

Causal Relationship Model of Factors Affecting Effectiveness of Schools under the Office of the Vocational Education Commission through Information Technology

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Abstract

Causal relationship model of factors affecting the effectiveness of vocational education schools under the Office of the Vocational Education Commission through information technology aimed to 1) study the components of causal relationship model of factors affecting the effectiveness of vocational education schools under the Office of the Vocational Education Commission through information technology, 2) develop and verify the harmonization of the causal relationship model of factors affecting the effectiveness of vocational education schools under the Office of the Vocational Education Commission through information technology, and 3) present direct influence, indirect influence and the combined influence that affect the effectiveness of vocational education schools under the Office of the Vocational Education Commission. The questionnaires respondents were 502 college teachers under the Office of the Vocational Education Commission. The results showed that the effectiveness of vocational education schools (SEF) was influenced by the professional competence of the teacher (PRO), communications (COM), transformational leadership of school administrators (TRL), organizational culture (CUL), and information technology (IT). The organizational culture (CUL) was a variable that most highly influenced (on) the effectiveness of vocational education schools with a total influence value of 1.28 followed by communications (COM), information technology (IT), professional competence of the teacher (PRO) with total influence values of 1.22, 0.48, 0.21 and 0.12 respectively and found that organizational culture (CUL) had a direct influence, indirect influence, and the total influence on the effectiveness of vocational education schools (SEF) with a total influence value of 1.28. The results showed that the organizational culture (CUL) variable that influenced (on) the effectiveness of vocational education schools (SEF) had direct influence and indirect influence through information technology (IT) with total influence values of 1.10, 0.18, and 1.28 respectively while transformational leadership of school administrator (TRL) had direct influence and indirect influence through organizational culture (CUL) and information technology (IT), and had direct influence and combined influence to the effectiveness of vocational education schools (SEF) with values of 0.48, 0.21 and 0.12 respectively. The hypothesis prediction model was consistent with the empirical data.

Keywords: causal relationship model, effectiveness of school, vocational education school

1. Introduction

Vocational education is very important for national development. At present, it is the age of technology. Thailand endeavors its efforts to develop and modernize the country to possess technological (technical)

knowledge and to be equivalent to other countries by developing education for youth as well as developing vocational education to fulfill the needs of the national economic and industrial sectors. In just a few decades, the world has entered an era of disruption. It is an era that combines turbulence, destruction, and new occurrence together in almost every aspect and with a very fast change, especially the advancement of Artificial Intelligence (AI) and new technologies that played a huge role in daily life, replacing work in many fields of careers such as financiers who were acquainted with investing. Artificial Intelligence (AI) and new technologies compete with the ability to memorize 10 years of historical information and learn more new things without prejudice in work. This is an advantage that humans do not have. Moreover, what used to be the prominent point of human beings which is the accumulated experience of more than 70 years is now seen as being unable to use nor adjust due to the rapidly changing world (Suchatwee Suwannasawat, 2018). Such change causes the graduates' unemployment rate to increase due to insufficient knowledge and abilities to meet the labor market needs. The problem is getting worse from the coronavirus (Covid-19) outbreak. This makes the management of teaching and learning at the vocational level to be more difficult affecting the effectiveness of the educational schools.

Government agencies in the education sector endeavor to develop and adapt the teaching and learning management to be up-to-date in the New-normal era which emphasizes the need to use various technologies to assist in problem-solving while the Office of Vocational Education Commission, the Ministry of Education has direct responsibility duty to prepare the education and training services for a new youth. The services need to prepare the youth to be knowledgeable with modern technology skills and permit them who are their production to have jobs that meet the businesses and industries needs to solve the unemployment problem and restore the national economy. However, effective personnel and effective administrative management are required for vocational education schools to be able to achieve their goals. The schools need to have good curriculums, competent teachers, and administration management that can support teaching and learning well. All of these require the schools to have a high-vision and competent administrator to solve many problems, both existing and new ones that arise from the situation, for higher organizational effectiveness. The vocational education schools under the Office of the Vocational Education Commission have some limitations which make their modern education promotion not evident. Effective educational management is not only due to the ability of the teachers or modern teaching equipment only, there are other factors that may play important role in the development of vocational education after the New Normal period.

The effectiveness of vocational schools apart from considering the results of the administration also has a method to determining the school effectiveness according to Mott's effectiveness evaluation concept (1972) which is the concept to use an organizational effectiveness measurement tool called IPOE (Index of Perceived Organizational Effectiveness) of Miskel and Others (1983) cited in Hoy and Miskel (2001) that considers the effectiveness of vocational schools in 4 dimensions: 1) the ability to produce high academic achievement students 2) the ability to develop students to have a positive attitude, 3) the ability to transform and develop the school, and 4) the ability to solve problems within the school. Prem Suri Chuamthong (1993) mentioned that the effectiveness of the school is the success of the school that can to achieve the set goals. This is due to the effectiveness of the school administrators who can apply their knowledge, abilities, and experience to administrate their work and convince subordinates to work to reach the achievement of the goals they set. This shows that vocational education schools must have many factors that affect their effectiveness to produce the students with the qualifications that society and the labor market need and for every student to be able to have a job. The factors that affect their effectiveness include academic *factor*, teaching and learning *factor*, school development *factor*, solving various problems *factor* and also being able to persuade personnel to perform their duties to achieve their goals.

It was found after the reviews of literature and research on the effectiveness of educational organizations that there were 5 factors involved: 1) professional competence of teacher (PRO), 2) transformational leadership of school administrator (TRL), 3) communications (COM), 4) organizational culture (CUL), and 5) information technology (IT), the details are as follows

The first factor is the transformational leadership of school administrators (TRL). Bass (1999:11) describes transformational leadership as a leader that pays attention to their followers more than their interests through an ideological influence, inspirational creating, intellectual stimulation, and individual considerations. The transformational leaders are able (can) to perform the said above effectively according to the study of Kongsak Yamprayoon (2018) which studied the effectiveness of the Office of Vocational Education Commission administration per the criteria of the Malcolm Baldrige National Quality Award and found that the school administration effectiveness factor has the highest average value.

The transformational leadership of school administrator is important but apart from this the educators also value the professional competence of teacher especially when the organization experiences a changing environment. Nonglak Rueanthong (2007) has conducted (a) research on an effective school management model

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using the referral method (Connoisseurship) of 15 academics experts. All of 15 experts have harmonized opinion that an effective school management model consists of eight components, and one of them is: administrators and teachers are professionals.

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The fourth factor is the organizational culture according to Cooke and Szumal (2000) classified organizational culture into 3 forms: 1) creative organizational culture , 2) defensive-defensive , and 3) proactive-defensive organizational culture and according to Nirut Songrit's research (2017) that studied the organizational culture and organizational relationship that affect to school effectiveness under the Office of the Basic Education Commission in northern Thailand. The results of the research found that organizational culture and school effectiveness had a positive relationship in a very high and statistic significant.

The fifth factor is information technology. The researcher has synthesized documents and concepts related to information technology systems for management and found four factors related to information technology: 1) management, 2) finance, 3) personnel, and 4) materials and equipment from (the) effectiveness of vocational education school study.

The aforementioned reasons make the researcher interested in studying the causal relationship model of factors affecting the effectiveness of schools under the Office of the Vocational Education Commission through Information technology to be guidelines for developing the effectiveness of vocational education schools and to achieve the goals of vocational education.

2. Literature Review

Vocational education is one of the educational managements after the secondary level that focuses on practicing to develop knowledge and abilities of students and preparing the student's readiness for the labor market. It includes the development of professional skills and a good attitude towards the profession for the students to be able to apply professional knowledge to work for their careers. The basic concepts, related to the effective vocational management theory, are modeled after Professor Dr. Charles Prosser, a pioneer who developed the vocational education system in the United States and benefited the development of human resources for industry (Teerawut Ekakul, 2000). The vocational education quality has a vocational education management system which is the most important component to affect the quality. The establishing of internal quality assurance standards for vocational schools is necessary for the vocational education management of the school to administrate effectively and efficiently to achieve the goal of vocational education management according to the terminological component definition of the above effectiveness and also from the components that are views or research results of scholars with other specific meanings. The researcher has synthesized these elements considered as components according to theoretical frameworks that the researcher will use for criteria to define a conceptual framework in the research (Conceptual framework). The definition of the observable variables that affect the administration effectiveness of vocational school consists of 4 aspects as follows: 1. learner quality 2. management quality 3. learning management quality 4. Personnel quality.

Transformational leadership of school administrators is essential for school administration. Bass and Avolio (1994) analyzed the characteristics of transformational leadership in four components: 1. Charisma is the leadership that builds self-confidence leading the followers to accept with faith, loyalty, and devotion without expecting personal interests and persuade the followers' mind to have compliant opinions. 2. Inspirational motivation is the leaders that use their ability to persuade the followers to change the interests for themselves into the activities that benefit the group or agency by using persuasive speech to have the work done successfully.

3. Intellectual stimulation is the leaders who use their knowledge and ability to motivate followers to apply their intelligence in problem-solving. This stimulates their system of thinking, learn how to solve problems creatively, encourages followers to develop ideas for problem analysis. 4. Individualized consideration is how the leaders show their attention and build interpersonal relationships. The understanding of followers' needs creates and develops the individual to achieve knowledge and understanding that lead to the elevated level of successful performance. The professional competence of teacher (Professional teacher) is the competency or ability of teacher who are outstanding in the skill which is defined as the ability (Abilities) to perform complex functions with ease, accurate and adaptable (Crick, 2018 cited in European Commission, Education and

Training, 2013) includes 1. teacher's pedagogical content knowledge 2. enthusiasm for teaching 3. Self-regulation skills, communication consisted of the use of communication channels, sending and receiving news and information that is clear and accurate. The organizational culture based on the concept of Cooke and Szumal classifies the organizational culture into 3 forms namely 1) creative organizational culture , 2) defensive-defensive organizational culture, and 3) proactive-defensive organizational culture. information technology: 1) management, 2) finance, 3) personnel and, 4) materials and equipment from the effectiveness of vocational education school study. Information technology in the areas of management, finance, personnel and materials and equipment.

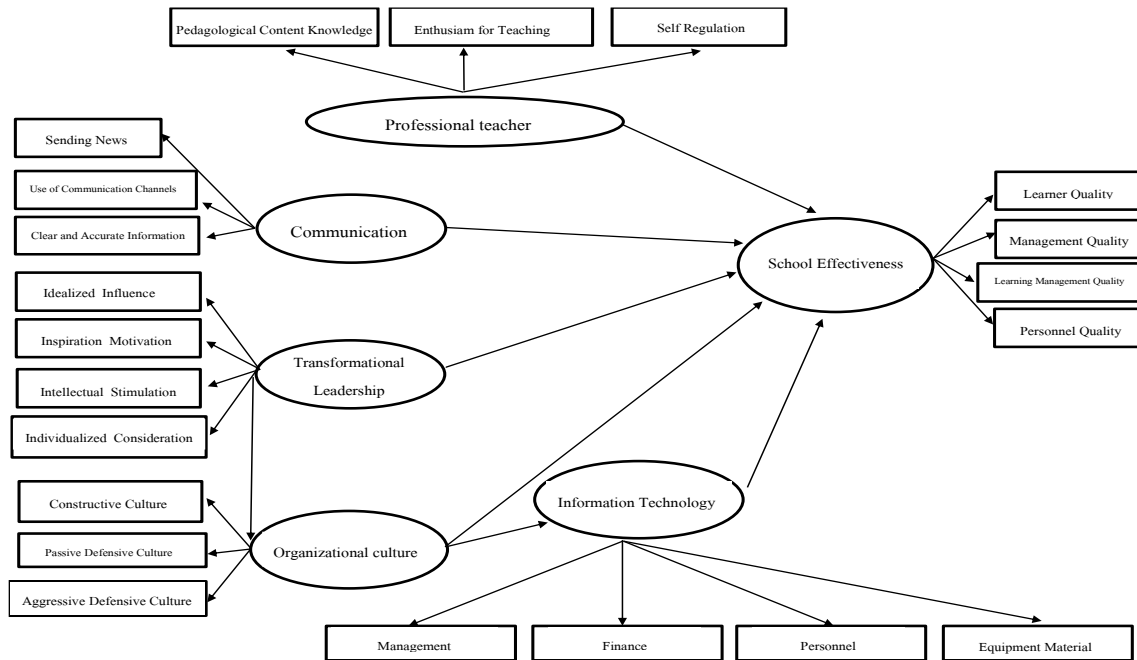


Figure 1 : Conceptual framework

Thus, the following hypotheses were offered:

1. The professional competence of the teacher, communications, transformational leadership of administrator, organizational culture, and information technology have a direct influence on the effectiveness of vocational education schools.
2. The transformational leadership of administrator has an indirect influence on the effectiveness of vocational education schools through the organizational culture variable
3. The organizational culture indirectly influences the effectiveness of vocational education schools through the information technology variable

3. Research Methodology

This research is quantitative research which studies the causal relationship between multiple variables using analysis technique of linear equation model (structural equation model: SEM) for studying the components of factors affecting the effectiveness of vocational education schools in the midst of a crisis, developing and examining the harmonization of the causal model of factors influencing the effectiveness of vocational education schools under the Office of the Vocational Education Commission through population information technology.

The questionnaires respondents were 16,224 teachers from provincial schools, according to their region, under the Office of Vocational Education Commission. The samples are used for collecting the information and opinions on factors affecting the effectiveness of vocational education schools under the Office of the Vocational Education Commission. The sample size is specified from the concept of using statistics the model analysis of structural equations from the law of expertise (rule of thumb) which had been used by statistic analysts for polynomial variables which is the sample size of 10 per 20 persons per 1 perceivable (observable) variable (Hair et al.1998 cited in Nonglak Wiratchai,1999). This research used 5 latent variables, 21 perceivable (observable) variables, and a sample size of 510 persons. Then a questionnaire was constructed to examine the harmonization of direct influence, indirect influence, and the combined influence of the model. The research

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compiled the knowledge gained from studying the related theories concepts from documents, texts, academic articles, and related research work both national and international and brought them to summarize the studied variables. The results of the studied variables were brought to construct the questionnaire by setting the definition of the actions and also brought them to make the asking questions in the questionnaire on the effectiveness of vocational education schools under the Office of Vocational Education Commission. This is for the verification of the consistency of direct influence, the combined influence of related linear structures models, quality of research tools. The researcher had 5 experts vote and find out the Index of Item-objective Congruence: IOC and calculate the index value of consistency between questions by using IOC formulas to check the reliability of the tool. The researcher tried out the improved questionnaire with 30 samples to fine Reliability of the questionnaire using Cranach's alpha coefficient which determined that it needed to have at least 0.70 value score for the survey research (Cranach L, 1974 and Jump, 1978). The data was collected and then was analyzed for the basic statistical analysis of variables using Descriptive Statistics which were frequency distribution, percentage, mean (x), standard deviation (SD), Skewness, and Kurtosis with the SPSS package.

The consistency analysis of the hypothesis model and empirical data using a Structural Equation Modeling: SEM analysis to test the relationship by the Lisrel program.

1. The analysis of Confirmatory Factor Analysis: CFA for checking the straightness of the model for measuring external latent variables by Lisrel program
2. The analysis of linear relationship path among variables or Path Analysis and the analysis of a Structural Equation Modeling: SEM analysis by the Lisrel program
3. The analysis of received data from the questionnaire by using Content Analysis by grouping the answer and select important points for additional explanation in analysis results

4. Research Results And Discussion

Structural Equation Modeling (SEM) (Ringle, Wende, & Will, 2005) with CFA and latent variable relationship (Hair,2012) was used to examine the measurement model and hypotheses. The following section he assessment of measurement model and the structural model using SEM. Before evaluating the measurement model, data were cleaned first to ensure that it could parsimoniously.

5. Measurement Model

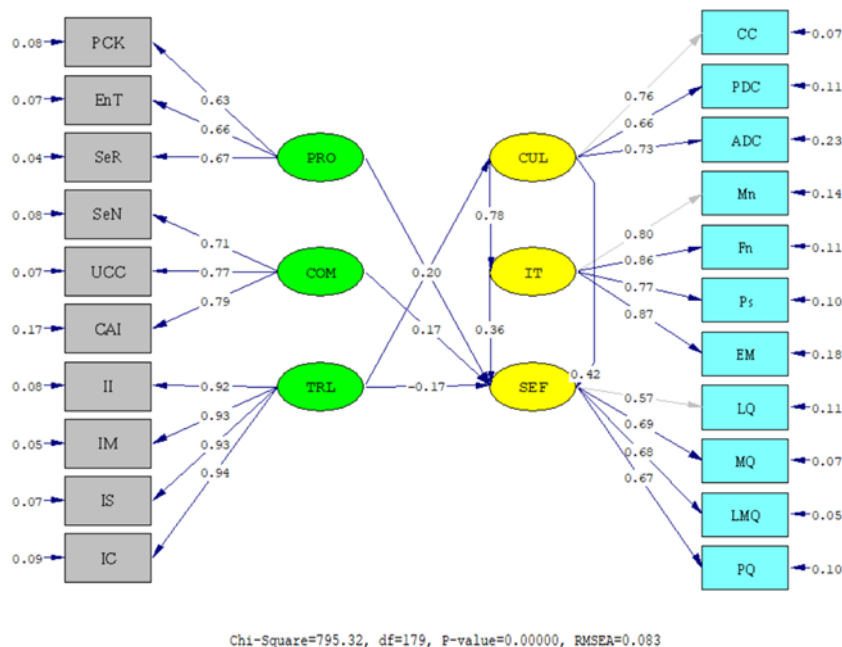


Figure 2 : It shows the results which revealed that Factors Affecting Effectiveness of Schools under the Office of the Vocational Education Commission through Information Technology

6. Discussion

The professional competence of teacher and communications had a direct influence on the effectiveness of vocational education schools. From the test result of the hypothesis model by analyzing the causal models of factors influencing the effectiveness of vocational education schools under the Office of the Vocational Education Commission through information technology, the first hypothesis found that the effectiveness of vocational education schools had been influenced by professional competence of the teacher, communications, transformational leadership of school administrator, organizational culture, and information technology. The variable that influenced the effectiveness of vocational education schools the most was the organizational culture with the combined influence value at 1.28. The following variables that influenced the effectiveness of vocational education schools were transformational leadership of school administrators, communications, information technology, and professional competence of teachers respectively.

These findings show that the effectiveness of vocational education schools had two factors that directly affect them. The first one was the professional competence of (the) teacher, due to the role of the teacher as a high-level professional, as Samlee Raksuthee (2000) said that teacher is a high-level profession with knowledge, potential, competence, and the ability to be suitable for both transferring knowledge to students and to live in the society as a precursor with dignity. Teachers need to adjust their quality and standards to suit their higher professions with a positive attitude towards the profession, professional knowledge as well as experience. The above said is inevitably result from teachers being professional. Somwang Phithiyauwat (2000) found that professional teachers characteristics must be a qualified teacher who loves and is ready to learn as well as to promote and instruct learners to develop according to their learning potential in order to raise the standard of teacher profession to a higher level which is one of the perceivable (observable) variables of the effectiveness of vocational education schools. Moreover, Sakchai Surakitaworn (2006) Teerasak Akarabaworn (1995) said that a good characteristic of a teacher is to love and to have faith in the teaching profession which is the basic important determination of teachers to commit and perform their duty successfully. In addition, Parkay & Stanford (1992) proposes that knowledge and skills are essential for professional teachers to have for the courses they teach consistently with Cruickshank & Bainer (1999) suggested that effective teachers must yearn to know, love to learn as well as be knowledgeable in the courses they teach consistently with the concept of Wichai Wongyai (2001) said that teachers in the reformation era must be teachers who see (give) the importance to the student who wants to develop, help to solve student problem, create new knowledge to constantly enhance the teaching and learning which will affect the student quality and the teaching professional development. The findings are consistent with Berliner (1992), who said that the professional person is the person who studies and profoundly gains his knowledge from the subject he has been studying. The result comes from being educated and trained. He constantly practices in that field for a long time as well as improving the skills. Cox's findings (2005) found that professional teacher characteristics consist of teaching experience years that contribute helping students to have a good learning experience. Besides, the study of Warasiri Wongsunthorn (2000) found that the teacher model must know the teaching contents, have a teacher spirit, be a good example for students in self conduct. In the same way, Arunee Onawat and Bunga Wachirasakmongkong (2005) found that good characteristics of teachers according to academic attitude were to have faith in the teaching profession, be a good role model, along with determined will, patience, discipline, compassion, and professional ethics including career engagement and cooperation with colleagues. All of this is a factor that leads to the effectiveness of vocational education schools accordingly.

Another factor that directly influences the effectiveness of vocational education schools is communication, due to vocational education schools are managed in accordance with section 12 of the vocational education act for the benefit of vocational education development and special vocational training. The committee of the Office of the Vocational Education Commission have to promote and support the vocational education schools that are experts or specialize in special professional training for them to be able to continuously provide vocational education and training and to be developed for keeping up with the changes in technology. Therefore, the educational schools must have their communication channel for sending news and communicate within the organization for personnel to receive complete and fast information which will affect the effectiveness of the school administration. The work of personnel within the organization must be communicated and communication is also used in teaching and learning management. The person must have the ability to work with others and colleagues. They need to be able to convey their knowledge and work experience to others for them to understand clearly. The organization needs to receive information from the administrative command. This must have a system and organizational pattern resulted from the use of language, speech, and gestures correctly that produce a good effect on the information understanding of their colleagues, administrators, and learners. In addition, the information is filtered very carefully before it is communicated. This is in accordance with Somyos Naweeakarn (1997) that communication is the process of information transferring from one person to other in a symbolic way. Lunenberg and Ornstine (1996) say that communication is like the lifeline of every

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organization as a process that connects individuals, groups, and organizations together. Thus, communication acts as a medium channel for bringing inputs from the external environment into the organization and delivering products to the environment. Communication is one of the tools for administrators to make a decision, follow-up the work, and corrects it according to objectives and to suit the environment at that time. This conforms to the research of Sopin Muangthong (2013) found that the communication factor has a positive direct influence on the effectiveness of private ordinary schools in the eastern region with a statistic significant at a level of .05.

In conclusion, the professional competence of teachers and communication have a direct influence on the effectiveness of vocational education schools. The transformational leadership of school administrator has a positive direct influence and indirect influence through the organizational culture and the information technology as mediator variables and it has the combined influence on the effectiveness of vocational education schools.

According to the test result from the hypothesis model that analyzed a causal relationship model of factors affecting the effectiveness of vocational education schools under the Office of the Vocational Education Commission through information technology of the transformational leadership of school administrator variable which had positive direct influence and indirect influence through organizational culture and information technology as mediator variables according to the 2nd hypothesis, it found that transformational leadership of school administrator which was a variable influencing vocational school effectiveness had a positive direct influence on vocational education effectiveness with a value of 0.22 and had indirect influence equal to 1.00 and the combined influence at a value of 1.22. The organizational culture which was a mediator variable had a positive direct influence on the effectiveness of vocational education schools with a value of 0.90 and the information technology which was a mediator variable had an indirect influence on the effectiveness of vocational education schools with a value of 0.77. The harmonization index meets the acceptance criteria, indicating that the hypothesis prediction model was consistent with the empirical data of 2nd hypothesis.

These findings show that leadership is an important administrative machinery for the successful administration of a vocational school. The vocational education schools administer and provide education under the vocational education act therefore transformational leadership of administrators must be applied in the administration of vocational education schools. This represents knowledge, talent, and skills to administrate the changes of the administrator who must have a vision, a long forward-looking, and the abilities to motivate people to have a commitment and to achieve the goals of the working operation and study preparation, consistent with Charoensri Panpee (2010), who studied the qualitative data and found that the administrators who had a broad vision, have the ability to motivate teachers to perform the duties with commitment, being a good role model for subordinates, have a good interpersonal relation, administrate the school with consideration regarding the benefits of teachers, students, and stakeholder parents, can supervise and monitor the work of personnel efficiency in according with Jitlada Chailert (2019) said that the administrators with high leadership would affect the effectiveness of educational providing of the College of Agriculture and Technology. The leadership of the administrators may indirectly influence through organizational culture, information technology, organizational atmosphere, and communication as well as Rujirapan Kongchuay (2011) who studied the causal factors influencing the effectiveness of the higher education administration of Rajabhat University in the Southern Region, found that leadership of school administrators has a direct influence on the effectiveness of higher education administration of Rajabhat University in the Southern Region with a statistical significance at a level of 0.01, the influence coefficient equal to 0.05 which was a result of the leadership of school administrator behavior. Thus, the higher education institutions contribute the administrative leadership to directly motivate teachers to work towards the institution goals. These will affect the effectiveness of higher education administration.

It can be seen that leadership is an important administrative machinery for the organization to be successful and leadership should be applied to persuade and motivate educational personnel in the institution to fully perform the work to achieve the goals. For the said reason, it supports the leadership to have a direct influence, an indirect influence, a combined influence on the effectiveness of vocational education schools.

Leaders have to administrate educational schools by providing opportunities for personnel to participate in, building morale and spirit support, raising job satisfaction, taking care, and encouraging personnel to think and solve problems in new ways. All these factors result the leadership to have a direct and an indirect influence on the effectiveness of vocational education schools. It shows that vocational education schools focus on operational values by paying attention to the teachers' satisfaction in terms of their enthusiasm for work. The organizational culture is a motivator for teachers to become motivated in their work to accomplish the task effectively. A good organizational culture better affects the effectiveness of vocational education schools. Based on the findings from this research, it was found that the leadership of school administrators indirectly affects the effectiveness of vocational education schools through organizational culture as a mediator variable because the

organizational culture is perhaps a combination of rules, regulations, official operation pattern, which affects the behavior, practice, values, and beliefs of personnel. This enables teachers in educational schools to understand the governmental operation, perform good governmental services, choose a correct way for solving the problems, and conduct governmental operations together which lead to clearly understand the importance of the organizational culture of the vocational school relating to ideas, beliefs, behaviors of personnel in vocational education schools. Moreover, the organizational culture with creative characteristics has the nature of the governmental performance that gives importance to both personnel and the work. It encourages personnel to have the freedom to work creatively, promotes teamwork for everyone to participate in, and the school administrators can manage the work properly. The school administration consists of planning for setting goals to achieve the official performance. The administrators must promote and support teachers and educational personnel to be motivated and work happily, encourage them with satisfying remuneration, various benefits, and sufficient welfares to achieve the work goals effectively. This is the result of the organizational culture as a motivator to achieve the most efficient and effective result for the organization in accordance with Sathorn Phurisophit (2006) found that the organizational culture of school with creative characteristics and inactive (sluggish) characteristics had a positive relation to the effectiveness of the school. The organizational culture of school had the power to predict the school's effectiveness by 60 percent and this was consistent with Suttipong Yongkamol (2000), who found that organizational culture was a factor affecting the effectiveness of schools using English as a teaching material which related to information technology of vocational education schools. The administrators of vocational education schools use information technology well and efficiently. This resulted in better effectiveness of vocational education school. Due to the current situation crisis, the use of information technology from the administration of vocational schools plays a huge role in supporting the school administration including teaching and learning management followed by supporting the teaching and learning system. This made the performance of government services more convenient and faster. Therefore, information technology is necessary that all educational school must pay attention to. Yanisa Bunjit (2009) found that there were 8 factors, consisting of the external environment, administrative policies and practices, organization structure, personnel quality, job characteristics, service recipient characteristics, technology, and organizational culture that affect organizational effectiveness and per Tuenjai Thianchanach (2016) found that the study of causal factors affecting the effectiveness of private educational school. Information technology factor (TEC) directly influences the effectiveness of vocational education schools factor (EFF) which explain that good information technology will affect the effectiveness of vocational education schools consistent with Thanawin Thongpaeng (2006) who studies the factors affecting the effectiveness of Burapha University and found that information technology had a positive direct influence to the effectiveness of Burapha University in according with Anchana Panich (2007) who studied the components of the effectiveness of Rajabhat universities organization and also found that technology component was important for the effectiveness of Rajabhat universities as a fourth range of the highest score.

Bandit Pagniran (2007) studied the influences of organizational characteristics, administrative policies and practice, organizational working atmosphere, working motivation, job satisfaction, and the organizational relationship that affected the effectiveness of Suan Sunandha Rajabhat University and found that the use of technology influenced the managerial policy and performance characteristics of Suan Sunandha Rajabhat University. It could be seen that information technology played an important role in teaching and learning management, supporting teaching and learning systems, and supporting the management system of school administrators, which directly affected the effectiveness of vocational education schools.

It can be concluded that administrative leadership is an important machinery for successful organizational administration through organizational culture as a mediator variable that is a governmental practice guideline, including the self-conducted behavior and also the teamwork of personnel within the vocational education schools. These directly affect the work effectiveness and the effectiveness of the vocational education schools. Therefore, from the aforementioned reasons, they support the view that administrative leadership has a direct influence and indirect influence through organizational culture as a mediator variable and information technology as a supplemental variable which support the effectiveness of vocational education schools. Thus, school administrators should apply transformational leadership and communication skills to change the organizational values of personnel. In order to change the organizational culture and values, school administrators must conduct themselves as sample model to constantly adapt themselves to response in the changing circumstances that happen all the time. They must be professional that can keep up with the world of technology to achieve the effectiveness of vocational education schools forever.

7. Conclusions

The results of correlation analysis among observable variables revealed that the correlation among 21 observable variables had a correlation value ranging from 0.258-0.942, which were the external observable

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variables or the 18 original variables and the internal observable variables or the 4 dependent variables. A total of 231 pairs had a correlation value among the variables with a statistically significant difference from zero at a count level of 0.01. The lowest correlation coefficient value was the correlation among the variables of Pedagogical Content Knowledge (PCK) that was an external variable or the causal variable and the financial information technology (Fn) that was a mediator variable. The relationship between charisma promoting variable (II) and inspirational motivation variable (IM) which were both causal variables had the highest correlation value indicating that the observed variables were related and the relationships of all variables pair had the same direction with a positive correlation coefficient value.

Considering the correlation value among the causal external observable variables, the values range from 0.258-0.942. The lowest correlation coefficient value was the relationship between Pedagogical Content Knowledge (PCK) and the individuality consideration variable (IC) that was equal to 0.328. The highest correlation coefficient value was the relationship between the charisma promoting variable (II) and the inspirational motivation variable (IM) that was equal to 0.942. The correlation value among the internal observed variables ranged from 0.783-0.896 and the lowest correlation coefficient was the relationship between the learner quality variable (LQ) and the personnel quality variable (PQ) that was equal to 0.896.

The statistical test results found that the KMO values of the observable variables used in the research were good since they were more than 0.5 and approached nearly 1 with values between 0.758-0.866. These indicated that data were suitable for all variable component analysis for Bartlett's test of sphericity. Determined from the Chi-square value, it had a significant value ($P < 0.05$). It indicated that the variables were related to each other and could be analyzed for the components. The index of consistency value was harmonic with the empirical data well according to the criteria. The Chi-square value at 66 independent degrees was equal to 82.67, the possibility (P) was 0.08058, the relative chi-square value (Chi-square/df) was 1.25, the index of consistency level measurement (GFI) was 0.98, the adjusted index of consistency level measurement (AGFI) was 0.95, the Standardized RMR) was equal to 0.38 and the (RMSEA) was equal to 0.022. The model was consistent with the empirical data. Therefore, the researcher then presented the research results which were analyzed that they met the criteria of a model and had consistency with empirical data.

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