Influence of Enhancing Academic Motivation, Professional Competence of Teachers and Work Empowerment on Teachers' Instructional Quality through Teachers' Self-Efficacy Mediator in Universities of Lao People's Democratic Republic (Lao PDR)

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ABSTRACT

The purpose of this research was to develop a causal relationship model that influences the teachers' instructional quality of university teachers in the Lao People's Democratic Republic (Lao PDR) and to examine the consistency of the model developed with empirical data. This quantitative research used questionnaires as research instrument. The sample was 351 teachers, from four Lao universities. The SPSS program was used to analyze the data for basic information and the LISREL program was used to analyze the causal relationship model.

The research results were: 1) Enhancing academic motivation had a direct positive influence on the teachers' instructional quality (TIQ) of 0.23 and an indirect influence through the teachers' self-efficacy (TSE) of 0.18. Professional competence of teachers had a direct negative influence on TIQ of - 0.26 and an indirect influence of 0.36. Work empowerment had a direct positive influence on TIQ of 0.27 and an indirect influence through TSE of 0.21. Work empowerment had a direct effect on TSE

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of 0.44 and TSE had a direct positive influence on TIQ of 0.47. 2) The causal relationship model was very well fitted with the empirical data (x2 = 62.95, df = 116, x2/df = 0.54, P-value = 0.99, GFI =0.98, AGFI = 0.97, SRMR = 0.026, RMSEA = 0.000). The model could explain the variance of the Teachers' Self-Efficacy (TSE) by 39% and the variance of the Teachers' Instructional Quality (TIQ) by 78%.

KEYWORDS: Teachers' Instructional Quality, Enhancing Academic Motivation, Professional Competence of Teachers, Work Empowerment, Teachers' Self-Efficacy

อิทธิพลของการเสริมสร้างแรงจูงใจทางวิชาการ ความสามารถของอาจารย์มืออาชีพ และการเสริมสร้างพลังการทำงานที่มีต่อคุณภาพการเรียนการสอน ของอาจารย์ผ่านตัวแปรคั่นกลาง การรับรู้ความสามารถแห่งตน ของอาจารย์ มหาวิทยาลัยในสาธารณรัฐประชาธิปไตยประชาชนลาว (สปป. ลาว)

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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์ เพื่อพัฒนาโมเดลความสัมพันธ์เชิงสาเหตุปัจจัยที่ส่งผลต่อคุณภาพการเรียนการสอนของอาจารย์มหาวิทยาลัยในสาธารณรัฐประชาธิปไตยประชาชนลาว (สปป. ลาว) และเพื่อตรวจสอบความสอดคล้องของโมเดลที่พัฒนาขึ้นกับข้อมูลเชิงประจักษ์ เป็นการวิจัยเชิงปริมาณ โดยใช้แบบสอบถามเป็นเครื่องมือวิจัย ตัวอย่างที่ใช้ในการวิจัย คือ อาจารย์มหาวิทยาลัยใน สปป.ลาว 4 แห่ง จำนวน 351 คน วิเคราะห์ข้อมูลพื้นฐานด้วยโปรแกรม SPSS และวิเคราะห์รูปแบบความสัมพันธ์เชิงสาเหตุด้วยโปรแกรม LISREL

ผลการวิจัย พบว่า: 1) การเสริมสร้างแรงจูงใจทางวิชาการ มีอิทธิพลทางตรงเชิงบวก ต่อคุณภาพการเรียนการสอนของอาจารย์ (TIQ) เท่ากับ 0.23 และอิทธิพลทางอ้อม โดยผ่านตัวแปรคั่นกลางการรับรู้ความสามารถแห่งตนของอาจารย์ (TSE) เท่ากับ 0.18 ความสามารถของอาจารย์มืออาชีพ มีอิทธิพลทางตรงเชิงลบต่อ (TIQ) เท่ากับ - 0.26 มีอิทธิพลทางอ้อมโดยผ่าน (TSE) เท่ากับ 0.36 การเสริมสร้างพลังการทำงาน มีอิทธิพลทางตรงเชิงบวกต่อ (TIQ) เท่ากับ 0.27 มีอิทธิพลทางอ้อม โดยผ่าน (TSE) เท่ากับ 0.21 และ การเสริมสร้างพลังการทำงาน มีอิทธิพลทางตรงต่อ (TSE) เท่ากับ 0.44 และ (TSE) มีอิทธิพลทางตรงเชิงบวก (TIQ) เท่ากับ 0.47. 2) การพัฒนารูปแบบ

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ความสัมพันธ์เชิงสาเหตุของปัจจัยที่ส่งผลต่อคุณภาพการเรียนการสอนมีความสอดคล้องกับข้อมูลเชิงประจักษ์อยู่ในเกณฑ์ดี (x^2 = 62.95, df = 116, x^2/df = 0.54, P-value = 0.99, GFI =0.98, AGFI = 0.97, SRMR = 0.026, RMSEA = 0.000) โดยรูปแบบความสัมพันธ์เชิงสาเหตุนี้สามารถอธิบายความแปรปรวนของการรับรู้ความสามารถแห่งตนของอาจารย์ ได้ร้อยละ 39 และอธิบายความแปรปรวนของตัวของคุณภาพการเรียนการสอนได้ ร้อยละ 78

คำสำคัญ: คุณภาพการเรียนการสอนของอาจารย์ การเสริมสร้างแรงจูงใจทางวิชาการ ความสามารถของอาจารย์มืออาชีพ การเสริมสร้างพลังการทำงาน การรับรู้ความสามารถแห่งตนของอาจารย์

INTRODUCTION

The overall goals of future development are to elevate Lao People's Democratic Republic (Lao PDR) to have economic growth at a moderate and stable level; and to develop human resources who will be equipped with suitable knowledge and ability (UNESCO, 2011). In developing human resources to have the right knowledge and capabilities, it is needed to improve the education of the country. In particular, higher education teachers need to be strengthened academically. Universities need to adapt to these changes for higher quality of education at the national level. Especially, higher education institutions are critically important to the well-being of the countries in which they are situated (Ministry of Lao Education & Sports or MoES, 2015).

The quality of Lao education has not reached international standards as well as the instructional quality of university teachers in Lao PDR and it is generally accepted that the Lao quality of education especially the quality of instruction is quite low compared to universal countries which is the most fascinating and a problem that needs to be resolved urgently (MoES, 2013). Therefore, in order to develop instruction of teachers to have a good quality and meet standards as required, the MoES (2015) has set up the Teacher Education Strategy 2016-2020 in line with the 2030 vision, strategic plan towards 2025 to raise the quality of instruction in the teachers training institutes as well as in higher education or universities to improve and develop the quality of instruction and to meet the set goals. In line with the Quality Assurance Agency for Education (2016) stated that the instructional quality is very important for improving education with emphasis on university teachers. If the university is managed correctly, teachers will be able to teach well. From the cause of the problem, it is therefore necessary that the MoES as well as the Department of Higher Education (2013) must improve the quality of instruction urgently to keep up with the prosperity of the world, at least among ASEAN member countries. Under various shortages, the state has to rely on the

teacher's self-improvement to have the ability and confidence in teaching and learning quality. Therefore, researchers have studied and reviewed literatures and found that there are many factors that can improve the teachers' instructional quality at a university level.

LITERATURE REVIEW

Teachers' Instructional Quality

The instructional quality is a structure that reflects the quality of instructors who are well-known to be positively related to the work of students. Teachers' instructional quality (TIQ) also refers to the effective management of instruction (International Association for the Evaluation of Educational Achievement, 2016). The TIQ consists of four indicators: the teacher support, the cognitive activation, the classroom management and the clarity of instruction (Scherer *et al.* 2016 cited to Klieme 2013; Quality Assurance Agency for Education (2016); Nilsen *et al.* (2016 cited to Rakoczy *et al.* 2010; Decristan *et al.* 2012).

Supportive climate means teachers share knowledge, have clear communication and provide accurate information, including caring and encouraging students in learning Teachers follow-up and counsel their students; organize an environment of respect and harmony within the classroom. Teachers give positive and creative suggestions to their students. Teachers introduce students to the full extent of classroom activities, manage the classroom and oversee the students' progress check (Nilsen *et al.,* 2016 cited to Kane & Cantrell, 2012 and Klieme *et al.,* 2009).

Cognitive activation refers to the abilities of teachers to challenge the students' understanding of the basic level of teaching (Nilsen *et al.,* 2016 cited Klieme *et al.* 2009), including: encouraging students to connect their prior and new knowledge while teaching, organize teaching activities to assess students' knowledge and spark students' interest learning. Teachers compare, give reasons, describe and

analyze activities by using open-ended questions (Lipowsky *et al.* 2009). Teachers encourage students to participate in creating and reflecting on the ideas in high level education (Klieme *et al,* 2009).

Effective classroom management means teachers create a supportive environment and facilitating academic, social and emotional learning (Seiza *et al.,* 2015), includes observing students' behavior and creating clear rules for prevention and management of students' interference during teaching and learning. Teachers immediately manage during student interference and continue observation of the students' behavior (Lipowsky *et al.,* 2009).

Clarity of instruction refers to the teachers' ability to determine an explicit set of learning goals for developing cognitive awareness among students (Klieme *et al.,* 2009 cited to Clark & Mayer, 2003 and Lemke, 1990). It includes a clear set of learning plans or structures and comprehensive learning goals. Teachers introduce or offer lessons by linking the old and new contents, using the coherence of teaching activities and evaluate, summarize, and review of instruction (Nilsen *et al.,* 2016 cited to Klieme *et al.,* 2009 and Kane & Cantrell, 2010 and 2012).

Enhancing academic motivation

Enhancing academic motivation refers to the executives encourage the teachers to have the desire to create a job, bring prosperity and achievement of goals to the institute (Scott & Scott, 2015). Scott and Scott presented the key areas for enhancing academic motivation to engage in learning of instructional quality in a university in the context of contemporary higher education institutions: the creating collaborative culture, the academic pedagogical development, the resourcing of teaching and learning infrastructure and the systematic reflection and action planning.

Creating collaborative culture means the universities' executives accelerate positive changes in educational institutes to encourage a collaborative atmosphere, including the engaging with all academic roles of instruction, research and service or

leadership (Scott and Scott, 2015 cited to Burnett and Huisman, 2010). The executives encourage teachers to communicate and work together, support them to create a teaching and learning community, support them on the learning mechanism, encourage them to review the teaching course and encourage them joint assessment practice (Scott and Scott, 2015 cited to Schon, 1987 & Ramsden, 2003).

Academic pedagogical development refers to the universities' executives providing teachers the professional advancement by improving formal and informal instruction, including giving teachers the opportunities to improve their curriculums, providing opportunities for teachers to meet teaching professionals, using of instructional innovation, facilitating all aspects to teachers in collaboration research and to allocate scholarships to teachers in the fields of teaching and learning (Scott and Scott, 2015).

Resourcing teaching activities and infrastructures means the universities' executives facilitate teachers in organizing the instructional activities to be appropriate and sufficiently utilized, consisting of a good infrastructure and technology that allows teachers use in instruction. The executives are responsible for teachers' research, allocate the classrooms, laboratories and the meeting rooms are equipped with maintenance (Scott and Scott, 2015).

Systematic reflection and action planning means the universities' executives promote a systematic reflection of individual teachers and operate for change. The executives promote teachers and students to have the instructional reflection, and then encourage teachers to bring the reflection results to do research. They also allocate of research funding for teachers equally in each subject area and facilitate for teachers in each field to do the research. (Scott and Scott, 2015 cited Mills, 2000).

Professional competence of teachers

Professional competence of teachers (PCT) is best described as "the complex combination of teachers' skills, knowledge, insights, attitudes, values and desires that lead to efficiency" (Crick, 2008). Professional teachers have abilities to apply strategies and appropriate system organization with learning and educational needs for learners, encourage students to learn independently and develop a good relationship based on good communication skills (Surakitboan, 2013). The PCT consists of three indicators: the pedagogical content knowledge, the enthusiasm for teaching and the self-regulation skills (Holzberger *et al.,* 2013 and Kunter *et al.,* 2013).

Teachers' pedagogical content knowledge refers to teachers' interpretation and change of knowledge in the context of facilitating the students' learning. It includes the knowledge about the course, structural concepts of learning theory, classification of teaching and learning, learning environment design, identifying course content, and using context of giving examples and metaphors (Olfos *et al.,* 2014 cited to Shulman, 1986).

Enthusiasm for teaching means the abilities and the efforts of teachers to teach in the form of lively teaching, which includes creating motivation, empathy, and using formality of lively teaching. Teachers are happy to teach, encouraging students to participate in teaching and learning, encouraging students to explore self-study and sparking students' curiosity to learn all the time (National Communication Association, 2016).

Self-regulation skills (SRS) refer to the teachers' personalized attention management associated with the thought process, behaviors and feelings of self-fulfillment (Baumeister, 2007). SRS includes: teachers observe students' responses when learning occurs and promote the process of students' expression during instruction. Teachers perceive the content-based self-efficacy and the self-directed knowledge or learning strategies, the job analysis and the work planning. Teachers improve the learning environment in the classroom and perceive their self-efficacy in

observing of their practice from the performance (Bandura, 1991 and Baumeister, et al., 2007).

Work empowerment

Work empowerment (WEM) means the executives build relationships and work together with their teachers. Teachers also require knowledge, skills, ability, morals, ethics, trust, mutual trust, responsibility and participating in decision-making as a working goal (Gutierrez, Parson and Cox, 1998). The executives encourage teachers to have the freedom to work, provide them the knowledge, skills and experience needed to perform the job. The executives allow them to demonstrate their abilities to perform work continuously by organizing the work atmosphere and to exchange knowledge between the teachers and executives. The WEM consists of four indicators: goal setting, work competency, self-determination and participative ownership (Chaihaow, 2013).

Goal setting means the university' executives encourage teachers to be involved in the organization's behavioral targeting and to define the criteria for a clear expression of the desired behavior (Chaihaow, 2013), including a clear goal setting, the defining measurable, realistic, and clear time base, be willing to target, having knowledge of planning, having cooperation in the agency, planning properly, choosing the right strategies, flexible and accepting the change (Tangprormphanh, no. year).

Work competence refers to teachers' individuality, which the executives can motivate teachers to create a good work plan and meet the criteria set in their jobs (Bell and Gilbert, 1996). It includes the teachers' skills, knowledge, attitudes, values and their identity and motivation or internal propulsion (McClelland, 1973).

Self-determination means the executives empower teachers to make decisions independently by having a basic belief that teachers need to be capable and they are learning to practice skills that lead to their goals. It consists of the executives providing teachers learning and practicing skills on a regular basis, giving

them the opportunities in building good relationships with colleagues to ensure their stability in work. The executives give teachers independence of expression their potential and capabilities, together with creation of their own choice to work (Chaihaow 2013 cited to Deci & Ryan, 1985).

Participative ownership means the executives support incentives for teachers to comply with agreements as an intention voluntary. It includes giving teachers opportunities to improve and develop the projects, the work processes and the team work. The executives support teachers to have opportunities to exchange mutual learning, working on their efforts to improve their work and promoting them to participate in the evaluation of the organization's work (Cunningham and Gresso, 1993).

Teachers' self-efficacy

Teachers' self-efficacy (TSE) in education is the information about the availability of teachers feeling in preparation which starting by teachers themselves about the instructional process. Then they can develop to become teaching experts. TSE is a strong hope and beneficial to learn and changes in positive performance on teachers' instructional quality. It consists of the teacher's commitment, the efficacy in instructional strategy**,** the personal teaching efficacy, and the efficacy in classroom management (Maddux & Kleiman, 2016 and Kirt, 2016).

Teachers' commitment (TC) refers to the teachers' emotional or psychological reaction to their experience in creating value to the institutions. It is a part of learning behavior or attitudes that are related to the behavior of professional teachers (Lawrence and Deepa, 2012). TC consists of the commitment to the learners, the commitment to the society, the commitment to the profession, the commitment to achieve excellence and the fundamental commitment in human values (Dave and Rajput, 1998).

Efficacy in instructional strategy refers to the teachers' abilities in using patterns, methods, and instructional techniques to help learners learn. It includes the learning strategies and the didactic teaching strategies. Learning strategies are strategies that teachers use to encourage students to memorize, learn and use information. The didactic teaching strategies are the sequences of organizing rules and activities system and resources used while teaching. The instructional strategy should be designed as a way that the students are supported, observed, analyzed and able to express their opinions (Kirt, 2016).

Personal teaching efficacy refers to the belief in abilities on teachers' skills to perform and manage their teaching in helping students learn and achieve their potential. Teachers adapt the assignments to suit their students' ability level; teachers understand the steps needed to manage teaching and they discover new teaching methods and improve instructions to be more effective in class management (Gavora, 2010).

Efficiency in classroom management refers to the belief in the abilities of teachers to handle inappropriate behaviors of students in the classroom. It covers dealing with inappropriate classroom behaviors. Teachers motivate students who do not want to learn to turn back to study. Teachers make it possible for students to graduate and teachers help students to value learning and support them to follow class rules (Poulou, 2007).

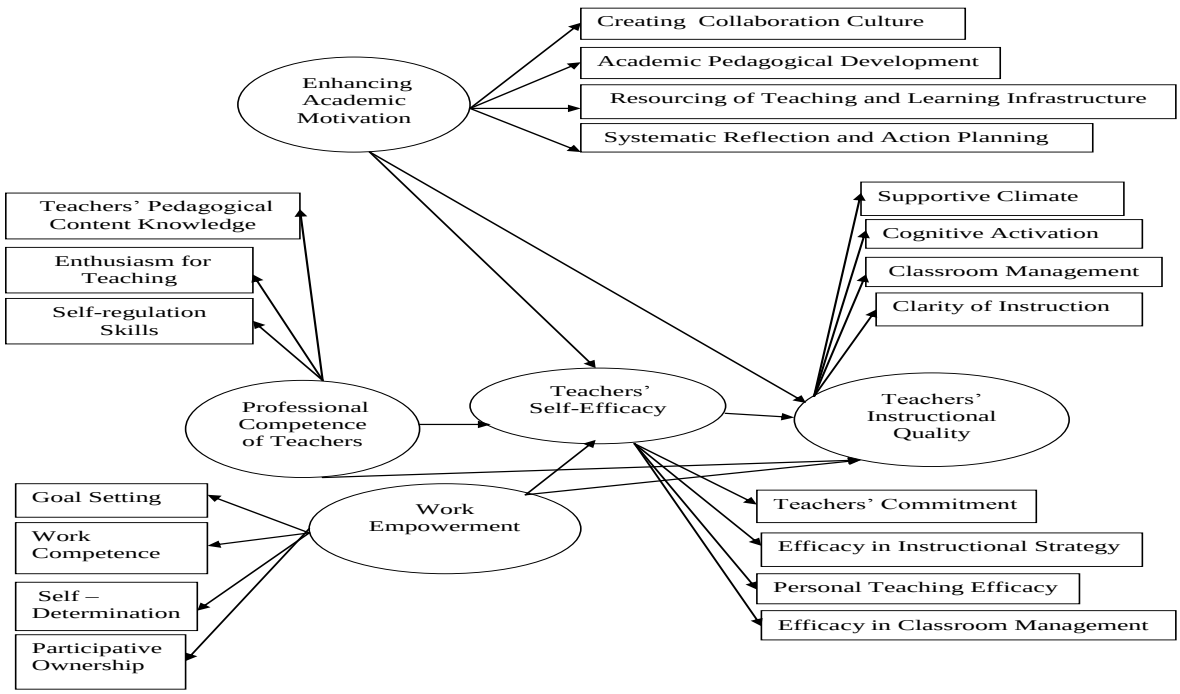
Conceptual framework

Researchers studied the concepts, theories, papers, and researches related to the dependent variable, teachers' instructional quality (TIQ) and found out the factors affected on TIQ were the independent variables: the enhancing academic motivation (EAM), the professional competence of teachers (PCT) and the work empowerment (WEM) and a mediator variable, teachers' self-efficacy (TSE).

From the studies of several researches related to the dependent variable, teachers' instructional quality (TIQ). Researchers found that the factors affected on TIQ both direct and indirect were: 1) **Enhancing academic motivation** (EAM) had a significant direct affect on teachers' instructional quality (Bedel, 2016) and indirect affect on teachers' instructional quality through teachers' self-efficacy (Scott and Scott, 2015). **2) Professional competence of teachers** (PCT) had a positive direct effect on teachers' instructional quality (Kunter *et al.,* 2013 and Holzberger *et al.,* 2013) and indirect affect on teachers' instructional quality through teachers' self-efficacy (Holzberger *et al.,* 2013). **3) Work empowerment** (WEM) had a significant direct affect on teachers' instructional quality (Veisi et al., 2015) and direct affect on teachers' self-efficacy (Ngang, 2012 and Rowbotham, 2015). And **4) Teachers' self-efficacy** (TSE) had a significant direct affect on teachers' instructional quality (Holzberger *et al.,* 2013) as can be shown in the conceptual framework below:

Conceptual Framework

The influence of Enhancing Academic Motivation,
Professional Competence of Teachers and Work Empowerment affecting
on Teachers' Instructional Quality through a Mediator as Teachers' Self-Efficacy,
Universities of Lao People's Democratic Republic) (Lao PDR)



The purpose of this research was to develop a causal relationship model that influences the teachers' instructional quality (TIQ) of university teachers in Lao PDR and to examine the consistency of the models developed with empirical data.

The hypotheses of this research were: 1. Professional competence of teacher, enhancing academic motivation, work empowerment and teacher's self-efficacy directly affects the teachers' instructional quality of university teachers in Lao PDR and 2. Professional competence of teachers, enhancing academic motivation, and work empowerment indirectly affect teachers' instructional quality through teachers' self-efficacy of university teachers in Lao PDR.

And the expected benefits of this research aimed to improve the quality of instruction: 1. Institutional executives, both national and university-level leaders, will bring the results to plan and formulate strategic plans to improve the quality of instruction of university teachers in Lao PDR, and 2. The teachers can bring the results to improve and develop their instruction to a better quality.

RESEARCH METHODOLOGY

Research instruments

The instrument used in this research was a questionnaire, and its quality has been validated by experts. Then the generated questionnaire was tried out with the non-sample population of 60 teachers, 15 teachers per university to check the quality of the tool through analysis of the questionnaire reliability by finding the alpha coefficient (α-Coefficient) of Cronbach, 1984. The updated questionnaire was then used as a tool to collect data from the sample set. The data were collected from 351 teachers by mail and by phone and there were 351 completed questionnaires, which accounted for 100 percent.

Research method

This study is quantitative research. The research population is 2,821 teachers, including 1,861 teachers in National University of Laos, 290 teachers in

Champasak University, 430 teachers in Souphanouvong University and 240 teachers in Savannakhet University. The sample was acquired by stratified sampling: 351 selected university teachers were used as a sample based on the concept of statistical analysis of structural equation model (SEM) that Hair, *et al., (*2006) proposed using at least 10-20 samples per 1 parameter. In this research, there are a number of parameters needed to estimate the 26 parameters; therefore, researchers used 13.5 samples per 1 parameter, so the sample size was 351 teachers. The study of sample characteristics and distribution of variables using basic statistics found that all 351 samples were 198 males or 56.40%. 203 samples had master's degree, or 57.80%. 76 teachers had experience in working for more than 15 years, 21.70%. There were a total of 68 university executives or 19.37% who were given a questionnaire, including: 7 deans, or 2%; 8 vice deans, or 2.30%; 20 heads of departments, or 5.70% and 33 deputy heads of departments, or 9.40%.

Data Analysis

The SPSS program analyzed the reliability of questionnaire which is the technique to measure the effectiveness of an instrument, whether it is fluent or similar or the same. And it must be no different effect or consistent by the calculated value that is called alpha (**α**). If the alpha is close to 1, that means the instrument has a high belief. The quality of the whole measurement by finding the reliability of the measuring instrument using the Cronbach alpha procedure on teachers' instructional quality (TIQ), calculated results from the program showed that the questions had reliability of 0.974, which was closed to 1, indicating that each teacher gave a consistent score.

Data analysis and processing perform basic data analysis, analyze relationships between variables, factor analysis and analyze causal relationship model with the SPSS program and LISREL program. Analyze direct influence and an indirect influence of causal factors and analyze the validity of the model by examining the consistency

of the hypothesis model with empirical data with chi-square index, relative chi-square index, RMSEA index, GFI index, AGFI index, RMR index and standardized RMR index.

RESULTS/ FINDINGS

The LISREL program was used for this causal influence analysis by estimating the parameters and by maximum likelihood (ML). The research results were: the development of a causal relationship model of factors affecting teachers' instructional quality (TIQ) was found to be consistent with the empirical data, where the chi-square value was 62.95, the P-value was 0.99 at degrees of freedom (df) of 116, the chi-square/df value was 0.54, the GFI index was 0.98, AGFI index was 0.97, standardized RMR was .026 and RMSEA was 0.000 and the causal relationship model could explain the variance of the Teachers' Self-Efficacy (TSE) by 39% and the variance of the Teachers' Instructional Quality (TIQ) by 78% as shown in figure.

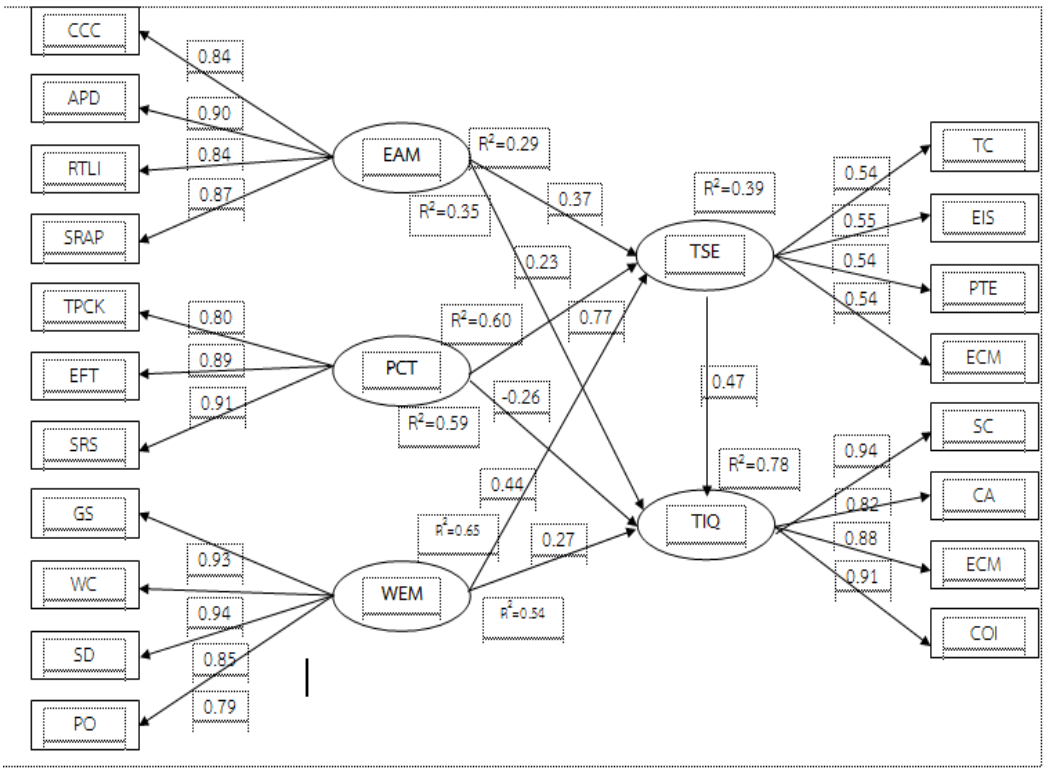


Figure: The causal relationship model of factors affecting teachers' instructional quality (TIQ).

Chi-square goodness of fit = 62.95, df = 116, P-value = 0.99, chi-square/df = .008, RMSEA = 0.000, RMR = 0.052, standardized RMR = .026, GFI = 0.98, AGFI = 0.97, CFI = 1.00, NFI = 0.99 and NNFI = 1.01.

Note:

R-Squared (R^2) is the variation of the explanatory variable contained in this linear model if how many percents. R-Squared means the explained variation or total variation. R-squared values are between 0% - 100%. (0% shows that the acquired mathematical model cannot explain the variation of the response variable value and the difference is around the average. 100% shows that the acquired mathematical model can explain the variance of the response variable value and the average spread around the average well).

University executives refer to the university-level leaders namely, the president, the vice president, the dean of the faculty, the deputy dean of the faculty, head of the department and the deputy head of the department who are responsible for the strategic vision and keep up to date with learning and teaching, research, internationalization strategies and change priorities for the university and the faculty.

Table Results of factors analysis in causal relationship model of factors affecting the Teachers' Instructional Quality (TIQ)

Latent Variables	Factors Loadings Matrix Observed Variables	Matrix Covariance	R square (R^2)
EAM	CCC = Creating Collaboration Culture	0.84	0.35
	APD = Academic Pedagogical Development	0.90	0.40
	RTLI = Resourcing of Teaching and Learning Infrastructures	0.84	0.35
	SRAP = Systematic Reflection and Action Planning	0.87	0.38
PCT	TPCK = Teachers' Pedagogical Content Knowledge	0.80	0.32
	EFT = Enthusiasm for Teaching	0.89	0.39
	SRS = Self-Regulation Skills	0.91	0.41
WEM	GS = Goal Setting	0.93	0.44

Latent Variables	Factors Loadings Matrix Observed Variables	Matrix Covariance	R square (R^2)
	WC = Working Competence	0.94	0.44
	SD = Self-Determination	0.85	0.46
	PO = Participative Ownership	0.79	0.42
TSE	TC = Teachers' Commitment	0.54	0.14
	EIS = Efficacy in Instructional Strategy	0.55	0.15
	PTE = Personal Teaching Efficacy	0.54	0.14
	ECM = Efficacy in Classroom Management	0.54	0.15
TIQ	SC = Supportive Climate	0.94	0.44
	CA = Cognitive Activation	0.82	0.33
	ECM = Effective Classroom Management	0.88	0.39
	COI = Clarity of Instruction	0.91	0.42

Research findings

From figure and table, showed the causal relationship model of factors affecting Teachers' Instructional Quality (TIQ):

The analysis results, the observed variables of each latent variable are as shown:

1. The latent variable, **enhancing academic motivation (EAM)** can be measured with four observed variables as defined. The observed variable with the highest loading factor was the academic pedagogical development (APD) of 0.90, followed by the systematic reflection and action planning (SRAP), the creating collaboration culture (CCC) and the resourcing of teaching and learning infrastructures (RTLI) with 0.87, 0.84 and 0.84 respectively. All the factor loadings are positive, high and statistically significant to 0.84 and above, which are greater than 0.50 that mean they can measure the latent variable, EAM well.

2. The latent variable, **professional competence of teachers (PCT)** can be measured with three observed variables as defined. The observed variable with the highest loading factor was the self-regulation skills (SRS) of 0.91, followed by the enthusiasm for teaching (EFT) and the teachers' pedagogical content knowledge (TPCK) with 0.89 and 0.80 respectively. All the factor loadings are positive, high and statistically significant to 0.80 and above, which are greater than 0.50 that mean they can measure the latent variable, PCT well.

3. The latent variable, **work empowerment (WEM)** can be measured with four observed variables as defined. The observed variable with the highest loading factor was the working competence (WC) of 0.94, followed by the goal setting (GS), the self-determination (SD) and the participative ownership (PO) with 0.93, 0.85 and 0.79 respectively. All the factor loadings are positive, high and statistically significant to 0.79 and above, which are greater than 0.50 that mean they can measure the latent variable, WEM well.

4. The latent variable, **teachers' self-efficacy (TSE)** can be measured with four observed variables as defined. The observed variable with the highest loading factor was the efficacy in instructional strategy (EIS) of 0.55, followed by the teachers' commitment (TC), the personal teaching efficacy (PTE) and the efficacy in classroom management (ECM) with the same factor loading of 0.54. All the factor loadings are positive, high and statistically significant to 0.54 and above, which are greater than 0.50 that mean they can measure the latent variable, TSE well.

5. The latent variable, **teachers' instructional quality (TIQ)** can be measured with four observed variables as defined. The observed variable with the highest loading factor was the supportive climate (SC) of 0.94, followed by the clarity of instruction (COI), the effective classroom management (ECM) and the cognitive activation (CA) with 0.91, 0.88 and 0.82 respectively. All the factor loadings are positive, high and statistically significant to 0.82 and above, which are greater than 0.50 that mean they can measure the latent variable, TIQ well.

To sum up, the observed variables analysis based on considering from the maximum factor loadings values of the 19 observed variables, found that all the factor loadings are positive, high and statistically significant at the 0.05 level. When considering the factor loadings found that the observed variables that had the high factor loadings were 5 variables, namely, the working competence (WC), the teachers' pedagogical content knowledge (TPCK), the self-regulation skills (SRS), the academic pedagogical development (APD), and the efficacy in instructional strategy (EIS), which had the highest values of 0.94, 0.94, 0.91, 0.90 and 0.55, respectively, Therefore, they were the major observed variables used to measure the latent variables: the Enhancing Academic Motivation (EAM), the Professional Competence of Teachers (PCT), the Work Empowerment (WEM), the Teachers' Self-Efficacy (TSE) and the Teachers' Instructional Quality (TIQ) the best.

The analysis results of the factors affecting teachers' instructional quality (TIQ) from the figure showed that:

1) The teachers' instructional quality (TIQ) were influenced by the enhancing academic motivation (EAM), the professional competence of teachers (PCT), the work empowerment (WEM), and the teachers' self-efficacy (TSE). The variable that influenced directly on the TIQ maximum was TSE with the influence of 0.47, followed by the WEM and EAM with the influence of 0.27 and 0.23, respectively. However, the PCT was not influenced directly on TIQ, which the result showed that it had a negative direct affect with - 0.26.

The result analysis of this causal relationship model will be explained below:

1. **Teachers' self-efficacy** (TSE) had a positive direct effect on the teachers' instructional quality (TIQ) of 0.47. Besides, the R –square (R^2) of the TSE on the TIQ was 0.49 and R^2 of the TSE was 0.39, that means the TSE and the TIQ had quite a low relationship.

2. **Work empowerment** (WEM) had a positive direct effect on teachers' instructional quality (TIQ) of 0.27, an indirect effect through the teachers' self-efficacy (TSE) of 0.21, and the WEM had a direct effect on TSE of 0.44. That meant WEM effected to TIQ both a positive directly effect and a positive indirectly effect. Besides, it was found that the R –square (R^2) of the WEM on the TIQ was 0.54 and (R^2) of the WEM on the TSE was 0.65, that means the WEM and the TIQ and the WEM and the TSE had a moderate relationship.

3. **Enhancing academic motivation** (EAM) had a positive direct effect on the teachers' instructional quality (TIQ) of 0.23 and a positive indirect effect through the teachers' self-efficacy (TSE) of 0.18. The EAM had also a positive direct on TSE of 0.37. Besides, it was found that the R –square (R^2) of the EAM on the TIQ was 0.35 and the (R^2) of the EAM on the TSE was 0.29, that means the EAM and the TIQ and the EAM and the TSE had a quite low relationship.

4. **Professional competence of teachers** (PCT) had a negative direct effect on the teachers' instructional quality (TIQ) of - 0.26 and a positive indirect effect through the teachers' self-efficacy (TSE) of 0.36. However, the PCT had a direct effect on TSE at high percent of 0.77. That meant TSE had a high influence to PCT and also to TIQ. Besides, it was found that the R –square (R^2) of the PCT on TIQ was 0.59 and the (R^2) of the PCT on TSE was 0.60, that means the PCT and the TIQ and the PCT and the TSE had a moderate relationship.

5. **Teachers' instructional quality** (TIQ) was a dependent or effect variable, from answering the questionnaire of the 351 teachers found that the R –square (R^2) of the TIQ was 0.78.

DISCUSSION AND RECOMMENDATION

DISCUSSION

The findings revealed that the teachers' instructional quality (TIQ) were influenced by enhancing academic motivation (EAM), professional competence of

teachers (PCT), work empowerment (WEM), and teachers' self-efficacy (TSE). The variable that had the most influence on TIQ was WEM with the influence of 0.47, followed by the work TSE, EAM and PCT with the influence of 0.27 and 0.23 and -0.26, respectively.

Hypothesis 1 The **Enhancing Academic Motivation** (EAM) affects directly on the Teachers' Instructional Quality (TIQ) and indirectly through the Teachers' Self-Efficacy (TSE) mediator. Results found that the EAM had a positive direct affect on the TIQ of 0.23, and had a positive indirect effect through the TSE of 0.18. And the Lao universities' executives supported their teachers on EAM in a low level as can be seen in table, the R square (R^2) of the observed variables of the EAM in the table had the values from 0.35 to 0.40.

That means the universities' executives encouraged their teachers to have the desire to create a job, bring prosperity and achievement of goals to the institute in a low level which Scott & Scott (2015) stated to, in order to enhance the instructional quality, the university 's executives persuade their teachers to do the best to love teaching and work willingly and in line with Ketsakorn (1998), stated that motivation is the force that governs the behavior of teachers to meet their demand, pressure force or the desire to push teachers struggling to achieve their instruction goals.

1.1 As shown in table, the Lao universities' executives supported their teachers in creating collaborative culture (CCC) by 35% by accelerating positive changes in educational institutes to encourage a collaborative atmosphere which is consistent with Scott and Scott (2015 cited to Burnett and Huisman, 2010) found that CCC by the executives engage teachers with all academic roles of instruction, researches and services or leadership will help teachers improve their quality of instruction. And in line with Scott and Scott (2015 cited to Schon, 1987 & Ramsden, 2003) stated that if the executives have communication and collaboration work with their teachers and support them to create a teaching and learning community, support them the learning mechanism, course review and joint assessment practice, then teachers can

improve the instructional quality to be higher.

1.2 As shown in table, the Lao universities' executives also improved the academic pedagogical development (APD) by 40%. They improved the formal and informal instructions for their teachers and gave them opportunities to improve curriculum and provide opportunities for teachers to meet the teaching professionals, which in line with Scott and Scott (2015) found that using of instructional innovation, facilitating all aspects to teachers in the research collaboration and to allocate or provide scholarships to teachers in the fields of teaching and learning would help improve their quality of instruction.

1.3 As shown in table, the Lao universities' executives provided the **resourcing teaching activities and infrastructures** (RTLI) by 35% on the allocation of good infrastructure that facilitates the teaching of teachers, providing modern technology which is in line with Scott and Scott (2015) found that when the universities' executives facilitate teachers in organizing the teaching and learning activities appropriately and sufficiently utilized by providing a good infrastructure and technology that allows teachers to use in teaching and learning.

1.4 As shown in table, the Lao universities' executives promoted their teachers on **the systematic reflection and action planning** (SRAP) by 38% in promoting the teachers and students to have the instructional reflection, and then encourage teachers to bring the reflection results to do research, which in line with Scott and Scott (2015 cited to Mills, 2000) found that the SRAP by promoting a systematic reflection of individual teachers and operate for change and promote teachers to reflect on instructional opinions and reflections from students, and then encourage teachers to bring the reflection results to do research. The executives allocate of research funding for teachers equally in each subject area and facilitate for teachers in each field to do the research to improve the instructional quality.

Hypothesis 2 The **professional competence of teachers** (PCT) has a direct affect on the teachers' instructional quality (TIQ) and indirect affect through the

teachers' self-efficacy (TSE) mediator. Results found that the hypothesis did not meet the hypothesis of the research, because the PCT had a negative direct affect the TIQ of – 0.26, however, it had a positive indirect effect through the TSE of 0.18. Besides, PCT had a positive direct effect on TSE at 0.77. And the Lao university teachers had their own PCT in a low level as can be seen in table, the R square (R^2) of the observed variables of the PCT had the values from 0.32 to 0.41.

That means the Lao university teachers had their own **professional competence of teachers** (PCT) in a low level on the abilities with knowledge, understanding, teaching, attitudes, values and desire to bring teaching results to efficiency, which Crick, 2008 cited in European Commission, Education & Training, 2013) stated that the professional teachers can predict the teaching results; can perform complex tasks with ease, precision and adaptability. The reason that PCT had a negative direct affect the teachers' instructional quality (TIQ) of – 0.26, It was maybe because Lao teachers believed themselves that they understood well on the pedagogical content knowledge, they had enough the enthusiasm for teaching and they had the high self-regulation skills that made them ignore in the quality of instruction which Surakitboan, (2013) suggested that the professional teachers have abilities to apply strategies and appropriately system organization with learning and educational needs for learners and encourage students to learn independently.

2.1 As shown in table, the Lao university teachers perceived **the teachers' pedagogical content knowledge** (TPCK) by 32% on the course knowledge, the understanding the concepts of the teaching system, the understanding on learning theories, the abilities to prioritize teaching and learning environment design and the abilities to identify course content by using context-based examples and appropriate comparing at a relatively low level, which Guerriero (2017) found that the TPCK was the exact knowledge of the teachers and it is one element of being a professional teacher (PT). The ability of PT involved more than knowledge, skills, attitudes and inspiration also leads to more effective teaching and learning.

2.2 As shown in table, the Lao university teachers had **the enthusiasm of teaching** (EFT) by 39%, in a low level which National Communication Association or NCA (2016) stated that the enthusiasm of teachers is generally regarded as one of the most important and satisfactory quality and the nature of effective teachers. The word "enthusiasm" is often used in teaching to express meaning, motivation, power, love, and a lively teaching style. Active teachers are always excited in the classroom, have fun and expectation. Teachers encourage students to participate in instruction and motivate the students to explore the knowledge themselves, so the EFT sparks students' curiosity and motivates them to learn. The EFT can lead to better evaluation of instruction.

2.3 As shown in table, the Lao university teachers had **the self-regulation skills** (SRS) by 41% in observing students' responses when learning occur, promoting the student's expression process during instruction. Teachers perceive the content-based self-efficacy and the self-directed knowledge or learning strategies, the job analysis and the work planning. They improve the learning environment in the classroom and perceive their self-efficacy in observing of their practice from the performance (Bandura, 1991 and Baumeister, et al., 2007).

Hypothesis 3. The **work empowerment** (WEM) has a positive direct affect on the teachers' instructional quality (TIQ) and has a positive indirect affect on through the teachers' self-efficacy (TSE). Results found that WEM had a positive direct affect on the TIQ at 0.27 and had a positive indirect affect through the TSE at 0.21. And the Lao universities' executives empowered their teachers on the WEM in a low level as can be seen in table, the R square (R^2) of the observed variables of the WEM in the table had the values from 0.42 to 0.44.

3.1 The Lao universities' executives supported their teachers in **the goal setting** (GS) by 43% in determining indicators for the institute and the faculty's operation and the participation in the faculty's mission setting that can be measurable and reach to the goals, which in line with Chaihaow (2013) suggested that

if the executives empower their teachers to set goals for their institution and faculty by encouraging teachers to be involved in corporate behavioral targeting and set clearly the criteria for expressing the desired behavior without being forced or demanded, then every teacher will achieve a shared vision and mission and the institutions' activities. Besides, Tangprormphanh (n.d.) pointed out that the goal setting must be SMART (S = specific, M = measurable, A = achievable, R = realistic and T = time based).

3.2 The Lao universities' executives supported their teachers on **the working competence** (WC) by 44% in the skillful working and practice skills, providing academic knowledge about instruction and knowledge of educational executive for proper practice, which in line with (Bell and Gilbert, 1996), the executives believe that teachers have attempts to achieve the goals and improve their working methods all the time, they can solve problems, be a good listener, calm and humble, trustworthy teachers and leadership characteristics, and the executives always encourage the teacher to create a plan and meet the criteria set in their job.

3.3 The Lao universities' executives empowered their teachers on **the self-determination** (SD) by 44% in learning and practicing their work skills regularly which consistent with Chaihaow (2013 cited to Deci & Ryan, 1985) suggested that the executives have a basic belief that teachers must have the abilities to learn to practice skills that lead to goals by learning and practicing skills regularly, building good relationships with colleagues to ensure stability in work. Teachers must be independent to show their potential and capabilities and the creation of their own choice then they can improve the quality of instruction themselves.

3.4 The Lao universities executives also empowered their teachers on **the participative ownership** (PO) by 40% in the participation of the institute's executives which the participation in the performance planning and performance appraisal, the project and process improvement, and the team working would make teachers feel involved as the work owners, which consistent with Cunningham and Gresso, (1993)

stated that the work participation allows teachers to share learning opportunities with each other, teachers would be treated equally and have an opportunity to choose the work to do by using their effort to make better work.

Hypothesis 4: The teacher's self-efficacy (TSE) has a positive direct affect on the teachers' instructional quality (TIQ). Results found that the TSE had a positive direct affect on the TIQ at 0.47 in a moderate level. And the universities' teachers in Lao PDR perceived their own TSE in a very low level as can be seen in table, the R square (R^2) of the observed variables of the TSE in the table had the values from 0.14 to 0.15.

The Lao universities' teachers perceived their **teacher's self-efficacy** (TSE) in a very low level on the availability, feeling of preparation which starting by teachers themselves about the learning and teaching process then they could become teaching experts, which consistent with Giallo & Little, (2003) suggested that TSE is a strong hope and beneficial to learn and changes in positive performance on teachers' instructional quality (TIQ) and affects the learning of the students. Teacher efficacy is a strong and helpful hope for learning and changes in efficiency to positively influence the quality of teacher instruction and student learning. If teachers perceived their self-efficacy higher, the quality of instruction will also be higher.

4.1 The universities' teachers in Lao PDR perceived their own **teachers' commitment** (TC) by 14% in a very low level. This may be because Lao teachers were not supported enough with technologies and teaching aids. They had a lack of teaching resources and did not have access to modern teaching resources as almost of them still used markers with white boards and teaching textbooks. There is little internet to look for ideas, teachers lack understanding of how to use internet. Many students don't have books so it is difficult to teach. And many classrooms don't have modern conveniences such as fans and air-conditioning, which Lawrence and Deepa, (2012 cited Ebmeier & Nicklaus, 1999), stated that the commitment of teachers in educational promotion needs more times because the commitment is a part of the

emotional reaction or teachers' mental to their experience in creating the values for the institution. The commitment will be part of learning behavior or attitudes related to the professional teachers' behavior.

4.2 The universities' teachers in Lao PDR perceived their own **efficacy in instructional strategy** (EIS) by 15% in organizing the activities system and resources used to teach and the teaching design. This may be because Lao teachers attended little seminars or workshops on the EIS, which in line with Kirt (2016) stated that the EIS is the sequence of organizing the activities and resources used by teachers. Teaching strategies must be designed in such a way that students can receive the support, observe, analysis, and express the opinion. Teaching strategies must be built the hypothesis by using a view to find a solution and let students discover knowledge by themselves.

4.3 The universities' teachers in Lao PDR perceived their own **personal teaching efficacy** (PTE) by 15%, which is in a very low level on the abilities to adjust tasks assigned to students and the abilities to learn themselves, in line with Gavora (2010) stated that if teachers perceive the abilities to manage their instruction, then they can demonstrate their beliefs in having the skills and abilities to facilitate student learning.

4.4 The universities' teachers in Lao PDR perceived their own **efficacy in classroom management** (ECM) by 15%, in a very low level on the abilities to deal with inappropriate behavior in the classroom of students and the abilities to make students respect and practice the rules of the class. This may be because Lao teachers thought ECM is not necessary for the bachelor students, learning should be more attention, which Poulou (2007) found that efficacy in classroom management (ECM) is a way to control classroom harassment to get students to follow classroom rules, then the teaching and learning would be run smoothly.

Research results revealed that **the Teachers' Instructional Quality** (TIQ) of four universities in Lao PDR were in moderate to low level, which can be seen in the

results of supportive climate (AC) was 44%, the cognitive activation (CA) was 33%, the effective classroom management (ECM) was 39%, and the clarity of instruction (CI) was 42% which was consistent Ministry of Education and Sports, Lao PDR, (2013), stated that it is generally accepted that the Lao quality of education especially the quality of instruction is quite low and that is the most fascinating and a problem that needs to be resolved urgently.

The causal relationship model and the results of the influence of the enhancing academic motivation (EAM), the professional competence of teachers (PCT) and the work empowerment (WEM) on the teachers' instructional quality (TIQ) through the teachers' self-efficacy (TSE) mediator of universities teachers in the Lao People's Democratic Republic (Lao PDR) are consistent with empirical data.

RECOMMENDATION

1) Researchers found that the work empowerment (WEM) had the highest positive direct affect on teachers' instructional quality (TIQ) compared to other independent variables by 27%. Therefore, the universities' executive should encourage teachers to work independently, to get the knowledge and the skills needed to perform the job. The executives should let teachers take parts in the goal setting, the work competence, the self-determination and the participative ownership.

2) Researchers found that the Teachers' Instructional Quality (TIQ) of four universities in Lao PDR was in a moderate to a low level. However, to maintain the quality of instruction of Lao universities' teachers to be more effective and comply with requirements, teachers should focus on the supportive climate, the cognitive activation, the effective classroom management and the clarity of instruction. Future research may benefit from a closer study of teachers' instructional quality (TIQ) for higher education in Lao PDR.

LIMITATION

This study took place in four universities in Lao People's Democratic Republic (Lao PDR). This study may be limited in that the university' senior executives may have a tendency to complete a questionnaire on teachers' instructional quality, not only teachers and junior executives who teach.

FUTURE RESEARCH

Policy Implication for Educator

Findings showed that the teachers' instructional quality (TIQ) was not directly influenced by the professional competence of teachers (PCT) but it was indirect influenced through the teachers' self-efficacy (TSE) in a high value of 77%. Moreover, the TSE was a good mediator and it plays a very important role in improving the TIQ in four Lao universities. Therefore, suggestions for those involved in university policy both nationally and at a university level are that executives should give importance to TSE in depth by bringing the results of this research to plan and develop a strategic plan then improve teachers and the TIQ to be effective.

Implications for Further Research

1) There should be a study about the influence of university's executives on teachers' self-efficacy and teachers' instructional quality and 2) There should be a study about influence of professional competence of teachers on teachers' instructional quality.

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