

Model Development for Adaptive Leadership of Division Heads in Technical Colleges under the Office of the Vocational Education Commission

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Abstract

The objectives of this research were 1) to study components and indicators for adaptive leadership of the division heads in technical colleges, 2) to study the current conditions, desirable conditions, and needs to develop adaptive leadership of the division heads in technical colleges, 3) to create and develop the model development for adaptive leadership of the division heads in technical colleges, and 4) to study the results of using the adaptive leadership of the division heads in technical colleges. The methodology was research and development conducted in 4 Phases as follows according to the objectives. The results of the research found that 1) the components and indicators of adaptive leadership consist of 7 components and 25 indicators, the results of assessing the suitability of the components and indicators overall are at the highest level. 2) The current conditions of the adaptive leadership of the division heads in technical colleges overall are at a high level, the desirable conditions overall are at the highest level, and the overall need for developing the division heads in technical colleges, the PNI modified mean is 0.23. 3) The model development for adaptive leadership of the division heads in technical colleges consists of 1) Principles, 2) Objectives, 3) Contents of activities, 4) Method of Leadership Development, and 5) Evaluation. The results of the model evaluation overall are appropriate at a high level, and the possibility, and utility overall are at the highest level. And the evaluation results of the manual for using the format as a whole are appropriate at the highest level. 4) The results of a study of the use of the model development for adaptive leadership of the division heads in technical colleges found that 1) the adaptive leadership behavior of the division heads in technical colleges before using the model overall average mean is at a moderate level, and after overall mean is at the highest level that higher than average before are statistically significant at the .05 level, and 2) The results of the division head's satisfaction assessment as a whole is at the highest level.

Keywords: leadership development style, adaptive leadership, head of department, technical college, Office of the Vocational Education Commission

1. Introduction

Leadership is an important factor in the success of jobs and organizations. Education management requires a leader with leadership, which means a relationship in terms of exerting influence on each other between leaders and followers aim for change (Kotakan, 2016). The leadership is related to the creation and development of adaptation not maintaining the status quo (Status Quo). Moreover, it is not the adaptation that the leader needs. But it is the objectives set together between the leader and the follower that will create the motivation to persuade the person to achieve the desired result, which is especially important for education management in the age of change. Especially for leaders with adaptive leadership that can face problems with variations. These problems can be dealt with only when individuals adopt the priorities, beliefs, visionary ventures are transformative challenges. This type of problem requires a leader with adaptive leadership rather than an expert that have the power to direct the structure of the organization (Heifetz, Grashow, & Linsky, 2009).

The Office of the Vocational Education Commission (2008) takes into account the quality of teaching and learning. The administrative structure of the educational institutions, under supervision, has been determined. The college director has the highest administrative authority. And there are 4 deputy directors of the college to

help manage the work. Namely, the academic department, and resource management department. Planning and Cooperation Department and the student affairs development department, which is the administrative structure within the educational institution. There is a clear division of the command line. School administrators are divided into 3 levels: the director of the school; deputy Director of Education and head of the department responsible for performing duties as assigned by the director of educational institutes; the administration of the school helping, the operational planning supervision of management in their own department, especially, the academic department. The department is divided into tasks and departments with the head of the department responsible—administration in the department, such as the preparation of teaching and learning plans supervision, promotion, supervision, monitoring of teaching and learning management perform other tasks as assigned. Therefore, it can be seen that the head of the department plays an important role in the administration of educational institutions according to the regulations of the Office of the Vocational Education Commission on the management of educational institutions, B.E. 2552 has already been mentioned. It was found that the head of the department was an important person in the administration of the school. Because they are the ones who must perform their roles and duties. It is directly important to the creation of academic excellence. The head of the department there should be more administrative features. In order to have relationships and are consistent with their roles and responsibilities in which the head of the department has performed the mission efficiently and resulted in achieving the objectives. That is administrative characteristics. Being able to determine the management behavior that appears to be able to satisfy colleagues can create incentives for cooperation until able to create academic excellence. Such administrative attributes include personality attributes, academic knowledge characteristics knowledge feature, administrative and human relations characteristics from such importance. Therefore, the researcher is interested in studying the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission suitable for the context of vocational education institutions.

This will be the driving force for the development of educational institute personnel at the head of the department level in order to adapt in the performance of duties to be more efficient. And achieve more effectiveness for the institute in the new era under the Office of the Vocational Education Commission. Be creative and determined to develop together to achieve the goal of producing Thai vocational manpower in the future.

2. Theoretical Conceptual Framework

In the study “The Model Development for Adaptive Leadership of the Division Heads in Technical Colleges under the Office of the Vocational Education Commission” the researcher synthesized concepts, and theories from scholars and research that are relevant to the theoretical conceptual framework as follows:

Elements of Adaptive Leadership consist of 1) Building a holistic vision which 3 indicators, namely, (1) foresight (2) Achievement motive (3) Self-confidence. 2) Diversity knowledge management competency with no fixed method which 4 indicators, namely, (1) (knowledge sharing (2) knowledge application (3) knowledge acquisition (4) knowledge creation. 3) Cultural and ethical competency which 3 indicators, namely, (1) cultural awareness (2) cultural sensitivity (3) respectful. 4) Harmony and persuasion which 4 indicators, namely, (1) human relationship (2) collaboration (3) compromising. 5) Strategic thinking skills integrated into the organization which 4 indicators, namely, (1) Creating confidence of vision, (2) Organize merging to share direction, (3) Creating, foresight abilities.

6) Emotional Intelligence which 4 indicators, namely, (1) Self-awareness, (2) Self-regulation, (3) Self-Motivation, (4) Empathy, (5) Social Skills and (6) Creation of new things and change development which 4 indicators, namely, (1) setting things which should change and redevelop (2) New Era Changing (3) Transformational Leadership (4) Participation working (Thana, 2008; Chaichana, 2013; Songtanin, 2015; Promsin, 2016; Vachayalak, 2017; Potchana, 2018; Boonpa, 2019; Saison, 2020; Wanakijpaiboon, 2021; Hogan, 2008; Cojocar, 2009; Heifetz, 2009; Torres & Rimmer, 2011; Digital Marketing Institute, 2018; Sheninger, 2019) Method of Adaptive Leadership Development consists of 1) Self-study and field study 2) Workshop 3) Implementation 4) Professional learning community (PLC) 5) Supervising, monitoring, and evaluation (Witayaudom, 2007; Prasertsri, 1998; Yavirach, 1998; Jarungkeatikoon, 2001, Panich, 2012; Chaichana, 2013; Trulove, 1992; Wills, 1993; Yukl, 2008; Rebore, 2000). Elements of Model consists of 1) Principles 2) Objectives 3) Content of Activities 4) Process Development 5) Evaluation (Bush, 1986; Brown & Moberg, 1980; Keeves, 1988; Gibson, 1997).

The theoretical conceptual frameworks are shown in Figure 1.

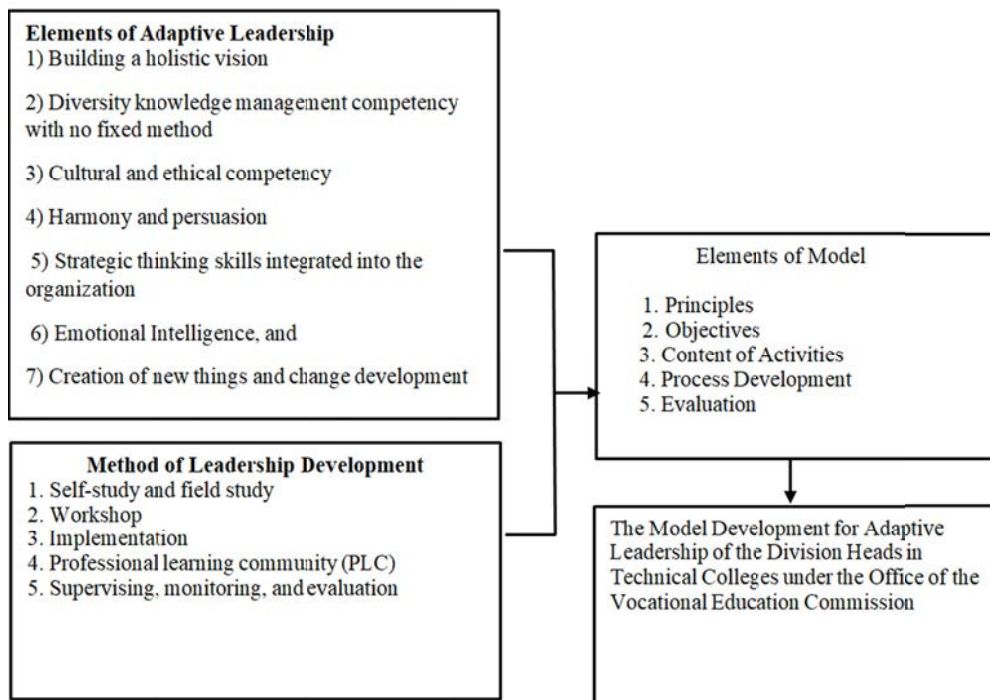


Figure 1. Theoretical conceptual framework of the model development for adaptive leadership of the division heads in technical colleges under the office of the vocational education commission

3. Research Objectives

- 1) To study the components and indicators for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission.
- 2) To study current conditions, desirable conditions, and the need for developing adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission.
- 3) To create and develop the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission.
- 4) To study the results of using the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission.

4. Research Methodology

This research was research and development and was conducted 4 phases as follows:

Phase 1: To study the components and indicators for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission.

- 1) A study of documents, concepts, theories, and relevant research on the components of adaptive leadership of division heads in technical colleges
- 2) Assessment of the suitability of components and indicators of adaptive leadership of division heads.
- 3) The group of informants assessed the suitability of components and indicators of adaptive leadership of division heads in technical colleges was an expert acquired by purposive sampling, 7 people were considered according to the specified qualification criteria.
- 4) Researching Tools
 - 4.1) Component and Indicators of adaptive leadership of division heads in technical colleges data analysis table
 - 4.2) Appropriate evaluation form of components and indicators of adaptive leadership of division heads in technical colleges. It is a 5-rating scale with an index of consistency (IOC) between .80 - 1.00.
- 5) Data analysis
 - 5.1) Analyze data on components and indicators of adaptive leadership of division heads in technical colleges

through content analysis.

5.2) Analyze the data of the appropriate assessment form of components and indicators of division heads in technical colleges including mean, and standard deviation.

Phase 2: To study current conditions, desirable conditions, and the need for developing adaptive leadership of the division heads in technical colleges

1) Population and sample

1.1) Population: Division heads in technical colleges under the Office of the Vocational Education Commission. In the academic year 2022, 1,800 people.

1.2) The sample group was the division heads in technical colleges under the Office of the Vocational Education Commission. The academic year 2022, totaled 317 people. The sample size was determined using the criteria according to the finished table of Krejcie and Morgan (1970) by using a stratified random sampling method of division heads in technical colleges under the Office of the Vocational Education Commission was the tier in the sample group (Srisa-ard, 2011)

2) The research tools were the current conditions and desirable conditions questionnaire of adaptive leadership of division heads in technical colleges Under the Office of the Vocational Education Commission. It is a 5-level rating scale that has an index of consistency between .80 - 1.00, and Cronbach's Alpha Coefficient is .99.

3) Data analysis

3.1) Analyze current conditions and desirable conditions through the basic statistics frequency, percentage, mean and standard deviation.

3.2) Analyze the needs data using the Modified Priority Needs Index (PNImodified) formula of Vongvanich (2015).

3.3) Prioritize the needs of adaptive leadership of division heads in technical colleges under the Office of the Vocational Education Commission by sorting the index of needs from the most to the least.

Phase 3: To create and develop the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission.

1) The information obtained from the phase 1–2, study and the results of the necessary needs assessment were used as interview questions for the administrators of educational institutions with best practices for developing leadership under the Office of the Vocational Education Commission.

2) Drafting and reviewing the draft of the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission by conducting focus group discussions, and evaluating the model and its use guidelines.

3) Informants group

3.1) A group of informants in the interview were educational institute administrators with outstanding leadership development practices (Best Practices), obtained by purposive sampling, namely: 1) The director of a Vocational institute in northeastern region1. 2) The director of Vocational Education Research and Development, and 3) The director of Nong Khai Technical College.

3.2) The group of informants conducted a focus group discussion on drafting and reviewing the draft model. Namely, 9 experts, evaluated the model and the manual of the model, obtained by purposive sampling based on specified qualification criteria.

4) Researching tools

4.1) Best Practices interview form is semi-structured. (Semi-Structured Interview).

4.2) Model assessment form and manual of the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission. It is a 5-rating scale level with an index of consistency of .80 - 1.00.

5) Data analysis

5.1) The information obtained from the interviews was compiled, organized, and summarized by content analysis.

5.2) Analyze the data of the model evaluation form and the manual of the model, including the mean, and standard deviation.

Phase 4: To study the results of using the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission.

1) The study of the use of development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission. The data obtained in phase 3 were used to conduct an experimental model with a sample of the division heads in Buengkan Technical College under the Office of the Vocational Education Commission. Evaluate the behavior and satisfaction of division heads at Buengkan Technical College.

2) The sample group that tried the model was the head of the department of Buengkan Technical College under the Office of the Vocational Education Commission. 13 people were obtained by purposive sampling and voluntarily participated in the development.

3) Research tools

3.1) The model manual consists of seven sets of leadership development documents: 1) Creating a holistic vision. 2) Competency in managing knowledge without a fixed method. 3) Cultural and ethical competency. 4) Building harmony and motivation. 5) Strategic thinking skills integrated into the organization. 6) Emotional intelligence, and 7) Innovation and change.

3.2) Adaptive leadership behavior assessment form for division heads at Buengkan Technical College.

3.3) The division head's satisfaction questionnaire toward the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission. It is a 5-rating scale level with a consistency index between .80 - 1.00, and Cronbach's Alpha Coefficient, equal to .98.

4) Data analysis

4.1) Analyze data from the adaptive leadership behavior assessment form of adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission. Basic statistics were used: frequency, percentage, t-test, mean, and standard deviation.

4.2) Analyze the satisfaction questionnaire data of the division heads in technical colleges under the Office of the Vocational Education Commission. The basic statistics are frequency, percentage, mean, and standard deviation.

5. Research Results

The results of the study of the components and indicators of division heads in technical colleges under the Office of the Vocational Education Commission from the synthesis of relevant documents and research. There were 7 components and 25 indicators as follows: 1) Building a holistic vision with 3 indicators. 2) Diversity knowledge management competency with no fixed method, 4 indicators. 3) Cultural and ethical competencies, 3 indicators. 4) Creating harmony and persuasion, 3 indicators. 5) Strategic thinking skills integrated into the organization 3 indicators 6) Emotional Intelligence, 5 indicators, and 7) Creation of new things and change development, 4 indicators. The appropriate evaluation of components and indicators by the 7 experts. It was found that the overall is at the highest level ($\bar{X} = 4.73$, S.D.= 0.07).

The results of the study current conditions, desirable conditions, and the need for developing adaptive leadership of the division heads in technical colleges are found that: 1) the overall current conditions are at a high level ($\bar{X} = 3.83$, S.D.=0.40), 2) the overall desirable conditions are at the highest level ($\bar{X} = 4.72$, S.D.=0.23), and 3) the needs assessment was found that the modified priority needs index as follow: (1) Creation of new things and change development (PNI modified = 0.38), (2) emotional intelligence (PNI modified = 0.32) (3) Creating a holistic vision (PNI modified = 0.29) (4) There is no fixed method for various knowledge management competencies (PNI modified = 0.20), (5) Cultural and ethical competencies (PNI modified = 0.19), (6) Strategic thinking skills integrated into the organization (PNI modified = 0.18), and (7) Creating harmony and persuasion (PNI modified = 0.11), respectively, all results as showed in Table 1.

Table 1. The mean, the standard deviation of current conditions, desirable, and the priority needs index for developing adaptive leadership of the division heads in technical colleges

Elements of Adaptive Leadership of the head of the department	current conditions (D)			desirable conditions (I)			modified priority needs index (PNI _{modified})	
	\bar{X}	S.D.	interpret	\bar{X}	S.D.	interpret	(I-D/D)	No.
	1. Creating a holistic vision	3.70	0.48	high	4.76	0.22	highest	0.29
2. There is no fixed method for various knowledge management competencies.	3.95	0.56	high	4.75	0.21	highest	0.20	4
3. Cultural and ethical competencies	4.07	0.44	high	4.86	0.33	highest	0.19	5
4. Creating harmony and persuasion	4.15	0.63	high	4.62	0.28	highest	0.11	7
5. Strategic thinking skills integrated into the organization	3.86	0.66	high	4.54	0.19	highest	0.18	6
6. Emotional intelligence	3.56	0.70	high	4.70	0.21	highest	0.32	2
7. Creation of new things and change development	3.49	0.69	moderate	4.81	0.28	highest	0.38	1
Overview	3.83	0.40	high	4.72	0.23	highest	0.23	

The results of creating and developing the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission found that: The model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission consists of 1) Principles, 2) Objectives, 3) Content of activities consist of 7 learning sets 84 hours, namely: 1) Set 1: Building a holistic vision for 9 hours; Fixed 10 hours; 2) Set 3: Cultural and Ethical Competencies 9 hours; 3) Set 4: Harmony and Persuasion 6 hours; 4) Set 5: Strategic Thinking Skills Combined with Organization, 9 hours; 5) Set 6: Emotional Intelligence, 16 hours; and 6) Set 7: Innovation and Development, 19 hours; 7) Development of the adaptive leadership of department heads, 4) Development process, and 5) Model evaluation. The evaluation results of the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission by 9 experts. It was found that the overall appropriateness was at a high level, a possibility at the highest level, and utility at the highest level, and the evaluation results of the manual for the use of the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission by 9 experts, it was appropriate at the highest level.

The results of a study of the use of the model development for adaptive leadership of the division heads in technical colleges found that 1) the adaptive leadership behavior of the division heads in technical colleges before using the model overall average mean is at a moderate level, and after overall average mean is at the highest level that higher than average mean before are statistically significant at the .05 level, and 2) The results of the division head's satisfaction assessment as a whole is at the highest level.

6. Conclusion and Discussion

The research "Model Development for Adaptive Leadership of Division Heads in Technical Colleges under the Office of the Vocational Education Commission." had crucial issues for the discussion as follows:

The results of the study of the components and indicators for Adaptive Leadership of Division Heads "in Technical Colleges under the Office of the Vocational Education Commission from the synthesis of relevant documents and research. There were 7 components of adaptive leadership and 25 indicators, which were 1) Building a holistic vision, 3 indicators. 2) Knowledge management competency with no fixed method, 4 indicators. 3) Cultural and ethical competency has 3 indicators. 4) Harmony and Motivation, 3 indicators. 5) Strategic Thinking Skills Integrated into Organization, 3 indicators. 6) Emotional Intelligence, 5 indicators, and 7) Innovation Creation and Development Changes, there are 4 indicators, and the results of the assessment of the suitability of components and indicators by qualified Overall, it's appropriate at the highest level. This is because all 7 elements are important and necessary for personnel development in educational institute administration to achieve the important goal of national education management. Namely, "Talented, Good, and Happy" learner personnel development at the leadership level. There are characteristics of adaptive leadership based on those elements. In order to have self-development including the organization by creating a holistic vision and having a variety of knowledge management competencies without a fixed method of cultural and ethical competencies. Creating harmony and persuasion strategic thinking skills integrated into the organization's emotional intelligence and creating new things and developing and changing. Therefore, adaptive leadership is a leadership

behavior that results from the combination of many ways that have an adaptability and capacity building of individuals, able to make decisions and express themselves with awareness and understanding in working towards challenging adjustments, new thinking, and new work adjustments. Modify new work processes to achieve the goals set. This is in line with the idea of Sergiovanni (2009) said that it is a very challenging leadership, perhaps almost all traits of a leader must be characterized by learning, and growth leads to the success of the goal. Therefore, it is essential to have ambitious goals toward challenging transformation, rethinking, and reworking. Adapt a new work norm that relies not only on Technical College. This is in line with the concept of Saenkaew (2015) said that the elements of adaptive leadership of educational institute administrators consisted of 4 aspects: building harmony, knowing compromise to reduce resistance in conflict situations able to face problems and encourage unity, and having a good relationship with government teachers' knowledge management to increase personal potential. And the work of the academy's cultural competence accepting differences, adapting, listening, and giving others opportunities to learn about diversity and manage diversity to be a harmonious and holistic vision. Looking at the big overview and making decisions to make the right choice until planning to use that option effectively and consistent with the research of Chaichana (2013) said that, adaptive leadership is leadership that is a combination of several leadership theories. Influencing change and building the potential of individuals and organizations towards prosperity. It is a system in which the leader directs a collaborative process to solve problems. Knowledge management cultural competence and a holistic vision for others to accept and follow.

The results of the study of current conditions, desirable conditions, and needs to develop adaptive leadership of division heads in technical colleges under the Office of the Vocational Education Commission.

The current state of adaptive leadership of division heads in technical colleges under the Office of the Vocational Education Commission as a whole was at a high level. It was found that the aspect with the highest average was the harmonization and motivation aspect, consisting of 3 aspects: 1) Good human relations. 2) Cooperation. 3) Compromise. This is because the department head is a kind person, honest, optimistic, and has empathy for others recognizing the value of the importance of cooperation have trust. Create a good working atmosphere and accept the opinions of others. Seeing the peace and success of the organization is an important sacrificed duty. Unselfish generosity and peace-loving, do not interfere with bad things that damage work in schools, consistent with Suzette (2005) said that a study of school administration principles and theories that to create harmony in that school (creating synergy), administrators must combine the power of a team of older to have an understanding of the common goal to work together, to feel like an important part. Therefore, there should be activities. These are 1) Creating collaboration by binding colleagues together or setting them apart and. 2) Establishing good relationships. And in accordance with Khan (2009), the world today is a world of knowledge. Being a quality organization and a learning organization will bring lasting benefits to the organization. Creating knowledge groups by combining power, create harmony in a variety of government agencies by combining the power of a group of experts which is important to the development of the private sector. Creating synergy requires clear goals that reduce the risk of failure and mutually valued and shared goals and purpose.

The desirable condition of adaptive leadership of division heads in technical colleges under the Office of the Vocational Education Commission as a whole was at the highest level. It was found that the side with the highest mean cultural and ethical competencies consists of 3 aspects: 1) Cultural awareness, 2) Cultural sensitivity, and 3) Respect for others. This is because the head of the department is aware of the importance of culture and recognizes the importance of differences in attitudes, behaviors, values, and beliefs. emotionally flexible and adapt in terms of emotions that correspond to the importance of responding to feelings and being tolerant of differences in culture between people. Accept and appreciate listening to opinions and have appropriate respect for personnel in the educational establishment. consistent Thana (2008) said that leaders need to integrate the knowledge and skills of ethical culture gained from observation, analysis, assessment, and adaptation with cultural awareness. Interacting, accepting, and making compromises between one's culture and the differences of other cultures, allows the experience to solve the problems with people who have different beliefs from their own group. To understand the motivations of those who have cultures. Ethics are different. And in accordance with Chaichana (2013) said that leaders want to be respectful. Eager to learn and accept differences accept the nature of change and be ready to adapt to other cultures, be open-minded, listen, and give opportunities to others to learn about diversity and organize variety to be harmonious.

The adaptive leadership needs of heads of Technical College departments. Under the Office of the Vocational Education Commission. It was found that the highest needs index was the creation of novelty and development. This is because department heads need to develop leadership in identifying changes and new developments. Behavioral changes to adapt to the modern era and to be a leader of change and adaptation in working with

participation, where the head of the department has contemplated identifying things that should be modified and developed new things. To keep up with the modern era, maintain various environmental conditions that are already good to remain adaptation, changing the way of thinking, analyzing, and synthesizing new things always. Being ready to adapt to change. Be alert and ready to adapt to every situation that arises. There is always education or self-development as part of the mechanism that drives the management to success. Recognize and respect colleagues, show their knowledge and ability to adapt, make operations run smoothly, and participate in management activities. Corresponding with Vanakijfaiboon (2021), summarized the lessons learned from adaptive leadership in the 21st century, in the midst of a global situation like VUCA. Everything around is uncertain, fluctuating, fluctuating all the time. The important thing is that you as a leader must have adaptive leadership skills or flexible leadership. Ready to adjust yourself, change the way to find new strategies to make the change successful. The adaptive leadership component consists of 3 parts: 1) Identify what needs to be changed and explore what needs to be changed and what should be maintained, starting from yourself and developing to explore the organization. What should be preserved and what should be developed to adapt to the changing era? 2) There is no fixed method to keep experimenting problems in the modern era are problems that must be learned and developed continually. There is no fixed method that has to be experimented with a variety of rapid tests by using a team to help. 3) Integrate best-performing solutions into operations Consistent with Cojocar (2009), leadership is modern and accepted leadership as leadership that incorporates and evolves contemporary leadership styles. Such as situational leadership, transformational leadership, transformational leadership, and complexity leadership which is very necessary for leaders in modern times. There are important fundamental elements that can help achieve the objectives: 1) Having a clear mission and vision. 2) A culture of equality (culture of equity). 3) The ability to build a learning community (capacity for learning community). 4) The capacity to build cooperation and diffuse leadership (collaborative and distributed leadership). 5) Fostering change and renewal. 6) Enhancing staff growth, and 7) Building bridges and networks.

The results of creating and developing the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission. There is a structure in the form consisting of 1) Principles, 2) Objectives, 3) Contents of activities, 4) Development methods, and 5) Evaluations. There were 7 learning sets of adaptive leadership development activities, taking 84 hours to develop a holistic approach. 2) Knowledge management competencies in various ways without a fixed method. 3) Cultural and ethical competencies. 4) Harmony and Motivation 5) Strategic Thinking Skills Integrated into the Organization 6) Emotional Intelligence, and 7) Innovation and change and how to develop based on the development principle of 70: 20: 10 consisting of 1) Self-study visits. 2) Workshop seminars. 3) On-the-job training. 4) Professional development learning community (PLC), and 5) Supervision, supervision, monitoring, and evaluation. This may be because each component of the model is linked to leadership development activities carried out in the same direction. With a clear pattern, which corresponds to the concept of Keeves

(1988) that the elements of the pattern are, 1) The principle of the pattern is the overall concept. 2) The aim or goal of the pattern. 3) The method of the process model, and 4) Evaluation of the model. Consistent with the research of Kulsan (2014), from a study on teacher leadership development model in schools expanding educational opportunities northeast, there are five components of the model: 1) Principles of the model, 2) Purpose of the model, 3) Content of the model, 4) Development process, and 5) Measurement and evaluation in accordance with the research of Promsin (2016) on the model of teacher leadership development in elementary school under the Office of Education Region 11. There are 5 components of the format: 1) Principles of the format, 2) The purpose of the format, 3) Content, 4) Model development process; and 5) Measurement and evaluation.

The model evaluation results by experts who have overall opinions are appropriate at a high level. Possible and useful at the highest level and the evaluation results of the model manual Overall, it is at the most appropriate level. Consistent with the research of Manophom (2019), from a study on the model of real leadership development of administrators of basic education institutions, it was found that the evaluation results of the model are appropriate at a high level and have a possibility at a high level. And the most useful is consistent with the research of Wakkawatpong (2015), from a study on Academic Leadership Behavior Development Patterns of Heads of Foreign Language Learning Subjects in Schools under the Office of Secondary Educational Service Area 31, it was found that the evaluation results of the model are appropriate and feasible at a high level.

The results of the study of the use of the adaptive leadership development model of the heads of departments of Technical Colleges under the Office of the Vocational Education Commission. The research results are as follows:

The evaluation results of the adaptive leadership behavior of the heads of departments of Technical Colleges.

Under the Office of the Vocational Education Commission. After receiving the development according to the model, the average is at the highest level. Above average before development statistically significant at the .05 level. This may be due to the development of the head. Some departments are not aware of it or have less emphasis on leadership development. And it has not taken concrete action that can develop the head of the department to adapt to change the way of working. Because there is still no definite and clear form when using the adaptive leadership development model of Technical Colleges department heads. Under the Office of the Vocational Education Commission. According to the newly developed model manual. As a result, the assessment results after using the model had a higher mean than before using the model and most importantly, the newly developed model is a good model with good quality. The elements of the pattern are structurally related. The research conceptual framework is integrated from the concepts and theories of adaptive leadership from various educators. It is a model that shows the relationship between new concepts for the development of effective adaptive leadership. Consistent with Getzels et al. (1968), Keeves (1988), Husen and Postlethwaite (1994), said that a good and useful model should have the following characteristics: 1) It should contain elements that have a structural relationship. 2) It should indicate or point out the rational mechanism of the matter study. 3) The model should be a tool for conceptualization and reconstructing the relationship of the variables which is an extension of the subject being studied; and 4) The model should lead to a test or trial, which can be verified with empirical data. This is in line with the research of Green (2020) studying the model of teacher leadership development in learning management in secondary schools. Under the Office of Education Region 11. It was found that the teacher leadership development behavior increased from before an experimental model was used with an average of 60.70 and was consistent with the research of Duangjai (2014) Studying the transformational leadership development model of learning subject heads in secondary schools. under the Office of Secondary Education Service Area 22 and 23 found that the developed model was effective for developing the transformational leadership of the learning subject heads in secondary schools to develop post-development practice behaviors. The mean scores were significantly higher than before the development at the .05 level, indicating that the developed model was effective in developing transformational leadership of the learning subject heads in secondary schools. And it is also in line with Wongboonyarit (2015) Studying the development of transformational leadership of administrators who administer using educational institutions as a basis. Under the Office of Nakhon Ratchasima Primary Educational Service Area 1-7. It was found that the participants had a statistically significant increase in post-development knowledge at the 0.05 level.

The results of the satisfaction assessment of the division heads in technical colleges towards the model development for adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission as a whole at the highest level. This may be due to the division heads in technical colleges can manage and operate according to this developed model easily, not complicated, working happily, and operating efficiently. Because the developed model has a systematic development process consistent with the theoretical concept principles of associate educators and passed the inspection and quality assessment before being used for the trial. This is in line with the concept of Srisa-ard (2009) that the development of the model may be done in two steps: 1) Creating or developing a model first. It is a model based on hypotheses from studies, research, concepts, theories, models that have already been developed in the same or other subjects, and the results of related studies or research. This allows to define different elements or variables in the form as well as the various relationships between elements or variables. Therefore, the researcher should clearly define the principles for model development. 2) Test the validity of the model after initially creating or developing the model, it is necessary to test the validity of the model. It is collecting data in real situations or conducting experiments to apply in real situations under the Office of the Vocational Education Commission developed this when the head of the department uses it and is satisfied. Because it is a form that allows changes to adapt to the times to help manage efficiency. This is in line with the research of Worachin (2016) Researching on the Creative Leadership Development Model of School Administrators. Under the Office of Secondary Education Service Area 24. It was found that the evaluation of the use of the creative leadership development model of school administrators had the level of satisfaction of teachers in educational institutions, where the administrators were the target group on the use of creative leadership by administrator schools. Overall, it was at a high level and in accordance with the research Srisangachai (2018) Research on the transformational leadership development model of school administrators in the 21st century. Under the Office of Khon Kaen Primary Educational Service Area 2. It was found that the results of the trial using the transformational leadership development model of school administrators and training for teachers and school administrators, the target groups after the model trial were satisfied with the developed model at the highest level.

7. Suggestion

7.1 Suggestions for Use

- 1) The results of this research revealed the need to develop adaptive leadership of the division heads in technical colleges under the Office of the Vocational Education Commission In terms of creating new things and developing and changing. There is an index of needs most needed to develop adaptive leadership. Therefore, educational institutions under the Office of the Vocational Education Commission should be given priority in the development of educational institute personnel.
- 2) The results of the study can be used as a guideline for the development of adaptive leadership for the division heads in technical colleges under the Office of the Vocational Education Commission according to the context of each school.

7.2 Suggestions for Further Research

- 1) There should be research and development on the model of adaptive leadership development with supervisors in educational institutions under the Office of the Vocational Education Commission.
- 2) There should be comparative research on the development of adaptive leadership development models of administrators and department heads under the Office of the Vocational Education Commission
- 3) The adaptive leadership development model of administrators and department heads in large and small educational institutions should be studied under the Office of the Vocational Education Commission.

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Authors contributions

Mr. Chanchai Seanchan and Assistant Professor Dr. Chaiyuth Sirisuthi were responsible for the study design and revising, Mr. Chanchai Seanchan was responsible for data collection, Associate Professor Dr. Chalard Chantarasombat was responsible for data analysis, Mr. Chanchai Seanchan drafted the manuscript and Assistant Professor Dr. Chaiyuth Sirisuthi revised it, All authors read and approved the final manuscript, and Professor Dr. Chaiyuth Sirisuthi was responsible for the publication and corresponding manuscript.

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