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**DEVELOPING THE TEACHING STAFF
IN A COMPETENCE-BASED APPROACH
IN TECHNICAL COLLEGES OF LAO PDR**

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DISSERTATION SUMMARY

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THE AUTHOR'S PUBLICATIONS RELATED TO THE DISSERTATION TOPIC

1. Xayyasit Nouamphone, *Some theoretical issues on the development of teaching staff in technical colleges of the Lao People's Democratic Republic*, Journal of Education Equipment, ISSN 1859-0810, No. 226, 123 -125, 2020.
2. Xayyasit Nouamphone, *Some theoretical issues on the current situation and solutions to develop the teaching staff at technical colleges in the southern region of the Lao People's Democratic Republic*, Journal of Education Equipment, ISSN 1859-0810, No. 230, 159-161, 2020.
3. Xayyasit Nouamphone, *Some theoretical issues on professional competence development for lecturers at technical colleges of Lao People's Democratic Republic*, Journal of Education and Society, ISSN 1859-3917, special issue June 2021.

INTRODUCTION

1. Reason for choosing the research topic

Nowadays, in the context of globalization and international integration, with the characteristics of the knowledge economy and the market economy, the impacts of the fourth industrial revolution (Industry 4.0) are affecting all aspects of social life, directly affecting the vocational education system. In that context, teachers in general and lecturers of technical colleges in particular are always the key factors determining the quality of vocational education in line with the Party's development goals of education and training.

In addition, lecturers also have the role of an educator who can combine knowledge teaching with value education, attitude formation and creative thinking development for learners. As scientists, lecturers also have to perform the tasks of scientific research, technology transfer, and scientific explanation of problems of nature and society that learners are interested in understanding.

The teaching staff is always considered a decisive factor in the quality of human resource training. The Resolution of the XI National Congress of the Lao People's Revolutionary Party states: "In the requirements of educational reform, education administrators and teachers at all levels of education play a key role in improving the quality of education ...".

Thus, along with the socio-economic development of each locality, the scale of vocational training there has been constantly growing, creating a driving force for the development of the teaching staff of each education level. For technical colleges of Lao PDR, the work of teaching staff development has achieved certain achievements. However, the reality shows that besides the advantages of the staff and teaching staff development in a competence-based approach in technical colleges of Lao PDR, there are still many limitations and shortcomings. For example, the competence to design and organize teaching, to build programs, to compile curricula and teaching materials is still limited, and the scientific research competence of the teaching staff at technical colleges has not been appreciated.

Teaching staff development in a competence-based approach in colleges has limitations: Standards of lecturers have not been put into practice; the planning, recruitment, employment and evaluation of the teaching staff are not based on their competence; training and retraining are not based on the needs of competence development of lecturers and teaching staff; the conditions and environment were not favorable: the salary regime and policy for lecturers are not commensurate with the characteristics of technical college training activities.

Therefore, the researcher chose the research topic: ***"Developing the teaching staff in a competence-based approach in technical colleges of Lao PDR"*** as the title for his doctoral thesis.

2. Research aims

Based on theoretical research and survey, assessment of the current situation of teaching staff development in a competence-based approach in technical colleges of Lao PDR, the thesis aims to propose measures to develop the teaching staff in a competence-based approach in technical colleges of Lao PDR to improve the quality of the teaching staff (ensure the quantity and quality) to meet the social requirements.

3. Objects, research subjects

3.1. Research subjects: The teaching staff at technical colleges.

3.2. Research object: Teaching staff development in a competence-based approach in technical colleges of Lao PDR.

4. Scientific hypothesis

4.1. Research question

- What management measures are needed to develop the teaching staff in a competence-based approach in technical colleges of Lao PDR?
- What are the current requirements of vocational education reform?

4.2. Scientific hypothesis

Over the past few years, teaching staff development in colleges has been interested and certain achievements have been made. However, teaching staff development in a competence-based approach in technical colleges of Lao PDR still has many limitations and shortcomings in terms of planning, recruitment, use, training, fostering, evaluation and training, implementing policies and procedures, and creating a working environment for lecturers. If measures to develop the teaching staff in a competence-based approach are proposed and applied in a scientific and synchronous manner, they will contribute to improving the quality of the teaching staff, meeting the current development requirements of technical colleges of Lao PDR.

5. Research tasks

To accomplish the above research objectives, the thesis must do the following specific tasks:

5.1. Study the theoretical basis of developing the teaching staff in a competence-based approach in technical colleges.

5.2. Properly assess the current situation of teaching staff development in a competence-based approach in technical colleges of Lao PDR.

5.3. Propose measures to develop the teaching staff in a competence-based approach in technical colleges of Lao PDR; Test the urgency and feasibility of the measures; organize the experiment on some proposed measures.

6. Research scope

- Content scope: The study focuses on teaching staff development in a competence-based approach and standards for lecturers in technical colleges in Lao PDR.

- Time scope to study the situation: Data were collected from the 2016-2017 school year to the 2019 -2020 school year

- Scope of survey subjects: The research surveyed 443 people at 4 technical colleges including (1) Champasak Technical College; (2) SeKong Technical College; (3) Attapue Technical College (4) Salavanh Technical College to assess the current status of the teaching staff and teaching staff development in a competence-based approach in technical colleges.

+ The total number of the management staff is 80 people (04 rectors; 08 vice-rectors; 38 heads/deputies of faculties and departments; 30 heads/deputies of departments).

+ Total number of lecturers: 363 people.

7. Methodology and research methods

7.1. Methodology: *human resource development theory-based approach; Standardization-based approach; Competence-based approach; System-based approach*

Specifically, the thesis employed the human resource development-based approach and the competence-based approach as the basics.

7.2. Research Methods

7.2.1. Group of theoretical research methods

7.2.2. Group of practical research methods

8. Arguments to be defended

8.1. To develop the staff of college lecturers in a competence-based approach, it is necessary to synchronously manage the following elements: Planning the development of college lecturers; selection and use of staff based on competence; training, retraining and assessment of specialized competencies; building a motivating working environment suitable for developing college lecturers.

8.2. To develop the staff of college lecturers, it is necessary to clarify the strengths, weaknesses, opportunities and challenges in terms of the activities for training and developing the staff of college lecturers; the characteristics of socio-economic development, culture, vocational education in general; characteristics of human resources and general and specific competencies of college lecturers in Laos.

8.3. Developing the teaching staff in a competence-based approach requires a system of synchronous solutions: supplement and complete the standards of lecturers; make schemes and plans to develop the teaching staff in accordance with the human resource training strategy and socio-economic development of the region; renew the recruitment, use, examination and evaluation of lecturers according to their competence; focus on training and retraining activities, encourage lecturers to self-improve their competence and build a favorable environment, creating motivation for lecturers to promote their competence and forte.

9. New contributions of the thesis

Theoretical contributions: The thesis has supplemented and clarified the scientific theoretical basis for teaching staff development at technical colleges in a competence-based approach. Specifically, the thesis has supplemented and clarified the concept of teaching staff management and development of technical colleges; the characteristics of the teaching staff and the contents of teaching staff management and development of technical colleges; clearly identified both objective and subjective factors affecting the teaching staff management and development in a competence-based approach at technical colleges of Lao PDR.

Practical contributions: The thesis has:

- Assessed the current status of the teaching staff and the current situation of developing the teaching staff in a competence-based approach at technical colleges of Lao PDR.
- Proposed some measures to develop the teaching staff in a competence-based approach in technical colleges of Lao PDR.
- The thesis is a reference document for research, teaching, and teaching staff development in a competence-based approach at technical colleges of Lao PDR.

10. Structure of Thesis

In addition to the introduction, conclusions and recommendations, references and appendices, the thesis is structured into three chapters:

Chapter 1. THEORETICAL BASIS OF TEACHING STAFF DEVELOPMENT IN A COMPETENCE-BASED APPROACH AT TECHNICAL COLLEGES

1.1. Literature review: The research has studied the teaching staff of technical colleges in a competence-based approach and teaching staff development in a competence-based approach in technical colleges, and made general comments on the works reviewed.

1.2. The instrumental concepts of the research

1.2.1. Lecturers

Lecturer is a term used to refer to a teacher who teaches a certain subject or specialty in colleges, universities, or academies. Lecturers are teachers who teach at colleges, universities and academies, including theory lecturers, practical trainers and integrated teaching instructors. The standard qualification for the title of college lecturer is university or higher. General standards of college lecturers stipulate: *"Having good qualities and ethics; having standard qualifications with professional training; having sufficient health according to professional requirements and having a clear background"*.

1.2.2 The staff of lecturers of technical colleges

A staff is a large number of people with the same function, task or profession organized and gathered into a force operating in a certain organization, performing one or more functions, sharing the same ideal, certain purposes, attached to each other in terms of material and spiritual interests.

1.2.3. Competence

Competence is a combination of skills, knowledge and attitudes with psychological characteristics and attributes of an individual in accordance with the specific requirements of an activity to produce outstanding and significant outputs. Every ordinary person has a competence, which is a quality, a potential an essential condition for them to be able to complete a certain action with high quality.

1.2.4. A competence-based approach to teaching staff development

1.2.5. Teaching staff development in a competence-based approach

1.2.5.1. Development

Development is the change, growth, the move forward in both quantity and quality, both in time and in space of things, phenomena and people in society.

1.2.5.2. Teaching staff development in a competence-based approach

Developing the teaching staff in a competence-based approach is the process of creating a staff of teachers who are sufficient in quantity, qualified in terms of qualifications and quality, and structurally synchronous to meet the increasing requirements of educational work. Developing the teaching staff in technical colleges means helping the teaching staff in technical colleges reach standardization and modernization; implementing the best policies for lecturers; creating a favorable working environment, ensuring the rationality, socialization and consensus in the college; organizing teaching, education and scientific research activities in a reasonable and synchronous manner with factors like the number and structure of staff; enhance democratization in activities to help teachers develop themselves.

1.2.5. Developing the staff of technical college lecturers in a competence-based approach

Teaching staff development in a competence-based approach at technical colleges is a standardized method that integrates knowledge, skills, and attitudes into a system of professional competency standards for technical college lecturers. To implement the method of developing college lecturers in a competence-based approach, it is necessary to build a set of professional competence standards. The next step is to "standardize" the content of activities to develop the staff of college lecturers in the process of scheming, planning, recruitment, assignment, evaluation, training and fostering of lecturers, policies on reward,

treatment, motivation for the staff. All of these are based on the professional competency standards of the lecturers.

1.3. Some theoretical issues about the teaching staff of technical colleges

(Characteristics of professional activities of lecturers at technical colleges; Requirements for lecturers of technical colleges in a competence-based approach; Professional standards and framework of professional competence of lecturers of technical colleges)

1.4. Theory of teaching staff development at technical colleges according to the theory of human resource development and in a competence-based approach

(Meaning and importance of teaching staff development in a competence-based approach in colleges; Theoretical approach to human resource development and competence-based approach in teaching staff development at technical colleges; Content of teaching staff development in a competence-based approach in technical colleges)

1.5. Factors affecting teaching staff development in a competence-based approach in technical colleges

1.5.1. External factors *(Socio-economic development conditions and science and technology; Industrialization, modernization and market economy; Mechanisms and policies of the Party and State)*

1.5.2. Internal factors *(Cognitive level and sense of responsibility of the management staff and teachers; The competence of the college leadership and management staff; The competence of the teaching staff; The other quality assurance conditions)*

Summary of Chapter 1

The need to develop the teaching staff is an urgent issue in society. In particular, teaching staff development in technical colleges is an urgent, topical and much-interested goal in Laos. In this chapter, the theoretical basis for teaching staff development in a competence-based approach of colleges to meet human resource training needs has been studied.

Chapter 2. PRACTICAL BASIS OF TEACHING STAFF DEVELOPMENT IN A COMPETENCE-BASED APPROACH AT TECHNICAL COLLEGES IN LAO PDR

2.1. Overview of technical colleges in the southern region of Lao PDR

(Introduction of technical colleges of Lao PDR; The sectors and professions the technical colleges are training; Organizational apparatus)

2.2. Investigate the current situation

In order to have a basis for assessing the current situation of teaching staff development in a competence-based approach in technical

colleges of Lao PDR, the researcher used three research methods: statistics; survey and case study.

2.2.1. Survey purpose

The purpose of the survey is to evaluate the current situation of the teaching staff and the development of the teaching staff in a competence-based approach in technical colleges of Lao PDR as a practical basis to propose measures to develop the teaching staff in a competence-based approach in technical colleges of Lao PDR in the context of educational innovation.

2.2.2. Survey content

The current situation of the teaching staff at technical colleges of Lao PDR

The current situation of teaching staff development in a competence-based approach of technical colleges of Lao PDR

2.2.3. Survey respondents

- Survey respondents are administrators and lecturers of 4 technical colleges, including (1) Champasak Technical College; (2) SeKong Technical College; (3) Attapue Technical College (4) Salavanh Technical College. The aim is to assess the current situation of vocational training, teaching staff and teaching staff development at the colleges. The total number of administrative staff is 80 people (04 rectors; 08 vice-rectors; 38 heads/deputies of faculties, departments; 30 heads/deputies of departments); The total number of the teaching staff is 363 people.

2.2.4. Survey methods and instruments

- Conduct surveys by questionnaires and interviews (according to the designed contents) with rectors, several vice-rectors, deputy heads of departments, faculties, key lecturers and administrators to consider the perception of teaching staff development and the level of performance in their professional areas.

- Conduct small group discussions with some rectors and vice-rectors of technical colleges about the function of the rector of a technical college, the requirements, advantages and disadvantages of the rector in implementing teaching staff development in a competence-based approach.

2.2.5. Processing the results of survey questionnaires by the mathematical-statistical method

* ***Evaluation method:*** The processing of the results of the survey questionnaires is based on the quantitative statistical method of the research results. The researcher used two assessment methods: quantitative by percentage method and scoring method.

2.2.6. Survey activities

- Conduct surveys by questionnaires and interviews (according to the designed contents) with rectors, several vice-rectors, deputy heads of departments, faculties, key lecturers and administrators to consider the

perception of teaching staff development and the level of performance in their professional areas.

- Conduct small group discussions with some rectors and vice-rectors of technical colleges at 04 technical colleges of Lao PDR.

Discussion contents: Discuss planning, recruitment, fostering, testing and evaluation of technical college lecturers

- Observe and study management records (work notebooks, work plans, minutes of college board meetings, work diaries) to review the performance of the management tasks.

2.3. The current situation of the teaching staff at technical colleges of Lao PDR

2.3.1. The current situation of quantity, training level, structure and professional functions of lecturers at technical colleges of Lao PDR

2.3.1.1. In terms of quantity and level of training

Table 2.2. Summary of training qualifications of the teaching staff of technical colleges

Faculty, Department	Number of lecturers	Level									
		Doctor		Master		University		College		Vocational school	
		No.	%	No.	%	No.	%	No.	%	No.	%
College 1	150	04	2,67	60	40,0	75	50,0	11	7,33	0	0
College 2	62	01	1,61	30	48,39	20	32,26	11	17,74	0	0
College 3	78	02	2,56	30	38,46	38	48,72	8	10,26	0	0
College 4	73	03	4,11	23	31,51	35	47,95	12	16,44	0	0
Total	363	10	2,75	143	39,39	168	46,28	42	11,57	0	0

(Data source: Department of Organization and Administration – technical colleges)

As can be seen from table 2.2, currently 04 colleges in Lao PDR have 363 lecturers. The training level of the teaching staff is still low. The number of lecturers with doctorate degrees accounts for only 16.1% to 4.11%. Meanwhile, lecturers with university and college degrees account for nearly 60%. This is a high percentage of college administrators who need to take measures to further improve their qualifications in the coming time.

2.3.1.2. Structure of the teaching staff by gender

Table 2.3. Structure of the teaching staff by gender

No.	School year	Number of lecturers	Ethnic		Gender			
					Male		Female	
			Number	%	Number	%	Number	%
1	2018-2019	360	12	3,33	190	52,78	170	47,22
2	2019-2020	358	14	3,91	183	51,12	175	48,88
3	2020-2021	363	16	4,41	193	53,17	170	46,83

(Data source: Department of Organization and Administration - technical colleges)

According to the statistics, the number of male and female lecturers is relatively balanced: in 2018-2019, the proportion of female lecturers was 47.22%; in the academic year 2020-2021, the proportion

of female lecturers was 46.83%. Although there was a decrease in the proportion of female lecturers, it is not significant. This rate is reasonable for technical colleges.

2.3.1.3. Structure of the teaching staff by age

The percentage of lecturers over the age of 50 was very low at 12.50%(the school year 2016-2017). They are long-term lecturers with experience in teaching, especially teaching students of engineering.

Lecturers in the age group of 41-50 are the leading teaching staff in each school, who needs to be fostered promptly. If this teaching staff is developed, they will have a positive influence on the quality of the teaching staff in the whole college.

The percentage of lecturers between the ages of 30 and 40 is 50% of the total number of lecturers in the colleges. This is the age when lecturers enjoy the maturity of their careers.

The percentage of lecturers under 30 years old is over 22%. These are young and enthusiastic teachers who are formally and methodically trained, and highly qualified.

2.3.1.4. Occupational title by job position

Table 2.5 shows that the teaching staff at technical colleges in Lao PDR have been active in improving professional titles, however, there are currently no senior lecturers in the colleges.

2.3.2. The current situation of quality and competence of the teaching staff in technical colleges of Lao PDR

2.3.2.1. The current situation of political awareness, ethics, lifestyle and professional responsibility of lecturers at technical colleges

Most of the responses assessed the professional quality of the teaching staff at technical colleges at the level of pass or above. In which, criterion 2 Professional ethics, with the highest average score (3.49-3.58) achieved a good level. This means that the management staff of colleges has paid attention to this content. Besides, the content of Lifestyle and manners had an average score of 2.88 and 2.94 respectively, reaching the good level. Therefore, the management staff needs to continue to pay more attention to the work of fostering lifestyle and behavior to develop the teaching staff.

2.3.2.2. The The current situation of professional competence of lecturers in a competence-based approach in technical colleges

Most of the responses of administrators and lecturers are rated at Passing or above. However, many responses are showing that the professional competence of the teaching staff at technical colleges is not high.

2.3.2.3. The current status of scientific research competence of lecturers in a competence-based approach in technical colleges

The criteria for scientific research competence of lecturers at technical colleges are rated at Passing or above. Specifically, the criterion, "Scientific Research Guide" achieved an average score of 2.54

and 2.55 respectively, reaching the good level. The management staff is interested in directing faculties and departments to carry out their assigned tasks of guiding student research. Although certain achievements have been made, the results of students' scientific research have not yet reached the set goals. Management staff should continue to pay attention and take measures to improve lecturers' competence to guide students in scientific research.

2.3.2.4. The current situation of competence to build a democratic educational environment and develop social relations of lecturers at technical colleges

The competence to build a democratic educational environment and develop social relations of lecturers at technical colleges was rated at Pass or above.

2.3.3. General assessment of the current status of lecturers at technical colleges

2.3.3.1. Strengths

The current teaching staff at technical colleges in Lao PDR is adequate compared to the training scale. The training level of the lecturers of the colleges is basically the same.

The gender structure of lecturers at technical colleges in Lao PDR does not differ much. This ratio is favorable for the teaching activities as well as other educational activities.

Most of the teaching staff were assessed to have political qualities, and their professional ethics are assessed at a high level. The teaching staff has the professional knowledge, and the guidance of students in scientific research has been effectively implemented. The competence to build a democratic educational environment and develop social relations of lecturers at technical colleges has performed well.

2.3.3.2. Limitations

Currently, the training level of the teaching staff is still low. Especially, lecturers with doctorate degrees are only 1.61% to 4.11%.

Many lecturers have not met the quality requirements; especially their teaching methods are innovated slowly; they have not actively participated in scientific research to improve their professional knowledge. On the other hand, the current teaching staff in colleges is still unbalanced in terms of age, gender and asynchronous in the professional structure; the number of young lecturers is small; lack of transition between generations; the ratio of female and male lecturers still has a big gap.

The age structure is not uniform; the percentage of teachers over 50 and under 30 years old is low. Up to now, there are no lecturers with the title of senior lecturer. Some lecturers have poor professional responsibilities, and their competence in program development is still limited. The works of scientific research of lecturers are limited.

2.4. The current situation of teaching staff development in a competence-based approach at technical colleges of Lao PDR.

2.4.1. The current situation of awareness of administrators and lecturers about the importance of teaching staff development in a competence-based approach at technical colleges of Lao PDR

The vast majority of respondents are aware of the importance of teaching staff development at technical colleges in Lao PDR. Specifically, 95% of the management staff perceive that it is important and very important. This is a strength because when the management staff is properly aware of the importance of teaching staff development at technical colleges, they will take measures to organize it effectively.

In addition, 93.11% of the lecturers rated teaching staff development at the very important and important level, but 6.89% still rated it as unimportant. This is something that the management staff needs to pay more attention to and take measures to overcome the above limitations.

2.4.2. The current situation of planning teaching staff in a competence-based approach at technical colleges

Currently, the planning work has been paid attention to. There are many contents with evaluation opinions at the level of average or higher. However, there is still a weak and poor assessment rate, which sets out for the management staff to find out the causes and propose measures to overcome those limitations and inadequacies.

2.4.3. The current situation of recruitment and use of teaching staff in a competence-based approach at technical colleges

Some contents are rated as good and quite good. However, most of the contents are still weak and low rate. In each different content, the rate of assessment is similar between the two subjects: administrators and lecturers. This means that those contents in the practice of colleges have coincided with the survey results.

Basically, the colleges have implemented recruitment according to regulations, but recruitment is only based on the criteria of degrees and certificates; there is no competence assessment system and recruitment according to the competence of the teaching staff. The colleges have arranged to use the teaching staff according to the right qualifications, ensuring fairness, objectivity and compliance with regulations; recruitment associated with employment in the direction of downsizing the staff, in accordance with the law.

2.4.4. The current situation of training and fostering teaching staff in a competence-based approach in technical colleges

+ The content of training to improve professional qualifications (sending lecturers to master and doctorate training programs) was assessed as good by management staff and lecturers with the highest

score ($\bar{X} = 3.56 \div 3, 62$). This is the most appreciated content in the training and retraining activities, in response to the requirements of educational innovation. The management staff has paid good attention to the training and retraining to improve the professional qualifications of the lecturers.

- + The contents of fostering foreign languages, informatics, political theory, social work skills and fostering soft skills were rated average by administrators and lecturers ($\bar{X} = 2.78 \div 3, 15$ points), of which there are still opinions for weak and poor performance.

- + Forms of training and fostering teaching staff according to the plan of the Ministry of Education and Training, organizing training courses, fostering vocational skills, and pedagogical skills, the performance results are assessed at a good level (management staff: 3.1 and lecturers: 3.0 points).

- + Forms of training for teaching staff or mentoring activities of experienced administrators and lecturers, and applied scientific research activities are only assessed at an average level of performance (administrators: 2.83 and lecturer: 2.76 points).

- + Forms of fostering the teaching staff through self-training and self-retraining of lecturers in the process of vocational training and experience at enterprises achieve weak performance, the lowest score (Managers rate from 2.74 and lecturers rate from 2.75 points).

- The training and retraining work of the colleges in the southern region in particular has contributed step by step to meet the requirements of improving professional qualifications, perfecting the basic education system and improve the quality of teaching staff. However, there are limitations:

- + The work of building and developing the staff has not been paid due attention by all levels and sectors (especially the fostering activities to improve foreign language competence, informatics, vocational skills and assessment of vocational skills for the staff); planning is not high; there is a lack of implementation conditions such as specific funding plans, mechanisms and policies; A part of lecturers is not fully aware of the need for training to improve the quality of the staff.

- + The implementation efficiency of training programs is not high: The content and programs are not close to the training needs of the subjects (not focusing on groups of competencies, fields of occupations that the lecturers are lacking or weak in); the quality of fostering has not kept up with the tasks and the current standards of college lecturers; the training period is not reasonable (mainly during the school year); The post-training evaluation has not been paid much attention.

2.4.5. The current situation of implementing regimes and policies and building a competence-based teaching staff development environment in technical colleges

The policy regime is the leverage factor in the human resource development of the college, therefore, it plays an important role in promoting the staff to improve professional qualifications. Table 2.14 shows that most of the content of the implementation of the policy regime and the environment for the development of the teaching staff is rated at an average level. In addition, some contents have weak and poor evaluations. Specifically, two contents are evaluated at a high and good level: Diversity of forms of taking care of material life and morale for lecturers; Timely implementation of policies and regimes, ensuring the interests of lecturers, with the average score by the management staff at 3.74 and 3.9 respectively; lecturers' evaluation at 3.69 and 3.88; none of them rated these contents at a weak level. This is an important content, giving the teaching staff peace of mind. In addition, two contents: Implementing fair, public and democratic emulation and commendation; Having policies to attract and treat good and highly qualified lecturers. The average scores are 2.98 and 2.78 by administrators; 2.90 and 2.74 by lecturers. These are the contents that have a weak or poor rating.

2.4.6. The reality of testing and evaluating teaching staff in a competence-based approach in technical colleges

The content "Developing a plan for testing and evaluating teaching staff periodically, irregularly/yearly" has an average score of 3.78 by administrators, and 3.71 by lecturers. This is a good level, demonstrating that the management staff is interested in developing inspection and evaluation plans for the teaching staff. This creates favorable conditions for the management staff to proactively grasp the strengths and weaknesses of the college faculty. The content with high evaluation is: "comprehensive examination and evaluation of lecturers' activities to ensure democracy, publicity and objectivity in accordance with regulations" with an average score by the administrative staff and lecturers at 3.4 and 3.54 respectively. These are the contents that the management staff need to continue to pay attention to and promote further to improve the quality of technical college lecturers.

2.5. The current situation of factors affecting teaching staff development in a competence-based approach in technical colleges

Most of the comments assessed the factors as influential and very influential on teaching staff development in a competence-based approach. In addition, there are also responses with little influence. Specifically, the factor "Perception of administrators and lecturers" has

average scores of 4.01 and 4.0. This is an important factor determining the direction and self-discipline in the training of the teaching staff.

The factor "Pedagogical environment, reputation, brand of the college" has many opinions rated as having little influence with 114 comments, accounting for 31.40% of the assessment as having little influence. And 13 opinions of administrators accounted for 16.25% of the assessment of low impact. This is a limitation that the management staff and lecturers need to consider carefully to create conditions for the teaching staff to develop.

2.6. General assessment of teaching staff development in a competence-based approach in technical colleges of Lao PDR

2.6.1. Strengths

The Party, State and people of Lao PDR increasingly attach importance to the role of education, pay more attention to and require education to innovate and develop to meet the needs of all classes of people in learning and acquiring professional knowledge and skills, practice necessary qualities and competencies in the period of national industrialization and modernization and international economic integration.

The policy of the Party and State towards the cause of education in recent years is a legal advantage for the construction and development of the teaching staff.

Laos has a tradition of studiousness, and the cause of education has received the attention of all levels of Party committees, local authorities and the entire people.

The People's Committees of the provinces and the Departments of Education and Training have implemented a decentralization mechanism that assigns autonomy in personnel and financial management to technical colleges, creating favorable conditions for technical colleges. Along with the rise of socio-economic fields, colleges have increased investment in training and fostering staff and lecturers; on teaching equipment... in order to improve teaching quality.

2.6.2. Drawbacks

The awareness of some administrators and lecturers about teaching staff development is not adequate. The staff development planning is not really appropriate; the new development plans are mainly concerned with solving immediate problems, but not have a long-term strategy.

The selection and use of lecturers according to their competence has not formed a standardized process, lacks the initiative of faculty and subject groups, has not created motivation for lecturers to strive and has not brought into full play the potential of the teaching staff.

The training, fostering and development of new lecturers mainly focus on improving their academic qualifications to ensure the criteria for

the percentage of lecturers with master's and doctoral degrees, but not on improving the competence of the teaching staff. Some competence development activities for teaching staff have not been organized regularly or very rarely.

The evaluation of lecturers has been implemented, but it is not effective because the assessment has not been carried out according to the competence of the lecturers; the evaluation and screening of the teaching staff are still formal, respectful and lacks seriousness, so it has not been effective; the evaluation criteria are still general and not specific, in which new research projects, initiatives, articles and scientific contributions to the engineering industry have not been highly valued.

The policy of remuneration for lecturers is outdated because it has not implemented the treatment of lecturers according to their competence. The payment of salary is still based mainly on the volume of teaching and seniority, not on the achievements and dedication of each lecturer, so it has not created the motivation for the lecturer to improve their task performance.

2.6.3. Reasons

The Personnel Department has not yet advised the Board of Rectors to do well in planning, forecasting the size of colleges and classes, the structure of demand for teaching staff, leading to a situation of local redundancies and unreasonableness among training majors.

The management decentralization is still unclear, and the overlapping status does not clearly define the tasks and powers between the management levels, leading to the extrusion of responsibility and the work not achieving the desired results, being passive at work, especially in the management of lecturers.

Some administrators themselves have not really tried hard to learn to improve their qualifications or regularly update new knowledge and information to enrich their knowledge for teaching.

The colleges have established internal regulations, but do not have strict requirements for self-study, self-improvement to improve professional qualifications, professional qualities, ethics and lifestyle of the teaching staff. Therefore, there is still a part of lecturers who have not met the increasingly demanding requirements of society.

Facilities, teaching aids, reference materials, reading rooms, and libraries do not meet the requirements.

There is no policy to attract good lecturers from outside sources or select students who graduated from the college with high academic achievements to be trained to become lecturers of the college later.

Currently, the standards and criteria to evaluate the teaching staff to meet the requirements still have many shortcomings; the criteria are still not specific and difficult to evaluate. Meanwhile, the application of assessment methods is still monotonous, not suitable for each subject and each teaching specialty.

2.7. Experiences of some countries such as Germany, Japan, Singapore and Korea on teaching staff development in a competence-based approach and lessons learned in teaching staff development at technical colleges of Lao PDR

* Lessons learned in developing the teaching staff of the Technical College of Lao PDR

Through the experience of the above countries, it is possible to confirm the role of education and educational development. Specifically, education development is an organic part of each country's economic development strategy; affirming that teachers in general and college lecturers in particular have a decisive role in ensuring the quality of vocational education.

The educational innovation trend is oriented from focusing on knowledge development to competence development. The model of training lecturers in the world is that lecturers must have been trained in universities. Although lecturers have graduated, they must work in actual production activities and be certified by production facilities as a teacher.

Developing college lecturers is a continuous process, linking from initial training (quality at university) to supplementing and perfecting in the process of professional performance, thanks to the training, accumulation and facilitation of the college's conditions, environment, and culture. Developing the teaching staff not only in terms of quantity and structure but also focusing on the quality, competence and consensus of the staff. Developing a staff of college lecturers both promotes the nation's traditions and inherits the experience of advanced countries.

It can be seen that the homogeneity in the application of the model (framework) of faculty competencies to the development of the teaching staff shows that all countries have the same opinion according to the overall model of teachers of the 21st century by UNESCO. It is aimed at training the competencies and qualities of a genuine scientist, a dedicated pedagogue, and an active socio-cultural activist. Developing a teaching staff according to the overseas competence-based approach is a "standardized" method that integrates knowledge, skills, and attitudes, forming a system of professional competency standards such as scientific research; teaching competence; leadership and management competence; sociocultural competence; strategy and vision; competence for community development and individual quality/efficacy (individual competence). Experience in teaching staff development in colleges and universities according to the overseas competence-based approach focus on 4 basic contents (1) Building a competency framework and standards for lecturers; (2) Selection of lecturers; (3) Use of lecturers; (4) Building a working environment for lecturers.

The experience of teaching staff development in a competence-based approach in foreign countries can be applied to the development of college lecturers in a competence-based approach in Lao PDR in the current context.

Summary of chapter 2

Based on the theory from Chapter 1 and the current situation investigation in Chapter 2, we have analyzed and identified the overall strengths, limitations and causes of existence and inadequacies of the current situation of teaching staff development in a competence-based approach in technical colleges. In particular, we have pointed out the shortcomings of the current situation of the teaching staff in a competence-based approach in colleges: there is still a lack in quantity; the structure is not reasonable, the quality is still low, and the requirements for educational innovation have not been met. The current situation of teaching staff development in a competence-based approach in colleges in the southern region has limitations: Standard of lecturers has not been put into practice; planning, recruitment, use and evaluation of the teaching staff are not based on their competence; training and retraining are not based on the needs of competence development of lecturers and teaching staff; the conditions and environment are not favorable: the salary regime and policy for lecturers are not commensurate with the characteristics of technical college training activities.

Chapter 3. MEASURES OF TEACHING STAFF DEVELOPMENT IN A COMPETENCE-BASED APPROACH AT TECHNICAL COLLEGES IN LAO PDR

3.1. Some basic orientations for the development of technical colleges of Lao PDR

3.2. Principles of proposing measures: *Ensure the uniformity of measures; Ensure the inheritance of the measure; Ensure the urgency of the measure; Ensure the feasibility of the measure.*

3.3. Some measures to develop the teaching staff in a competence-based approach in technical colleges of Lao PDR

3.3.1. Raise awareness for administrators and lecturers about the meaning and importance of teaching staff development in a competence-based approach in technical colleges

3.3.2. . Make plans for developing the teaching staff of technical colleges by job position

3.3.3. Organize the selection and use of lecturers at technical colleges based on their competence

3.3.4. Organize training and retraining of lecturers at technical colleges according to the professional competency framework

3.3.5. Evaluate the teaching staff at technical colleges according to the professional competency framework

3.3.6. Develop a working environment for lecturers of technical colleges to promote and develop their professional competence

3.4. The relationship between measures

Measures have shown steps from raising awareness, innovating and perfecting planning, to practical measures in teaching staff development to meet the requirements of educational innovation.

In the process of implementing measures, it is necessary to apply reasonable and scientific methods to bring the highest efficiency.

3.5. Testing the necessity and feasibility of the measures

3.5.1. Purpose

The purpose of the test is to collect information to evaluate the necessity and feasibility of the proposed measures to develop the teaching staff in a competence-based approach at technical colleges. Accordingly, we could adjust inappropriate measures and further confirm the reliability of the measures which were highly appreciated by many people.

3.5.2. Contents and methods of the experiment

3.5.2.1. Testing content

The content of the test focused on two main issues:

First: Are the proposed measures really necessary for teaching staff development in technical colleges today?

Second: Under current conditions, are the proposed measures feasible for teaching staff development in technical colleges at present?

3.5.2.2. Testing methods

Design questionnaire with 3 levels of rating:

+) Very necessary, necessary, unnecessary.

+) Very feasible, feasible, not feasible.

3.5.3. Test subjects

To find out the necessity and feasibility of the proposed measures, we surveyed 175 people including leaders, administrators, deans, heads of departments and key lecturers.

3.5.4. Results of testing the necessity and feasibility of the proposed measures

3.5.2.1. Necessity of the measures

Participants highly appreciated the necessity of measures to develop teaching staff at technical colleges proposed in the thesis. The average scores are all between 2.85 and 2.93. This confirms that the measures in the thesis are necessary for the process of developing teaching staff in technical colleges.

Among the 6 proposed measures, the measure "Developing a working environment for college lecturers based on their ability and job position" is considered essential with an average score of 2.93 (100%), ranked first out of 6 measures.

3.5.2.2. Feasibility of the management measures

The survey results for the ranking of the feasibility of management measures in Table 3.2 are different from the urgency of the proposed measures. That difference is inevitable and objective because the subjects have different working positions, and their qualifications are also uneven, so when analyzing and explaining, they also follow their subjective opinions.

On the other hand, the measures are extremely urgent; however, they cannot be done overnight, but need a combination of forces, leadership's attention to the mechanism and investment in education. However, in the opinion of administrators and lecturers, the proposed measures have a clear purpose, content and implementation method, so the feasibility of the measures is assessed at a high level.

3.5.2.3. Correlation between the necessity and feasibility of the measures

The researcher shows the correlation between the necessity and feasibility of the proposed new measures in the chart below:

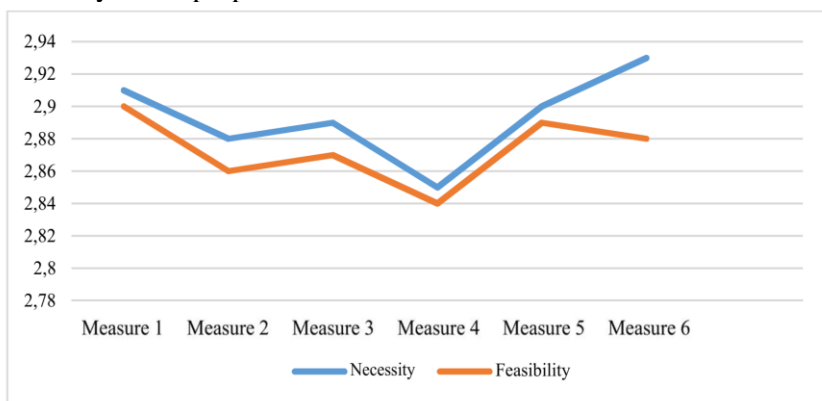


Chart 3.1. Correlation between the necessity and feasibility of the proposed measures

3.6. Organization of the experiment on the proposed measure

3.6.1. Experiment purpose

To verify the effectiveness and feasibility of the proposed measure: "Organize training and fostering of teaching staff in a competence-based approach at technical colleges".

3.6.2. Experiment hypothesis

It is possible to improve the effectiveness of training and fostering of technical college lecturers if the following measures are applied: "Organize training and fostering of teaching staff in a competence-based approach at technical colleges".

3.6.3. Experiment content

Due to legal conditions and research time, the researcher only tested the content of measure 4: "Organize training and retraining of lecturers at technical colleges according to the occupational competency framework".

3.6.4. Experiment participants

The lecturers were divided into 2 groups

Group 1: (experimental group) was fostered according to the method of managing fostering lecturers proposed by the researcher.

Group 2: (control group) was fostered according to the traditional management method.

3.6.5. Experiment stages

Preparation: Compiling documents to prepare for the experiment, building testing instruments including survey questionnaires, assessments, and interview questions for experts.

Experiment steps:

To conduct the experiment, the researcher conducted the following steps:

Step 1: Evaluate the program development process and the quality of lecturers in colleges from the two target groups (control group and experimental group) identified at the same time.

Step 2: Apply the proposed management measures

The control group was fostered according to the traditional management method. The experimental group was fostered according to the method of managing fostering lecturers proposed by the researcher.

Step 3: Measure the results and changes in fostering for teachers at technical colleges in Laos.

After the experimental period, measure the results of professional competence-building activities for technical college lecturers on pedagogical competence in both groups of subjects. From there, we could conclude the effectiveness and feasibility of the tested measure.

3.6.6. Processing the experiment results

The testing results were collected from survey samples, minutes of collecting results of the assessment of pedagogical competence of lecturers, and expert opinions during the testing process. The researcher synthesized the survey data, processes mathematical and statistical formulas such as mean, and Spearman's hierarchical correlation coefficient to analyze and compare quantitatively the test results; compared the results of the impact of the researcher's proposed management measures on the experimental group with the control group (50 lecturers who were not affected). From there, specific conclusions are drawn about the proposed measures. Then, we analyzed expert opinions through interviews to have more grounds to confirm the effectiveness of the proposed measure.

3.6.7. Evaluation Criteria

Criteria for evaluating pedagogical fostering activities for lecturers.

We can affirm the effectiveness of the measure "Organize training and fostering for teaching staff at technical colleges according to the professional competency framework" with the following criteria:

Contents of fostering pedagogical competence of lecturers at technical colleges (professional competence, teaching competence; competence to assess learners' learning results; competence to develop the learning environment, competence for training for students; competence for education and educational counseling; competence to understand the development of learners after graduation; competence to develop training programs; competence for educational scientific research and specialized science; competence to work in an internationalized environment; competence for professional development; competence to cooperate with stakeholders, cooperate with the community for community development)

3.6.8. Measurement time

The implementation period is from July 1, 2019 to July 1, 2021

- Measure before the experiment (before fostering according to the proposed measure): Measure the experimental group and the control group.

- Measure after the experiment (after fostering): Measure the experimental group and the control group

3.6.9. Experiment results

3.6.9.1. Pedagogical competence of lecturers before the experiment

Table 3.4 shows that the criteria for assessing the competence of the lecturers before the experiment of the control group were not high, with the average score from 1.76 to 2.2. The highest average score is criterion 1: professional competence, teaching competence; the lowest is criterion 10: competence to cooperate with stakeholders, and cooperate with the community for community development.

Table 3.5 shows that the assessment of the competence of the lecturers before the experiment of the experimental group is low, in which the criterion 1 (professional competence, teaching competence), which is considered the basic competence of the lecturers, had a mean score of 2.22 higher than the mean score of the control group. Meanwhile, criterion 10 has the lowest average score. This shows that, before the experiment, the competence of the teaching staff was assessed as not high.

Table 3.6 summarizes the survey results on the competence of technical college lecturers before the experiment of the two basic groups of subjects is equivalent to the deviation in the criteria between the two groups of subjects, which is very small; the biggest is 0,12 and the smallest is -0.06.

3.6.9.1. Pedagogical competence of lecturers after the experiment

Table 3.4; 3.6 and chart 3.2 show the changes in pedagogical competence of lecturers in the two groups of subjects.

The competency criteria of college lecturers increased markedly compared to before the experiment. The rate of good criteria before the

experiment of the control group was assessed from 4.0% to 36.0%. After the experiment, the rate of assessment of competency criteria of lecturers who were rated well increased from 40.0% to 66.0%. The mean score of the control group was 1.88 to 2.22; the experimental group increased from 2.24 to 2.64.

3.6.9.2. Summary of the experiment

The experiment has confirmed the feasibility of the measure: "Organize training and fostering for teaching staff in a competence-based approach at technical colleges"

Thus, the application of the measure: "Organize training and fostering for teaching staff in a competence-based approach in technical colleges" is highly effective in improving the competence of the teaching staff to meet the requirements of educational innovations.

Summary of chapter 3

Based on the orientation of developing education, training and vocational training, human resource development and socio-economic development in the southern region for the period 2011-2020; based on the decision of the Ministry of Education and Sports approving key occupations and key colleges to be invested by 2025 of Lao PDR; and based on the actual survey, consultation with experts, administrators and lecturers of technical colleges, the researcher has proposed 6 measures to develop the teaching staff in a competence-based approach at technical colleges to meet the needs of human resource training by 2025, including 6 measures.

The proposed measures aim to influence the management subjects and stages of the management process from the planning stage; the direction of recruitment and use, training and fostering, cooperation relations, implementation of regimes and policies; inspection and evaluation in order to develop a staff of technical college lecturers, sufficient in quantity, synchronous in structure and quality assurance to meet human resource training needs by 2025 with orientation to 2030.

The researcher has conducted consulting with experts, administrators, and lecturers at technical colleges. The consulting results confirm that the proposed measures are necessary and feasible.

The experimental results also confirm that the measures proposed by the researcher are effective in developing the competence-based teaching staff at technical colleges to meet the needs of human resource training.

CONCLUSIONS AND RECOMMENDATIONS

1. Conclusion

Based on the results of the research "Developing the teaching staff in a competence-based approach in technical colleges of Lao PDR", the researcher can draw the following conclusions:

Technical colleges play an important role in training high-quality human resources, contributing to the socio-economic development of the locality and region. Developing the teaching staff of technical colleges is decisive for meeting the needs of human resource training, contributing to socio-economic development in the context of industrialization and modernization and international integration.

Developing the teaching staff of technical colleges to meet the needs of human resource training is the impact of the management entity to ensure that the teaching staff is qualified and meets the requirements in terms of quantity, quality, organization and quality according to regulations, and at the same time is affected by objective and subjective factors in the conditions of regional and international integration. The content of teaching staff development in a competence-based approach at technical colleges includes the following stages: Planning; Recruitment and use; Training and fostering; Implementing Policies and Evaluation.

Through the survey on the current situation, we can see that along with the development of the network of vocational education institutions, the training scale and structure, the teaching staff of technical colleges has also developed, contributing to the training of human resources of the region. In addition, compared with the human resource demand by 2025, with orientation to 2030, the college lecturers are still limited in quantity, professional skills, pedagogical skills, scientific research competence, foreign language proficiency and computer skills. These skills need to be addressed satisfactorily.

The survey also shows that the administrators of technical colleges are interested in making plans for the development of lecturers in association with the plans for human resource development in technical colleges. However, compared with the requirements of human resource training by 2025, teaching staff development in a competence-based approach at technical colleges is still limited in terms of awareness, planning, recruitment and use, training and fostering, implementing policy regimes, testing and evaluation.

Based on the orientations for education and training development, human resource development and socio-economic development for the period 2011-2020; based on the decision of the Ministry of Education and Sports approving key occupations and high-quality colleges which are invested until 2025 and based on the results of the surveys, consultations with experts, administrators and lecturers of technical colleges, the researcher has proposed 6 measures to develop the teaching staff in a competence-based approach at technical colleges in the direction of meeting standards and meeting human resource training needs by 2025, with orientation to 2030.

Measure 1. Raise awareness for administrators and lecturers about the meaning and importance of teaching staff development in a competence-based approach in technical colleges

Measure 2. Make plans for developing the teaching staff of technical colleges by job position

Measure 3. Organize the selection and use of lecturers at technical colleges based on their competence

Measure 4. Organize training and retraining of lecturers at technical colleges according to the professional competency framework

Measure 5. Evaluate the teaching staff at technical colleges according to the professional competency framework

Measure 6. Develop a working environment for lecturers of technical colleges to promote and develop their professional competence.

The proposed measures aim to influence the management subjects and stages of the management process: planning, selection and use, training and fostering, implementation of regimes and policies, testing and assessment in order to develop a staff of technical college lecturers who are qualified, sufficient in quantity, synchronous in structure and quality assured, to meet the needs of human resource training by 2025.

The results of the surveys with administrators, lecturers, experts and scientists show that the proposed measures are both necessary and feasible.

The experimental results also confirm that the proposed measures are highly effective in developing the teaching staff in a competence-based approach of technical colleges to meet the needs of human resource training.

2. Recommendations

2.1. For the Government

2.2. For the Ministry of Education and Sports

2.3. For the People's Committees of the provinces and cities of Laos.

2.4. For technical colleges

2.5. For the staff of technical college lecturers