ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพใน
ประเทศไทย

นางภัทน์นรี ปิยะมาน

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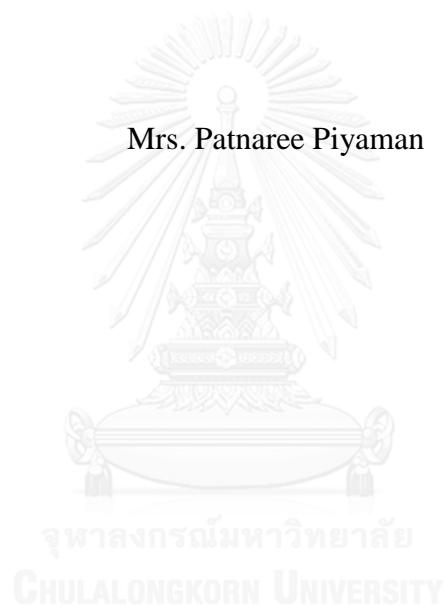สาขาวิชาบริหารการศึกษา ภาควิชานโยบาย การจัดการและความเป็นผู้นำทางการศึกษา
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THE IMPACT OF LEARNING-CENTERED LEADERSHIP

ON TEACHER ENGAGEMENT IN PROFESSIONAL LEARNING IN THAILAND

Mrs. Patnaree Piyaman

A Dissertation Submitted in Partial Fulfillment of the Requirements
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การวิจัยนี้เป็นการศึกษาบทบาทของภาวะผู้นำทางการเรียนรู้ในการส่งเสริมความเชื่อมั่น ของครู พลังในการเรียนรู้ของครู และความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย การวิจัยนี้เป็นการวิจัยแบบผสมผสานที่ใช้รูปแบบการวิจัยแบบขั้นตอนเชิงอธิบายโดยการวิจัยเชิง ปริมาณใช้วิธีการวิเคราะห์องค์ประกอบเชิงยืนยันและการวิเคราะห์โมเดลสมการโครงสร้างเพื่อ กำหนดโมเดลการวัด การวิจัยเชิงคุณภาพใช้การสัมภาษณ์เชิงลึกและการจัดกลุ่มสนทนากับ ผู้อำนวยการโรงเรียน หัวหน้าครู และครูเพื่อการเข้าใจอย่างลึกซึ้งเกี่ยวกับความสัมพันธ์ของภาวะ ผู้นำทางการเรียนรู้ของผู้อำนวยการโรงเรียนและการเรียนรู้ทางวิชาชีพของครู ผลการวิจัยยืนยัน บทบาทของภาวะผู้นำทางการเรียนรู้ในการส่งเสริมความผูกพันของครูในการเรียนรู้ทางวิชาชีพและ เน้นความสำคัญของตัวแปรคั่นกลางคือความเชื่อมั่นของครูและพลังในการเรียนรู้ของครู ผลจาก การวิจัยยังชี้ถึงช่องว่างของทรัพยากรบุคคลระหว่างโรงเรียนในเมืองและโรงเรียนในชนบท นอกจากนี้การวิจัยนี้ยังนำเสนอโมเดลภาวะผู้นำทางการเรียนรู้เพื่อการส่งเสริมความผูกพันของครู ในการเรียนรู้ทางวิชาชีพในประเทศไทย ซึ่งประกอบด้วย 8 วิธีการปฏิบัติ ได้แก่การร่วมมือระหว่าง ผู้นำและครู สภาพแวดล้อมแบบเปิดเผยและสนับสนุน การสนับสนุนผ่านช่องทางและวิธีการที่ หลากหลาย โอกาสทางการเรียนรู้ภายในและภายนอก โปรแกรมการฝึกสอนและการให้คำปรึกษา โปรแกรมการวิจัยโดยครู ระบบการประเมินอย่างต่อเนื่อง และสมรรถนะวัฒนธรรม

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This study explores the role of learning-centered leadership in fostering teacher trust, teacher agency, and teacher engagement in professional learning in Thailand. The research employed a mixed method with sequential explanatory design. Quantitative analysis employed confirmatory factor analysis and structural equation modeling to define the measurement model. Qualitative research is conducted through an in-depth interview and focus-groups with principals, middle-level leaders, and teachers to elaborates on the quantitative findings and to gain further insight about the relationship of principal leadership and teacher learning. Research results affirmed the role of learning-centered leadership in fostering teacher engagement in professional learning and highlighted teacher trust and teacher agency as the two significant mediators. The study also suggests human resource gap between urban and rural schools. In addition, the research introduces new model of leadership for teacher learning in Thailand, which consists of eight practices: Teacher/Leader collaboration, Open/Supportive environment, Support through various sources/approaches, Internal/External learning opportunities, Coaching/Mentoring program, Teacher research program, Continuous evaluation system, and Cultural competency.

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CHAPTER 1

INTRODUCTION

1.1 Problem Statement

In this rapidly changing world, education reform has definitely been an ongoing challenge in many countries. In dealing with these changes, it was essential that government policy-makers were able to support educators so that they were capable of adapting to new perspectives, knowledge, and skills (Vescio, Ross, & Adams, 2008). How can schools implement new knowledge and create successful education reform? The answer lies in teacher continuous learning and development. Over the course of their careers teachers must be able to adapt to new instructional practices. Thus, the teaching career requires teachers to continuously seek new knowledge, and support colleagues in professional learning. Thus, according to Lieberman and Mace (2008), teacher learning is at the very core of education reform.

In Thailand, education reform was initiated at the turn of the 21st century (Kaewdang, 1998). A new legal framework of reforms for Thai education set three national educational goals. These were for graduates to be capable learners, as well as moral and happy citizens. These goals are a big change from the past when the education system had the task of teaching a specific body of knowledge to students who would need to pass tests that certified that they had learned that body of knowledge. In the past, student application of knowledge and attitude development were neither considered important, nor were they assessed by the education system prior to student graduation (Fry & Bi, 2013; Hallinger & Lee, 2011, 2014).

Simply stated, new national goals would require new educational methods. Achievement of these new educational goals would depend upon the capacity of Thailand school leaders and teachers to enact many changes in school management, teaching-learning methods, and curriculum (Fry & Bi, 2013; Wiratchai, Wongwanich, & Ruengtrakul, 2004; Wongwanich & Wiratchai, 2004). Principals would need to add instructional leadership to administration and management in their new role as learning leaders (Gamage & Sooksomchitra 2004; (Hallinger, 2004; Hallinger & Lee, 2011, 2014). Teachers would need to develop new capacities aimed at student-centered learning and local curriculum development (Fry & Bi, 2013; Mounier & Tangchuang, 2009; Wiratchai et al., 2004).

In many respects, these changes in leader and teacher roles in Thailand were similar to those described in the global literature on education reform (Fullan, 2009; Hallinger, 2003). Although education reform was a critical challenge throughout the world, one may argue that it was even more difficult in developing countries where resources, opportunities to learn, and the structure of culture were more limited. Nonetheless, in Thailand's traditional educational system these changes would not be easy. Implementation of Thailand's reforms would require time, patience, as well as human and fiscal resources to support change in leader and teacher attitudes, knowledge and skills. Evidence accumulated in the years since 2000 suggests that only limited progress has been made (Fry & Bi, 2013; Hallinger & Lee, 2011, 2014; Moolenaar & Sleegers, 2010; Mounier & Tangchuang, 2009; Wiratchai et al., 2004). Additionally, with its unavoidable situation in dealing with frequent changes in policy-makers and policy-making, Thailand education reform has failed to meet its goals in the past two

decades. Hallinger and Lee (2011) have concluded from the perceptions of 2,000 Thai principals about Thailand's education reform as:

> [O]ur data indicated that progress in implementing these reforms to a degree that impacts students across Thailand has been slow. Indeed, based on the principals' perceptions, a significant percentage of teachers have yet to 'get off the mark' and actively engage these reforms. It should be noted that the principals did not 'blame' teachers for this pattern of implementation, but merely described the current status of reform progress as they saw it. This was consistent across all regions of the country. . .
> (Hallinger & Lee, 2011, p. 153)

The failure of education reform in Thailand has brought us to the consideration for a more effective system that supports the learning and development of educators. In Thailand education was largely a top-down system, where teachers were directed to do their tasks and attend workshops in order to meet the authority and the government's command. Most teachers show strong interest in being promoted by collecting hours of workshop attendance, but very little interest in actual learning. Workshop content were often mismatched with educators' needs and frequently rated as useless, impractical, or ineffective. Within the education system, performance indicators monitored by the Ministry of Education more frequently track workshop attendance than results.

How can teachers develop the autonomy and motivation needed to learn on the job? What conditions were needed in schools to inspire and support teacher engagement in professional learning? Research conducted throughout the world, including Thailand, finds that school leadership plays an important role in supporting, inspiring

and enhancing the professional learning of teachers (Frost, 2006; Hallinger & Lee, 2011, 2014; Hallinger, Liu, & Feng, 2016). In fact, Robinson, Lloyd, and Rowe (2008) found that supporting and participating in teacher development was the most powerful means by which principals and other school leaders can impact student learning.

This problem of 'people development' in the Thai education system has another dimension of interest to researchers and policymakers. This concern the gap in achievement of students located in urban and rural schools (Fry & Bi, 2013; Stromquist, 2005). Lower achievement among rural students when compared with urban students was a problem that was also evident in other developing nations in East Asia such as China and Malaysia (Othman & Muijs, 2013). Causes of this problem include differences in resources available to students both at home and in the school. At home, lower educational level of parents and less time to spend with their children offers less support for student learning. Rural schools often receive lower levels or lower quality of resources, for example, less qualified principals and teachers (Sadiman, 2004, 16-19 November), and less access and support for quality professional learning on the job (Hallinger et al., 2016).

Professor Pruet Siribanpitak also stated in UNESCO (2014) that "poor learning achievement at small-sized or remote schools was the most serious problem impeding Thailand's launch of the Education for All (EFA) in Thailand". The issue of disparity between urban and rural areas was enlarged by problems of inappropriate budget allocation based on the number of students, allowing small budgets to be distributed to most schools in the rural area where quality resources and financial support were significantly required, said Dr. Archanya Ratana-Ubol, Deputy Dean of Research and Academic Affairs at Chulalongkorn University (UNESCO, 2014).

In Mahachai (2007, August 17), Dr. Pruet Siribanpitak noted that 90 percent of basic education schools were state-run and 70 percent are at a poor standard due to the resource limitations. As a result, teachers working in small-sized, rural schools tend to face more difficulties living and working, while incentives and professional development were not as attractive as working in urban areas. As a result, higher qualified teachers were usually found working in urban areas where resources were more abundant, and there were better opportunities for professional learning and career development.

In the context of Thailand's education reform, efforts to reduce the achievement gap among rural and urban students depend upon the capacity of teachers to learn new skills and attitudes. This in turn requires first that principals and middle-level leaders understand their roles in both teacher and student development. Then leadership practices must be employed that inspire, motivate, and support the professional learning of teachers.

This study examines the processes of learning-centered leadership and teacher learning in urban and rural primary schools in Thailand. The study has two broad purposes. First it will assess patterns of learning-centered leadership and teacher engagement in professional learning in a sample of primary schools. This phase of the study will seek to describe how Thai school leaders enact the role of learning leaders and how these practices impact teacher engagement in professional learning. Then the study will seek to determine if there were differences in these processes among leaders and teachers working in urban and rural schools.

1.2 Research Questions

This research study sought to explore the role that school leadership plays in fostering teacher agency, trust, and professional learning in Thailand. The study addressed four research questions:

1. What is the pattern of learning-centered leadership and teacher learning in Thai primary schools?

2. What was the effect of learning-centered leadership on teacher trust, teacher agency, and teacher engagement in professional learning?

3. How does learning-centered leadership and teacher engagement in professional learning differ between urban and rural schools?

4. How do learning-centered leadership practices shape teacher agency, trust, and teacher engagement in professional learning?

1.3 Research Goals

In order to answer these research questions, the study addressed four related goals.

1. To collect quantitative and qualitative data from principals, middle-level leaders, and teachers, on learning-centered leadership, teacher agency, teacher trust, and teacher engagement in professional learning.

2. To analyze quantitative data collected in 60 primary schools in Thailand aimed at understanding if and how school leadership impacts factors associated with teacher engagement in professional learning and if there were differences between urban and rural schools.

3. To analyze qualitative data gathered from subsets of urban and rural schools in order to understand how the school location impacts practices associated with school leadership and teacher engagement in professional learning.

4. To validate a conceptual model of learning-centered leadership in Thailand.

1.4 Conceptual Framework

This study examines the extent to which Teacher Agency and Trust mediate the effects of Learning-Centered Leadership on Teacher Engagement in Professional Learning.

Variables

The variables used in the research's conceptual framework can be explained as follows:

1. <u>Learning-Centered Leadership</u>: In this research, a model of learning-centered leadership integrates features identified with three types of leadership: distributed leadership (Spillane, 2006), instructional leadership (Hallinger & Murphy, 1985), and transformational leadership (Leithwood & Sun, 2012). The model of learning-centered leadership was adopted from the research of several different scholars [e.g. Goldring, Huff, Spillane, and Barnes (2009), Hallinger and Murphy (1985), Leithwood, Patten, and Jantzi (2010), Walker and Ko (2011), Yu, Leithwood, and Jantzi (2002)]. The dimensions specified in the model include:

- *Builds a Learning Vision*, which reflects the extent to which leaders set developing vision to motivate learning of teachers and students

- *Provides Learning Support*, which reflects the extent to which leaders provide resources needed to support teacher and student learning

- *Manages the Learning Program*, which reflects the extent to which leaders organize and manage related activities designed to foster teacher and student learning;

- *Modeling*, which reflects the extent to which leaders articulate values and set examples as lifelong learners

2. <u>Teacher Agency</u>: The model of teacher agency was adopted from research conducted by Frost (2006), Hökkä (2012), and Shen (2015). Teacher agency, which reflects a teacher's sense of initiative, ownership and motivation to learn on the job can be classified into the following areas:

- *Learning Effectiveness,* which reflects teachers' belief about their learning ability

- *Teaching Effectiveness,* which reflects teacher beliefs about their teaching ability

- *Optimism,* which reflects teachers' attitude toward their future success

- *Constructive Engagement,* which reflects teacher initiatives to engage in professional learning and expand their professional influence within the School

3. <u>Trust</u>: The model of trust was adopted from the research of Tschannen-Moran (2009), Li, Hallinger, and Walker (2015), and McAllister (1995). The dimensions specified in the model can be classified into the following areas:

- *Calculative Trust, was* based on logical analysis of personal costs and benefits of collaboration.

- *Relational Trust, was* based on the emotional bonds and sense of affiliation among colleagues.

- *Faith Trust, was* based on similar beliefs, work attitudes, intentions, and expectations among co-workers.

4. <u>Teacher Engagement in Professional Learning</u>: The model of teacher engagement in professional learning was adapted from research conducted by several scholars (Evers, Kreijns, & Van der Heijden, 2015; in de Wal, den Brok, Hooijer, Martens, & van den Beemt, 2014; Kwakman, 2003; Schechter & Qadach, 2012). The dimensions specified in the model include:

- *Collaboration*, which reflects teacher behaviors indicating collegial engagement in learning

- *Reflection*, which reflects teacher behaviors indicating the use of feedback from leaders, students, and colleagues to guide their efforts to learn and improve

- *Experimentation*, which reflects teacher behaviors indicating openness to trying new approaches in their teaching

- *Reaches Out to the Knowledge Base*, which reflects teacher behaviors aimed at gaining access to new information and skills from outside

Conceptual Model

This study will be guided by a conceptual framework drawn from other research conducted on the relationship these variables as enacted in urban and rural school (Hallinger et al., 2016). 'Learning-centered leadership' (LCL) was presented as the research's independent variable, 'teacher agency' (TA) and 'teacher trust' (TT) were

mediate variables, and 'teacher engagement in professional learning' (TEPL) was the research's dependent variable. The conceptual model that guided the study accounts for the possibility that leadership effects could be either partially or fully mediated by teacher trust and teacher agency (see Figure 1). Based on findings from earlier studies [e.g. in de Wal et al. (2014), Li et al. (2015), Liu, Hallinger, and Feng (2016a), Liu, Hallinger, and Feng (2016b)], the dotted line between the main variables was used to represent the 'path' in which an effect was less likely significant.
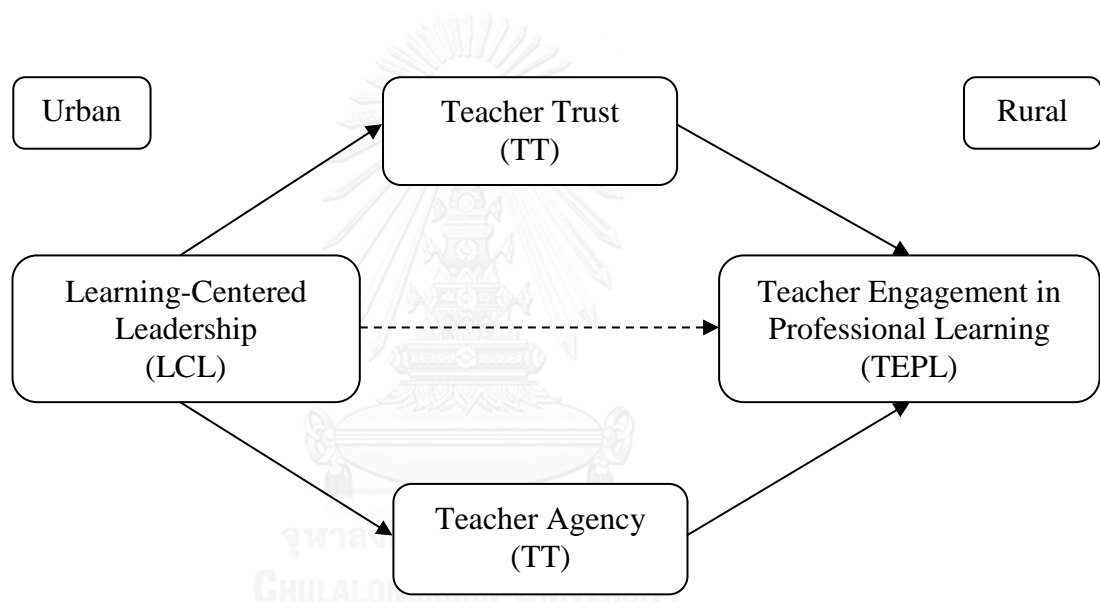
Figure 1 Hypothesized model of leadership and teacher learning in the schools

1.5 Scope of the Study

The target population in this study include principals working in medium-sized primary schools in the formal education system listed in the Office of the Basic Education Commission of Thailand (OBEC), Thailand, where instruction was at primary level (Grade 1 to 6). The sample of this research included 60 schools for the research quantitative analysis; where in each school, 1 principal and 20 teachers were participated in the research questionnaire, comprising to a total number of 60 principals

and 1,200 teacher respondents. For the qualitative analysis, 4 schools were selected; where in each school, an in-depth interview was conducted with the principal and focus-groups were conducted with the middle-level leaders and teachers.

1.6 Significance of the Research

This research offers policymakers and practitioners in Thailand insight into the status of learning-centered leadership and teacher engagement in professional learning in primary schools as well possible directions for stimulating teacher learning and development. The study also adds to a growing body of research on school leadership and teacher learning and development both globally. [e.g. Frost (2006), Lieberman and Mace (2008), Saphier, King, and D'Auria (2006), Vescio et al. (2008), Schwille, Dembélé & Schubert, 2007)] and in East Asia [e.g. in de Wal et al. (2014), Liu et al. (2016a), Liu et al. (2016b)]. In sum, its significance can be suggested as follows:

- Education administrators may use the results to better understand their role as leaders of learning and increase the effectiveness of their strategies for school improvement.

- System leaders in Thailand may use the results to refine the focus of training programs for school leaders and to change policies related to teacher learning.

- Ministry of education in Thailand may gain insight into differences in teacher learning in urban and rural schools, in order to improve quality of education throughout the country, especially in the rural area.

- Researchers in Thailand will have new instruments validated for use in measuring key variables related to improving conditions for teacher engagement in professional learning.

- The research will add to the global knowledge base on learning-centered and instructional leadership. Specifically, the results will extend and can be compared to those from the USA, Hong Kong, and China.

1.7 Definition of Terms

1. <u>Learning-Centered Leadership</u>: Leadership from the principal and other school leaders aimed at enhancing the learning of teachers and students by participating in building a learning vision, providing learning support, managing the learning program, and modeling to achieve the attainment of teachers' professional learning. It was a leadership that integrates features of three types of leaderships: instructional leadership, transformational leadership, and distributed leadership.

2. <u>Teacher Agency</u>: Teacher's initiative, drive, and motivation to learn, which were demonstrated by their learning effectiveness, teaching effectiveness, optimism, constructive engagement to make active contribution to the school.

3. <u>Teacher Trust</u>: Teachers' beliefs in collaborative engagement and willingness to work towards school development through calculative trust, relational trust, and faith trust, which contribute to their professional learning and development.

4. <u>Teacher Engagement in Professional Learning</u>: The teachers' engagement in professional learning activities including collaboration, reflection, experimentation, and reaching out to the knowledge base to strive for continuous improvement of their teaching practices and learning outcomes.

5. <u>Urban school</u>: Schools in the formal education system listed in the Office of the Basic Education Commission of Thailand (OBEC), Thailand, where instruction was at primary level (Grade 1 to 6), and the schools' location was in the Bangkok area.

6. <u>Rural school</u>: Schools in the formal education system listed in the Office of the Basic Education Commission of Thailand (OBEC), Thailand, where instruction was at primary level (Grade 1 to 6), and the schools' location was in rural provinces.

CHAPTER 2

LITERATURE REVIEW

This section reviews research relating to the impact of learning-centered leadership, teacher agency, and trust on teacher engagement in professional learning in Thailand. The Chapter was divided into five sections: 1) Learning-Centered Leadership 2) Teacher Agency 3) Trust 4) Teacher Engagement in Professional Learning and 5) Urban-rural differences in schooling in Thailand.

2.1 Learning-Centered Leadership

Overview of Models

Various types of effective leadership have been studied over the past five decades. In this study, learning-centered leadership was the focus as it comprises core components of three related leadership models (Bredeson, 2000; Hallinger, Lee, & Ko, 2014; Li et al., 2015; Robinson et al., 2008; Saphier et al., 2006). It includes features of instructional leadership, transformational leadership, and distributed leadership (Hallinger, 2011).

Instructional leadership emphasizes the roles of leaders in curriculum management, teaching support and evaluation. Transformational leadership focuses on vision, motivational influence and modeling. Distributed leadership highlights the facet of shared leadership (Crowther, Ferguson, & Hann, 2008; Gronn, 2009; Murphy, 2005) in enhancing supportive and collaborative communities.

Learning-centered leadership refers to the roles and practices of school leaders at all levels in improving teaching and learning in schools (Goldring et al., 2009; Hallinger, 2011; Heck & Hallinger, 2010, 2014; Knapp, Copland, Honig, Plecki, &

Portin, 2010; Printy, Marks, & Bowers, 2009; Saphier et al., 2006). According to Goldring and colleagues (2009), learning-centered leaders employ a related set of interpersonal skills as well their knowledge of curriculum and instruction. It involves leader's expertise in building a vision for learning, managing instructional program and assessment, supporting the communities of learning, and being a role model in teaching and learning. Knapp, Copland, and Talbert (2003) concluded that leadership for learning means "creating powerful, equitable learning opportunities for students, professionals, and the system, and motivating or compelling participants to take advantage of these opportunities" (p.12). Murphy, Elliott, Goldring, and Porter (2006) defined learning-centered leadership as "the process of influencing others to achieve mutually agreed upon purposes for the organization, with notations that leadership was a process that involves influence (interactions and relationships among people), and purpose (for organizations and the people affiliated with the schools move toward reaching desired goals". These definitions of leadership highlight the fact that leadership can be shared and relies on complex, organic interrelationships between leaders and followers.

In this study, the definition of learning-centered leadership was defined as leadership from the principal and other school leaders aimed at enhancing the learning of both teachers and students. Robinson et al. (2008) focused on the aspect of instructional leadership and its effects on student learning. According to their research, 'principal participation in and support for teacher learning' has the highest impact of relevant leadership dimensions on student learning. Research conducted in Hong Kong, also found that school leadership can positively impact teacher engagement in

professional learning (Hallinger et al., 2014; Hallinger & Lu, 2014; Li et al., 2015; Walker & Ko, 2011).

Goldring and colleagues (Goldring, Porter, Murphy, Elliott, & Cravens, 2007) described the following core components of learning-centered leadership as:

- *High Standards for Student Learning*—there were individual, team, and school goals for rigorous student academic and social learning.
- *Rigorous Curriculum* (content)—there was ambitious academic content provided to all students in core academic subjects.
- *Quality Instruction* (pedagogy)—there were effective instructional practices that maximize student academic and social learning.
- *Culture of Learning & Professional Behavior*—there were integrated communities of professional practice in the service of student academic and social learning. There was a healthy school environment in which student learning was the central focus.
- *Connections to External Communities*—there were linkages to family and/or other people and institutions in the community that advance academic and social learning.
- *Performance Accountability*— Leadership holds itself and others responsible for realizing high standards of performance for student academic and social learning. There was individual and collective responsibility among the professional staff and students.

In sum, Murphy et al. (2006) stated that learning-centered leadership matters as it defines organizational success in terms of student achievement.

Dimensions of Learning-centered Leadership

The first dimension of learning-centered leadership, "Builds a Learning Vision" was drawn from research on instructional leadership as well as transformational leadership. Hallinger and Wang (2015) emphasize the role of the principal in articulating a vision and mission for the school. Yu et al. (2002) demonstrated the effects of principals' transformational leadership practices on teachers' commitment to change in Hong Kong primary schools. As building a vision and group goals were one of the important components of transformational leadership, two of the leadership dimensions provided in Yu et al. (2002)'s research were included to the development of 'building a learning vision' dimension in this research. They were: (a) 'Identifying and articulating a vision', which refers to "practices aimed at identifying new opportunities for the school, and developing, articulating, and inspiring others with a vision of the future" (Yu et al., 2002); and (b) 'Fostering the acceptance of group goals', which refers to "practices aimed at promoting cooperation among staff and assisting them to work together toward common goals" (Yu et al., 2002).

The second dimension of learning-centered leadership in this research, "Provides Learning Support," was adopted from research by Walker and Ko (2011) and Leithwood et al. (2010). Two of the dimensions identified in Walker and Ko (2011)'s six core areas of leadership: 'Leader and teacher growth development', and 'Staff and Resource Management' can be contributed to the second dimension in this research. 'Leader and teacher growth development' refers to "how principals promote and enable continuing professional and career development for teachers and themselves" (Walker & Ko, 2011). Principals, in this dimension, were responsible in facilitating professional knowledge, and supporting ongoing teacher engagement in professional learning with

commitment to improved teaching quality, student achievement, and school effectiveness.

'Staff and Resource Management' refers to "how principals create a collaborative team management ethos focused on using human, physical and fiscal resources efficiently towards the goals of school improvement and student achievement" (Walker & Ko, 2011). The roles of principals in this area were for example; resources allocation, staff management, and support with resources and opportunities that yield professional learning. These dimensions were included in the 'Provides Learning Support' dimension in this research as it deals with the role of leaders in enhancing teacher's growth and development, in which resources and supporting practices was provided by leaders to facilitate teacher engagement in professional learning.

Additionally, variables in Leithwood et al.'s (2010) organizational path were also associated with 'learning support' in terms of how leaders organize around the school structure and standard procedures; for example, instructional time, teaching demonstration, school meeting, rewarding system, in order to facilitate professional learning of teachers. It also includes leaders' role in creating supportive environment that represent professional learning community, where teachers were reinforced to learn individually and collectively.

The third dimension of learning-centered leadership in this research, "Manages the Learning Program," was adapted from research conducted by Hallinger and Murphy (1985), Leithwood et al. (2010), and Goldring et al. (2009). Hallinger and Murphy (1985) argue that principals should be highly involved in overseeing the instructional program and engaged in working with teachers on issues of teaching and learning.

However, various studies have found that most school administrators were bound by other managerial tasks unrelated to instruction (Casey, 1980; Crowson, Hurwitz, Morris, & Porter-Gehrie, 1981; Friesen & Duignan, 1980; Hannaway, 1978; Martin & Willower, 1981; Peterson, 1977-1978; Pitner, 1982, March; Willis, 1980; Willower & Kmetz, 1982, March); cited in Hallinger and Murphy (1985). Time consumed by these managerial activities reduces the focus of principals on teaching and learning (E. Cohen & Miller, 1980; Dornbusch & Scott, 1975; Lortie, 1969, 1975); cited in Hallinger and Murphy (1985).

The fourth dimension of learning-centered leadership in this research, 'Modeling', was adapted from one of Yu et al. (2002)'s dimensions of transformational leadership called 'Providing an Appropriate Model'. This dimension refers to leaders' practices in 'modeling' or setting examples for staff to follow that were consistent with the values leaders espouse. It was proposed that modelling can enhance teachers' beliefs about their own capacities and develop a sense of self-efficacy (Yu et al., 2002). Modeling may also motivate emotional arousal processes in which teachers were simulated to be 'action-readiness', a state in which staffs were prepared to take or maintain patterns of action (Yu et al., 2002).

2.2 Teacher Agency

The concept of 'teacher agency' is widely discussed in recent research. Priestley, Biesta, and Robinson (2012) asserted that teacher agency reflects teachers' actions as 'agents of change'. This view was consistent with Frost (2006), who stated that teacher agency simply means "the capacity to make a difference – an assumption that making a difference can extend beyond the practice of classroom teaching". Emirbayer and Mische (1998) defined teacher agency as "a teacher's sense of

purposefulness as well as a belief that s/he was capable of developing new capacities and making a difference in student learning". Priestley et al. (2012) takes the above definitions further referring to teacher's agency as "their active contribution to shaping their work and its conditions – for the overall quality of education".

Teacher agency was related to teacher's self-efficacy which was indicative of 'a growth mindset' (Gerstein, 2013). Teacher agency and self-efficacy help teachers enlarge their abilities to conquer difficulties, failures, criticism, or inequity, which may result in anxiety, fear, and disappointment (Frost, 2006). Teachers who develop a growth mindset are more likely to achieve positive well-being (Bandura, 1986) as well as productive learning (Frost, 2006). As a result, Gerstein (2013) concluded that teacher agency is a personal capacity to act.

According to Priestley, Biesta, and Robinson (2015), 'agency' was "an emergent phenomenon, something that happens through an interplay of individual capacity and the social environment. Biesta and Tedder (2006) who refer agency to as "the situation where individuals are able to exert control over and give direction to the course of their lives". However, even high-capacity individuals may fail to achieve agency if the conditions were difficult". This raises the importance of creating conditions of opportunity, support, and autonomy in which agency can thrive.

Dimensions of Teacher Agency

In this research, a model of teacher agency was adopted from Liu et al. (2016b), Shen (2015), and Peng, Wang, Huang, and Chen (2006). The dimensions specified in the model can be classified into four areas: Learning Effectiveness, Teaching Effectiveness, Optimism, and Constructive Engagement. The following describes the adopted literatures and their relations to the dimensions of teacher agency.

Learning effectiveness reflects teachers' belief about their learning ability. Biesta and Tedder (2006) argued that there was an interactive relationship between agency and learning. Learning can impact agency, as when "learning influences the capacity of individuals to give direction to their lives". Agency can also impact learning as in "situations in which adults consciously decide to engage in forms of learning, for example to overcome particular problems, deal with challenges or give their life a new direction or at least create the conditions for doing so" (Biesta & Tedder, 2006).

The second dimension of teacher agency, 'Teaching Effectiveness', relates to teacher beliefs about their teaching ability. Askew et al. (1997) model shows that teaching practices correspond with teacher beliefs and their pedagogic content knowledge, which then impacts student outcomes. In their model, teacher beliefs involve their understanding of the learning of students and confidence in effective teaching method. Teacher pedagogic content knowledge includes their subject knowledge, knowledge of teaching approaches, and knowledge of pupils (Askew et al., 1997).

Similarly, *Education Review Office* n.d.) stated that for teachers to become effective, they must possess both pedagogical skills and content knowledge of their subject areas. Moreover, they must have high expectations of students, support them in reaching their potential, and be committed to providing a high quality education for all learners (*Education Review Office* n.d.) In addition, effective teachers were approachable, listen to the aspirations and concerns of parents, and maintain positive relationship with students and parents (*Education Review Office* n.d.).

The third dimension of teacher agency concerns teacher "Optimism". This reflects teacher attitudes toward their future success. Referring to Boniwell (n.d.),

"people who have a sense of optimism tend to see things in a positive light, learn from negative situations, exert more continuous effort and persevere, assuming that the situation can be handled successfully in one way or another". Optimism can be related to hope related to aspirations for learning achievement, positive relationships, life satisfaction and well-being (Boniwell, n.d.; Gerstein, 2014). Gerstein (2014) suggested that hope can be cultivated to strengthen agency and motivate individuals to move beyond obstacles and find pathways toward goal achievement. Gerstein (2014) further clarified this by emphasizing the importance of a, "positive view about the future, can do attitude, personal agency, engage in positive self-talk, belief in ability to solve problems, belief in one's ability to impact positively on one's situation, maintaining perspective, and sense of efficacy".

The fourth dimension of teacher agency was "Constructive Engagement". According to Bakker, Albrecht, and Leiter (2011), the work engagement of teachers is comprised of energy and involvement. Similarly, Macey and Schneider's (2008) review of research on engagement suggested that work engagement reflects dispositions (feelings of energy) that lead to engaged behaviours (acting in an energetic fashion). Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007) argue that self-efficacy represents a kind of workplace resource that leads to work engagement. As a result, the dimension 'Constructive Engagement' in this study reflects teacher initiatives to engage in professional learning and expand their professional influence within the school. It involves teachers engaging in setting purpose and achieving learning goals, implementing constructive ideas at work, making full use of resources, and expanding professional influence in the process of school change.

2.3 Trust

Trust was discussed in extensive studies across social science disciplines. Mishra (1996) defined trust as "one party's willingness to be vulnerable to another party based on the belief that the latter party was (a) competent, (b) open, (c) concerned, and (d) reliable". Mayer, Davis, and Schoorman (1995) defined trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the others will perform a particular action important to the trustor, irrespective of the ability to monitor or control that party".

Trust was a two-way relationship where an individual believes that the other will act in one's best interests, and therefore develops a willingness to act on the words, actions and decisions of another (Hoy, Tarter, & Hoy, 2006; Lewicki & Wiethoff, 2000). Sebring and Bryk (2000) identified four ''vital signs'' for assessing trust in schools: respect, competence, personal regard, integrity. These features mirror Walker and Ko (2011)'s definition of trust as "the extent to which one engages in a reciprocal relationship such that there was willingness to be vulnerable to and assume risk with the confidence that the other party will possess some resemblance of benevolence, competence, honesty, openness, reliability, respect, care, wisdom, and educational ideals" (472).

Trust has been proposed a necessary feature of a learning community. This was based on the idea that mutual sharing and collaborative learning will only take place in a culture of trust. Lee, Zhang, and Yin (2011) provided empirical support for the close relationship between professional learning community and trust in colleagues. Maele, Forsyth, and Houtte (2014) also found that schools characterized by high levels of trust demonstrate higher levels of collective teacher efficacy where teacher performances

were likely to improve student achievement. Moolenaar and Sleegers (2010) further suggested that trust is associated with teacher attitudes toward innovation and change.

Dimensions of Teacher Trust

The model of trust adopted in this study drew on the research of Tschannen-Moran (2009) and McAllister (1995). The dimensions specified in the model can be classified into three areas: Calculative trust, Relational trust, and Faith trust. "Calculative Trust refers to teacher's trust toward colleagues based on a rational assessment of personal costs and benefits in the relationship. The definition reflects the teacher's judgement of his/her colleague's competence and reliability in ongoing relationships (McAllister, 1995). This assumes that people tend to assess trustworthiness based on how well colleagues performed in the past (Cook & Wall, 1980; Granovetter, 1985; McAllister, 1995).

McAllister (1995) explained that, in working relationships involving high interdependence, peer performance can have a determining impact on personal productivity, and evidence that peers carry out role responsibilities reliably will enhance a manager's assessments of a peer's trustworthiness. Newell and Swan (2000) stated that "calculative trust can be considered as most relevant to task-oriented processes, especially when the knowledge was high tacit and difficult to imitate". Although researchers have asserted that calculative trust can impact teacher engagement in professional learning (Li et al., 2015; S. Park, Henkin, & Egley, 2005), some argue that calculative trust can be considered as a 'double-edged sword'. When the primary dynamic in a relationship was based on calculative trust, colleagues may develop defensive attitudes and refuse to share knowledge (McAllister, 1995).

"Relational Trust" reflects teachers' trust toward colleagues based on the emotional bonds. Relational Trust was based on empathy, affiliation, and genuine caring for each other. Relational trust is also associated with McAllister (1995)'s affect-based trust which was demonstrated by a person's behavior of interpersonal care and concern for others rather than serving personal interest. It was also revealed that principals, who show concern for their staffs and promote relational trust, were more likely to gain teachers' socio-emotional benefits, which enables them to develop teachers collaboration and enhance greater professionalism in teacher's behavior and their work.

"Faith Trust" reflects teachers' trust toward colleagues based on similar beliefs, work attitudes, intentions, and expectations. Tschannen-Moran (2009) stated that true professional learning communities demonstrate collective focus on student learning (Seashore, Kruse, & Marks, 1996). There was a strong sense of accountability of all members and commitment to a shared vision and mission. This shared sense of purpose underlies Faith Trust. When teachers hold similar norms, values, beliefs, and assumptions, Faith Trust is more readily established in professional relationships.

2.4 Teacher Engagement in Professional Learning

Teacher engagement in professional learning was defined as "activities to develop an individual's skills, knowledge and expertise and other characteristics as a teacher" (OECD, 2009). Another detailed definition given by Cole (2012) was "the formal and informal learning experiences undertaken by teachers and school leaders that improve their individual professional practice and the school's collective effectiveness as measured by improved student engagement and learning outcomes".

Teacher professional learning is suggested to be an ongoing process, which reflects their practice, and resulted in increased knowledge, skills, and positive attitudes (OSE, n.d.). According to OSE (n.d.), the professional learning process involves teachers in exploring about their role, evaluating their teaching strategies, and experimenting their practice so that understanding of the subject content, the student and their learning style can be achieved. As Little (1999) stated that the criteria for effective professional learning was all about teachers' knowledge and skills about the subjects, the students, and the practice, in which were applied effectively.

Kwakman (2003) asserted that teachers' learning was an ongoing process which demands teachers to strive for continuous improvement of their teaching practices as it was strongly connected to professional goals, and therefore, can be referred to as professional learning. Timperley (2008) also included that teachers' professional knowledge and skills, based on the principle of teaching effectiveness, have a positive impact on student outcomes. Therefore, teachers who were engaged in effective professional learning practice take greater responsibility for the learning of all students despite any difficulties or setbacks (Timperley, 2008).

Teacher engagement in professional learning can be considered very important in today's dynamic, rapid-changing education environment. According to Cole (2012), professional learning was suggested to be activities that reform agendas and make a difference in terms of the improvement of teacher's individual practice, knowledge, and skills, and increased of school effectiveness. As a result, school leaders who support teacher engagement in professional learning; for example by developing teachers as leaders, structuring professional learning activities, and demonstrating roles in

coaching and mentoring, were able to acquire results of schools alignment, coherence and structure (Walker & Ko, 2011).

Teachers' professional learning, their knowledge, and practice strongly impact student learning (Timperley, 2008). As learning requires knowledge of information, Foord and Haar (2008) emphasized that both the student learning data and the teacher learning data were important to be considered. For example, the analysis of what student learning was required was as important as what teacher engagement in professional learning was needed (Foord & Haar, 2008). According to Foord and Haar (2008), student learning data, such as student's difficulties or deficits in learning, should imply teachers taking responsibility and commitment to improve their learning and teaching so that students can be improved and the desired outcome can be achieved.

Scholars have argued that Thailand's top-down approach to system management has made it difficult for schools to implement change and move away from their traditional classroom approach and behavior. Principals and teachers, especially in public sector schools, have limited autonomy. Although workshops designed to provide new knowledge on classroom and teaching methods were regularly offered to teachers, they were often inappropriate or mismatched with the educators' need. With teachers having low motivation in professional learning, changes in classroom practices has been slow and limited in scope (Hallinger & Lee, 2011).

Recent studies in Thailand have paid attention to fostering teacher professional learning communities (PLCs). This model of teacher development emphasizes learning through cooperating and sharing with each other in the school community (Theparee & Patphol, 2014). Theparee and Patphol (2014) proposed a model of professional learning communities which includes four factors: collaboration learning culture, cognitive

process, best practices, and sustainable professional learning development. Their research found that developing professional learning communities not only yields teacher professional learning but also enhances student learning skill and competency (Theparee & Patphol, 2014). Chukumnerd and Sungthong (2014) reviewed the literature on PLC and concluded that the six components of PLCs and details include shared vision, collaborative teamwork, shared leadership, professional learning and development, caring community and supportive community.

These teacher professional learning communities (PLCs) research in Thailand supports the international trend which finds that developing communities of professional learning can bring about positive results both with respect to the learning of teachers and students. However, in Thailand, few studies have been published that focus on factors that influence teacher learning, how a learning cultures develops, or how principal leadership can impact these outcomes.

Dimensions of Teacher Engagement in Professional Learning

Evers et al. (2015); cited in Kwakman (2003) stated that "Collaboration" was important in providing the necessary support for learning, affording teachers critical thinking, and brining new challenges and ideas. According to Killion (2012), collaborating on all aspects of teaching (e.g. planning, decision making, problem solving) leads to a shared collective responsibility for the outcomes, where a culture of professional sharing, dialogue, experimentation and critique becomes commonplace. In this culture of social interaction and collaboration, the focus shifts from individual learning goals to the learning and knowledge base of colleagues and the school. (Cole, 2012).

As a result, collaboration can be viewed as a process of learning that takes place while collaborating, in which social interaction was at the base of learning (Vygotsky, 1978). For example, Tynjälä (2008) and Kwakman (2003) agree that people learn through collaborating with colleagues, in a way that feedback, new information or ideas do not only come from individual learning, but also from dialogue and interaction with other people. This concept suggests that through collaboration, learning culture and learning community was developed as a place where learning was supported and stimulated. Based on literature review, interactions with colleagues were seen as an important source for gaining professional knowledge (Grangeat & Gray, 2007), which further adds value to the teacher professional development (Evers et al., 2015; Little, 1990; S. Park, Oliver, Johnson, Graham, & Oppong, 2007). Riveros, Newton, and Burgess (2012) also conclude that 'school-based peer collaboration' was a path through which teachers can learn more about their profession and collectively contribute to the educational success of their students.

The second dimension of teacher engagement in professional learning in this research was "Reflection". Evers et al. (2015) asserted that 'reflecting' was a key strategy for professional development (Schön, 1983). The term, reflection, implies the process of referring to one's experience and considers its meaning, analyzing consequences of that experiences, and producing theories and solutions, in which end results were implemented in the actual workplace (Daudelin, 1996; Retallick, 1999). Runhaar (2008) showed that reflection by teachers played a decisive role in learning from practice, in which asking for feedback may both be an immediate starting point for reflection and an outcome of a reflection process (Prilla, Degeling, & Herrmann, 2012; Ramani & Krackov, 2012). Evers et al. (2015) also added asking feedback was

an essential element of reflecting and was critical to individuals' learning and performance improvement in the context of their work. Schechter and Qadach (2012) noted that not only asking for information was important in the reflection process, receiving information, analysis of information, and putting information to use should also be considered.

Kwakman (2003) characterized "Experimenting" as an intentional effort of teachers to undertake something new within the classroom. Benson (2010) concluded that the impact of teacher education courses depended on experimentation with new ideas in the classroom. Geijsel, Sleegers, Stoel, and Krüger (2009) classified experimentation as an important professional learning norm and found that it could influence collaboration among teachers, internalization of school goals into personal goals, and self-efficacy. Foord and Haar (2008) argued that to complete the cycle of learning, the intersection of the two dimensions of learning: perceiving and processing need to be portrayed. Based on the Kolb (1984) model, active experimentation was included in the processing dimension, in which the acting/doing dimension can be seen as a consequence of sensing/feeling, watching, and thinking dimensions.

The fourth dimension of teacher engagement in professional learning in this research was "Reaches Out to the Knowledge Base" (Saphier & King, 1985). Originally Kwakman (2003) referred to this dimension as 'reading'. This was meant to suggest teachers' efforts to connect with new ideas, knowledge and research through personal reading (Geijsel et al., 2009; Kwakman, 2003). Evers et al. (2015) elaborated on Kwakman's (2003) study and referred to this dimension as 'keeping up-to-date'. Thus, Evers et al. (2015) also included formal on-the-job and off-the-job training activities as part of a way of learning new skills and knowledge that were up-to-date [see also

Cheetham and Chivers (2001), Geijsel et al. (2009), Y. Park and Jacobs (2011), Tynjälä (2008)].

In this research, the dimension was referred to as 'Reaches out to the Knowledge Base'. It consists of teachers' professional learning activities that involve gaining new knowledge through reading, collecting feedback from students, and observing colleagues, and learning from practices used in other schools.

2.5 Urban-Rural Differences in Schooling in Thailand

The unsatisfactory quality of Thai students' learning has, over the past 20 years, resulted in continuous efforts at educational reform (Fry & Bi, 2013). According to a study by the "National Education Standards and Quality Assessment" 2008), the quality of 3,243 out of 15,515 schools in Thailand did not pass the minimum quality requirements. This was also reflected in the continuing underperformance of student's result in the national test organized by the National Institute of Educational Testing Service (NIETS). Thai students failed eight out of nine subjects on average on this national exam (BangkokPost, 2016). Consequently, a majority of Thai students rely on tutorial services, private tutors, and institutes in order to be successful on these exams, which reflects the inefficiency of Thailand public education and the needs for improvement.

The performance of Thai students was also considered poor on international standardized tests. For example, results from the Programme for International Student Assessment (PISA) in 2012 ranked Thailand education at 48th and 50th among 65 participating countries in all subjects (Mathematics, Sciences, and Reading). According to Fry (2013) almost 50 percent of Thai students were low achievers scoring below level 2. Less than 5 percent of students were top performers at levels 5 or 6. Moreover,

the relatively small number of high-performing students were generally from elite and demonstration schools in urban areas and the majority of low-performing students were from rural schools. This wide gap between urban and rural education was also supported by World Bank data, which shows that the level of knowledge among rural students in Thailand was about three years behind students in urban areas (BangkokPost, 2016).

Sompong Jitradup (BangkokPost, 2016) pointed that "most concerns arising from the exam results were about the inequality and discrepancies in the Thai education system as this can be seen by the wide gap between the scores of urban and rural students." Similarly, Amornvit Nakornthap (BangkokPost, 2016), stated that "the inequality in the education system was the biggest issue. The poor scores were believed to be from small schools mostly in rural areas while most students in urban areas and from leading schools were believed to have got higher scores." Academic achievement of rural students was even more difficult as quality education requires financial support and most qualified teachers were likely to request for transfer to urban area.

Furthermore, Pruet Siribanpitak asserted in UNESCO (2014) that poor learning achievement at small-sized or remote schools was one of the most serious problems in Thailand. According to Lounkaew (2013), the five main conclusions relating to urban-rural disparities were:

1. Performance of students in urban area was higher than the rural counterparts.
2. Disparities in educational resources and socioeconomic status exist between urban and rural schools.
3. Parents of students in urban area have higher education than those in rural areas.

4. Rural schools tend to be smaller than urban schools and operate with a severe shortage of learning materials.

5. Rural schools hold a larger share of government funding relative to the annual income of their communities.

One notable disparity between schools in urban and rural area lies in budget allocation which was based on the number of students. Amornvit Nakornthap stated in the BangkokPost (2016) that more than 15,000 smaller schools were found in rural areas with less than 120 students each. This causes small budgets to be distributed to most schools in the rural areas where quality resources and financial support were urgently required (UNESCO, 2014).

Research does, however, suggest that resource and budget allocation alone do not lead to quality education. Education reform must also attend to 'intangible' aspects, such as management, autonomy, leadership, parental participation, accountability, and perceptions of staff and students (Lounkaew, 2013).

A study by Nieto and Ramos (2013) analyzed the differences between students' educational outcomes in middle income countries, including Thailand. According to Nieto and Ramos (2013), student's motivation was significant in their learning and the efforts of teachers in stimulating and motivating students has positive and significant effect on their achievement. Interaction between teachers and students show great importance in the applicability of student's knowledge in real life. As a result, Nieto and Ramos (2013) concluded that among all of the relevant factors, school and teacher quality were the most powerful factors of student outcomes that can be used to reduce cross-country differences.

CHAPTER 3

METHODOLOGY

In this chapter, the research methodology is presented. The main sections explain the research design, population and sample, sampling method, and research instruments. These are followed by methods for assessing validity and reliability, data gathering, and data analysis.

3.1 Research Design

This study employed a mixed methods research design (Creswell, 2005). The research design was sequential explanatory design. This means that quantitative data were collected in order to provide a broad view of leadership and teacher learning in urban and rural schools. Then qualitative data were obtained in a purposively selected sample of urban and rural schools. The qualitative data analysis was aimed at offering greater insight into patterns observed in the quantitative analysis.

3.2 Population and Sample

Population

Selection of a school sample was designed to identify a contrasting set if urban and rural primary schools for the study. This research refers to a standard by the Office of the Basic Education Commission of Thailand (*Budget Establishment Year 2016 (in Thai)*, 2016, p. 29) to separate schools by their size. Table 1 shows how primary schools in Thailand were categorized into four groups.

Table 1 School categorization

Small-sized school	1-120 students
Medium-sized school	121-600 students
Large-sized school	601-1,500 students
Extra-large-sized school	More than 1,500 students

In Thailand, schools under the Office of the Basic Education Commission of Thailand (OBEC) were separated into 129 areas across the country (*Education Management Information System*, 2016a). The levels of instruction include kindergarten, primary (Grade 1-6), and secondary (Grade 7-12) schools. The majority of schools at the primary level were medium-sized (*Education Management Information System*, 2016b). As a result, in this research, the target populations include all of the medium-sized schools in the formal education system listed in the Office of the Basic Education Commission of Thailand (OBEC), where instruction was at primary level (Grade 1 to 6).

Sample

The minimum sample acceptable for structural equation modeling depends on the complexity of the model and other factors (e.g., number of factors, number of indicators of a factor). According to Wolf, Harrington, Clark, and Miller (2013), 10 cases per variable represents a rule-of-thumb leading to a sample size recommendation ranging from 40 to 240. Sideridis, Simos, Papanicolaou, and Fletcher (2014) assert that a sample size of 50-70 was sufficient for a structural equation model involving four

latent variables. Based on these recommendations, with four latent variables used in this research, the sample size of this research included 60 schools for the quantitative analysis. Within each school, the principal and 20 teachers participated in the survey. This resulted in a total of 60 principals and 1,200 teacher respondents.

For the qualitative analysis, four schools were selected. In each school, the researcher conducted an in-depth interview with the principal. In addition, separate focus-groups interviews are also conducted with middle-level leaders and teachers.

3.3 Sampling Method

As indicated above, the quota sampling method was used to select the school samples. We determined that a sample size of 60 medium to large size primary schools, comprised of 30 urban and 30 rural schools would be sufficient to conduct the necessary analyses. Two urban and two rural school districts under the Office of the Basic Education Commission of Thailand (OBEC) were selected based on convenience for school visitations. Urban schools were selected from Bangkok and Nonthaburi districts, and rural schools were selected from Supanburi and Ubon Ratchathani districts. Schools in those districts were sorted based on size so that only primary schools with 300 to 400 students were included in the list. The researcher then placed them a random selected order and began contacting the schools to seek their participation, selecting from the remaining list until the desired quota of 30 urban and 30 rural schools was attained.

For the qualitative research, a small-scale qualitative instigation was undertaken following the quantitative data analysis. The proportion of sample was distributed equally among the urban and rural schools. Therefore, with a sample size of four

schools, the interview and focus-group are allocated with two urban schools and two rural schools.

Selection of the schools was based on results of learning-centered leadership and teacher engagement in professional learning as suggested from the quantitative synthesis. Consistent with the goal of the broader study, we used 'purposive sampling' in order to identify two of the strongest performing and two of the weakest performing schools among both the rural and urban schools based on the quantitative results. This sampling strategy would not only allow us to check the accuracy of the quantitative ratings but also offer insights into nature of practices used in contrasting sets of schools (i.e., on our constructs).

To summarize, the proportional allocation of sample in quantitative and qualitative research is shown in Table 2.

Table 2 Proportional Allocation of Sample (n = schools)

	Quantitative	Qualitative
Educational Segment	Sample (n)	Sample (n)
Urban area	30	2
Rural area	30	2
Total	60	4

3.4 Research Instruments

This study used a questionnaire as an instrument for quantitative data gathering and an in-depth interview and focus-group for qualitative data gathering. Items were

related to the dimensions of each factor in the study, namely Learning-centered leadership, Teacher Agency, Teacher Trust, and Teacher engagement in Professional Learning. The survey was separated into two sections: general information on the respondents (e.g. age, gender, education level, job position and years of work experience) and survey items for measuring the constructs.

For the quantitative research, the instrument was developed by Liu and colleagues (2016a), for a study conducted in Mainland China. A five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was used in the questionnaire asking teachers to indicate the intensity of agreement to the statement. Adapted from several authors, the measures consisted of 91 items in total (See Appendix A). Learning-Centered Leadership consisted of four dimensions: *Builds a Learning Vision* (six items), *Provides Learning Support* (eight items), *Manages the Learning Program* (six items), and *Modeling* (five items). Teacher Trust consisted of three dimensions: *Calculative Trust* (five items), *Relational Trust* (six items), and *Faith Trust* (six items). Teacher Agency consisted of four dimensions: *Learning Effectiveness* (six items), *Teaching Effectiveness* (seven items), *Optimism* (five items), and *Constructive Engagement* (six items). Teacher Engagement in Professional Learning consisted of four dimensions: *Collaboration* (five items), *Reflection* (nine items), *Experimentation* (five items), and *Reaches Out to Knowledge Base* (six items).

For the qualitative research, two interviews were conducted in each school: an individual interview for the school principal and focus-group interviews for 4-6 middle-level leaders and teachers (See Appendix B). Open-ended questions were used to gain more insight of the actual practices of the principals, middle-level leaders, and teachers concerning the research questions.

3.5 Validity and Reliability

Linguistic Validation

To ensure the quality of the survey in Thai version, the research used Brislin (1970) backward translation method to translate the survey from English to Thai. Two fluent bilingual English/Thai educators were invited to assist in translation. The steps included:

1. The original English version was translated into Thai version by one professional translator who was experienced and fluent in English

2. Production of a backward translation from the Thai version into English by another professional translator, who was a native speaker of the source language and fluent in the target language

3. The backward translation and the original was compared and analyzed by two professionals, resulting in changes and refinements made to the Thai version.

4. Production of the final Thai version was made through modifications and adjustments based on the professionals' comments.

Content Validity

Content validation procedures aimed at ensuring that the items would be 'meaningful to the respondent group (i.e., Thai principals and teachers). Once the survey items were designed, the researcher then checked for content validity by presenting the survey items separately to five academic members. These academic members were responsible for consideration whether or not the survey was suitable to use with the respondents in Thailand education context. The selections of these

members were based on their academic qualifications on the knowledge and experience in teaching in Thai schools, or having professional performance relating to learning-centered leadership in education.

After careful consideration from each of the academic members, the index of item-objective congruence (IOC) method developed by Rovinelli and Hambleton (1977) was used for determining content validity. The question assessments were measured by the following rating scale:

+1 = item clearly taps objective (agree to use the question)

0 = uncertain/unclear to use the question

-1 = item clearly does not tap objective (disagree to use the question)

With the result of an index ranging from –1 to +1, only the questions rated from .50 to 1.00 were selected through the use of the following formula:

$$\text{IOC} = \frac{\sum r}{N}$$

Where, IOC = index of item-objective congruence ranging from -1 to +1

$\sum r$ = total of rating points from the academic members

N = numbers of the academic members

After receiving comments from the academic members, the researcher then made adjustments according to the suggestions. Small changes were made to ~15% of the items in order to ensure greater clarity of understanding among Thai teachers.

Instrument Reliability

As indicated above, the survey instrument used in this study had already been used in China where reliability of the four main constructs and dimensions had been established. Liu et al. (2016b) reported Cronbach's alpha coefficients used to evaluate the internal consistency of the main variables. These were at above the minimum desired level of 0.70 for all of the measured variables [i.e. $\alpha = 0.965$ (LCL), $\alpha = 0.959$ (TT), $\alpha = 0.954$ (TA), $\alpha = 0.950$ (TEPL)]. Reliability of the scales used in this research in Thailand would be included in the data analysis using the same test of internal consistency.

Instrument Reliability

The construct validity of the scales was also confirmed by Liu et al. (2016b). The factor loadings for the LCL subscales at above 0.70 [i.e. Builds a Learning Vision 0.88, Provides Learning Support 0.96, Manages the Learning Program 0.96, Modeling 0.94]. The average variance extracted (AVE) for the main variables was above 0.50 [i.e. AVE 0.876 (LCL), AVE 0.884 (TT), AVE 0.830 (TA), 0.799 (TEPL)]. As well, model fit were excellent for all main variables, and can be concluded as a model with sufficient reliability and validity, and adequately fits the data. Since the reliability and validity of these scales had previously demonstrated in previous research with teachers, a pilot test was deemed unnecessary (Liu et al., 2016a).

For the qualitative phase, pilot tests were conducted with representatives of each of the target groups of principals, middle-level leaders, and teachers both to ensure clarity and utility of the questions. These yielded minor refinements.

3.6 Data Collection

For the research's quantitative phase, the researcher sends survey packages to 60 schools by post. Each package included a cover letter from Chulalongkorn University, which stated the title of the dissertation, its purposes, and the required participants (1 principal and 20 teachers for each school), the research questionnaire, and a folder for school to send the package back to the researcher.

For the qualitative phase, the researcher selected four schools (two in urban areas, two in rural areas) based on results of principal leadership and teacher learning. A top-performance and a low-performance schools were selected in each area. For each school, an in-depth interview was conducted with the school principal and the focus-group was conducted with middle-level leaders and teachers. The purpose was to observe and examine their knowledge, insights, thoughts, and opinions about the topic being studied. The focus of questions was associated with the teachers' learning practices and the role of leaders in the selected schools. Questions were open-ended, semi-structured, and lasted approximately one to two hours. Throughout the interview and focus-groups, the researcher used audio-recording method to ensure transcription (Merriam, 1988). For convenience, the interviews and focus-group were conducted at the location where the key informants work.

3.7 Data Analysis

Quantitative data analysis: To analyze quantitative data, the researcher followed data analysis by the following sequence: descriptive analysis of the results for the full sample, analysis of the measurement properties of the scales, inferential analysis of the full sample of 60 schools, inferential analysis comparing the urban and rural primary schools.

Descriptive analysis of the results for the full sample: The analysis of general information of the respondents was performed through the use of descriptive statistics to describe the characteristics of the sample and their responses on the survey scales. Percentage and frequency distribution was used as a method to express the relative frequency of survey responses.

Analysis of the measurement properties of the scales: As noted above, Cronbach's alpha test of internal consistency was used in the initial step in establishing the reliability and validity of the scale. A minimum standard of 0.70 was set for the desired alpha coefficient.

Next, to assess the construct validity of measurement model and test the consistency between the measures of constructs, confirmatory factor analysis (CFA) was employed. For structural model validity, factor loadings and several model-fit indices were employed. These include comparative fix index (CFI), Goodness-of-fit index (GFI), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA). In this research, model fit was considered acceptable with the scores of CFI > 0.85, GFI > 0.90, SRMR < 0.08, and RMSEA < 1 (Browne & Cudeck, 1993; Hu & Bentler, 1999).

Inferential analysis of the full sample of 60 schools: Mediation analyses were conducted in this study to understand the path in the model and its relationship (i.e. direct and indirect effects) by exploring the underlying mechanism or process by which one variable (X) influences another variable (Y) through a mediator (M) (J. Cohen, Cohen, West, & Aiken, 2003). From the research's conceptual framework, the direct effect of learning-centered leadership on teacher engagement in professional learning

and the indirect effect of learning-centered leadership, through teacher agency and trust, on teacher engagement in professional learning were explored.

In terms of the inferential data analysis, the researcher used Structural Equation Modeling (SEM) method to define the measurement model and to understand the paths between the constructs. The process of structural equation modeling was adapted from Hoyle (1995). It involved the following steps:

1. *Specify the model*: To "test whether certain variables were interrelated through a set of linear relationships by examining the variances and covariances of the variables" (StatSoft, 2011). The first step involved the researcher drawing the relationship of variables through the use of a path diagram as guided by the research's conceptual framework. The variances were examined through the mean and the standard deviation taken from the result of the data analysis of the questionnaire. Hypotheses were then tested whether one set of numbers was related to the other set of numbers by comparing the variance of the variables.

2. *Identify the model*: The second step involved the researcher consideration "whether a unique value can be obtained for every free parameter from the observed data" (DeVault, 2016). The free parameters were estimated, where value was other than zero, meaning that variables were related.

3. *Estimate the model*: The step involved the researcher testing "whether the variances and covariances fit the model that has been created" (DeVault, 2016). It involved using the statistical package used for Structural Equation Modeling (Mplus), to build a model which generates and compares an estimated population covariance matrix with an observed population

covariance matrix. The two covariance matrices were converged to create a third matrix called "residual matrix", where difference between the two matrixes should be minimized.

4. *Test the model fit*: The fourth step involved testing the model fit by the results of the statistical testing, and parameter estimates and standard errors for the numerical coefficients in the linear equations (DeVault, 2016). It involved the researcher finding a correlation of 1.0, which indicates a perfect relationship, or a ratio between X^2 and degrees of freedom that was less than two, to indicate a good fit of a model.

5. *Manipulate the model*: The final step in the process involved examining the structural model validity. Factor loadings and several model-fit indices were employed, including comparative fix index (CFI), Goodness-of-fit index (GFI), standardized root mean square residual (SRMR), root mean square error of approximation (RMSEA), and chi-square ($\chi 2$).

The SEM analysis was complemented by the use of the bootstrapping method (Preacher & Hayes, 2008) to verify the nature of relationships within a model. We used bootstrapping to resample the data 2,000 times. In bootstrap analysis the point estimates of total effect, indirect effect, and direct effect represent the means computed over the 2,000 bootstrap samples and provide an indication of effect size. The standard error shown in the analyses represents the standard deviation of the 2,000 estimates (Preacher & Hayes, 2008).

Inferential analysis comparing the urban and rural primary schools: To study the differences of the main variables between urban and rural teachers, multi-group confirmatory factor analysis was employed to determine the measurement

invariance or equivalence of measured construct across the urban and rural groups. In specific, three tests were used to test the measurement invariance. These include configural invariance, metric invariance, and scalar invariance, where configural invariance serves as a baseline model to test the equivalency of the basic model structure between the two groups. Differences in model fit between the two groups were tested by assessing the fit indices of the data. An equation developed by Cheung and Rensvold (2002) was applied to assess this measurement invariance. This can be written as:

$$\Delta \text{ CFI} = \text{CFI}_{constr.} - \text{CFI}_{unconstr.}$$

From the equation, the results of the change in CFI (ΔCFI) should not exceed 0.01 for the comparison to be considered valid between the two groups (Cheung & Rensvold, 2002). After assessing measurement invariance, independent samples T test was employed to compare the means of the two independent groups. Structural equation modeling (SEM) was then applied to establish rural and urban model and to determine whether there were differences in the paths within the model of the two subgroups.

Qualitative analysis: To analyze the qualitative data, the researcher followed data analysis and coding procedures suggested by Creswell (2005) and Patton (2005). The methods allow understanding of people or events "from those we can't observe" (Patton, 1987, p. 196). Moreover, it allows information to be obtained from other sources and increases the credibility of research findings (Emerson, Fretz, & Shaw, 1995).

According to Creswell (2009), the data analysis process can be categorized into six steps as follows:

1. Organize and prepare the data for analysis. The step involved the transcription of the data from audio tapes into document.

2. Read through the data to understand the information and ideas received from the participants.

3. Begin detailed analysis with the coding process, by organizing the material into segments, placing them into categories, and labeling them into terms.

4. Use the coding process to generate a description of the setting or people as well as categories for these for analysis. The step involved the researcher generating codes into themes, which were them being analyzed and described in detail.

5. Advance how the description of the themes will be represented in the qualitative narrative. The step involved taking the themes into narrative passages.

6. Interpret the meaning of the data. The step involved understanding of the data and a careful interpretation, where original meanings of the participants were not distorted by the researcher's bias.

In this research, an in-depth interview with the school principal and a focus-group interview with middle-level leaders and teachers were performed at the schools' location. Missing data or information which need clarification were further collected through telephone interview. With differences in the school background, context, and location; the researcher presented its analysis in the format of case studies, with explanation of each school given. School categorization (e.g. urban/rural, low-performance/high-performance) were disclosed to the school upon the interviews. As

well, names of the school and its participants were made anonymous to ensure that facts and information were provided without distortion.

As suggested by Creswell (2009), the research began with data transcription from audio recording into document. After reading through the documents, coding process was performed by organizing the material into segments. As the research aimed to understand the impact of learning-centered leadership and its practices that shape teacher agency, trust, and teacher engagement in professional learning, qualitative materials were described into four themes according to the four dimensions of learning-centered leadership: builds a learning vision, provides learning support, manages the learning program, and modeling. The qualitative narrative and data interpretation were carefully translated and written based on facts and information perceived from the participants to ensure original content and avoid possible bias.
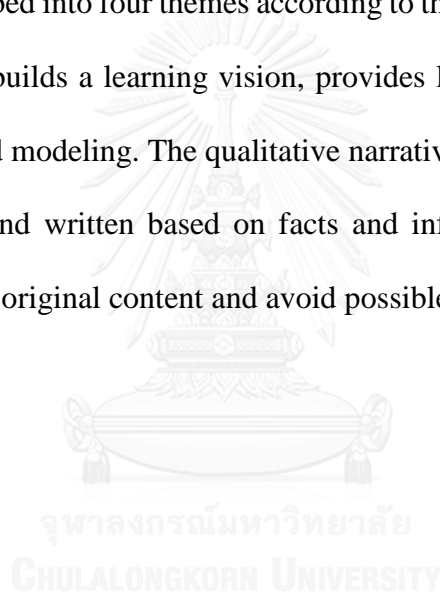
CHAPTER 4

QUANTITATIVE RESULTS

The research addressed four questions:

1. What is the pattern of learning-centered leadership and teacher learning in Thai primary school,

2. What is the effect of learning-centered leadership on teacher trust, teacher agency, and teacher engagement in professional learning,

3. How does learning-centered leadership and teacher engagement in professional learning differ between urban and rural schools,

4. How do learning-centered leadership practices shape teacher agency, trust, and teacher engagement in professional learning.

This chapter responds to research question 1 to 3, and the following chapter responds to research question 4. In this chapter, the first section presents demographic information about the sample. Next, substantive results with respect to the research questions are presented with the following detail: comparative analysis of teacher and principal samples, general measurement model, comparative analysis of urban and rural samples, and the urban/rural measurement model. In the final section conclusions of the research findings are discussed.

4.1 Demographic Information on the Sample

Prior to the research inferential analysis, demographic information was analyzed in order to understand the characteristics of the sample. Data were categorized

by the total teacher sample, the urban and rural teachers, and the principal sample as

shown in Table 3.

Table 3 Demographic information by the total teacher sample, the urban and rural

groups, and the principal sample

Characteristics	Total Teacher Sample (1,011)		Urban (566)		Rural (445)		Principal Sample (60)	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Gender								
Female	780	77.15	443	78.27	337	75.73	20	33.33
Male	231	22.85	123	21.73	108	24.27	40	66.67
Age								
<30 years	177	17.51	114	20.14	63	14.16	-	-
31 - 39 years	208	20.57	130	22.97	78	17.53	-	-
40-49 years	188	18.60	100	17.67	88	19.78	3	5.00
50 years old or above	438	43.32	222	39.22	216	48.54	57	95.00
Highest Education								
Less than Bachelor's Degree	11	1.09	4	0.71	7	1.57	-	-
Bachelor Degree	704	69.63	385	68.02	319	71.69	6	10.00
Master Degree	293	28.98	175	30.92	118	26.52	49	81.67
Doctoral Degree	3	0.30	3	0.30	-	-	5	8.33
Years of work experience in position								
Less than 2 years	85	8.41	51	9.01	34	7.64	-	-
2-5 years	177	17.51	111	19.61	66	14.83	1	1.67
6-10 years	178	17.61	113	19.96	65	14.61	1	1.67
More than 10 years	571	56.48	291	51.41	280	62.92	58	96.67

According to demographic information in Table 3, there was a total of 1,011 teacher questionnaires (89% response rate) and 60 principal questionnaires (100% response rate). Information was categorized by respondent gender, age, education, and years of work experience. The pattern of demographic characteristics corresponds with the population of Thai teachers and principals ("Education Statistics (World Bank)," 2016).

The teacher respondents were largely female (77%) and the principal respondents were largely male (66%). In terms of age, most teacher respondents were over 40 years old (62%) and most of the principals were over 50 years old (95%). More than 74% of the teacher respondents had more than six years of teaching experience. Over 90% of the principal respondents had more than 10 years of experience. In terms of education, most teacher respondents held a first university degree (99%) and most principal respondents held a Master degree (90%).

In both urban and rural schools the majority of teachers were female (78% and 75% respectively). However, teachers in the urban schools were somewhat younger (44% < 40 years) compared with rural schools (31% < 40 years). Teachers in the urban schools had achieved slightly higher levels of education with 31% holding a Master degree compared with 26% in rural schools. Teachers in the rural schools had a slightly higher percentage of teachers with more than 10 years of work experience (51% in urban, 62% in rural).

Research Question 1: What is the pattern of learning-centered leadership and teacher learning in Thai primary school?

To respond to the research question, data was presented with the perceptions of both principal and teacher respondents to reflect the pattern of learning-centered

leadership provided by the school principals and teachers in Thailand. Comparative analysis were employed between teacher and principal samples through mean and the independent t-test for learning-centered leadership. For teacher learning, statistics were presented by teacher perceptions of the remaining variables: e.g. teacher trust, teacher agency, and teacher engagement in professional learning (see Table 4).

4.2 Comparative Analysis of Teacher and Principal Samples

As shown in Table 4, learning-centered leadership and its sub-dimensions presented high significant level of difference between principal and teacher perception (t-score at 8.470 to 10.822; $p < 0.05$). Mean of principal self-report ratings (4.543 – 4.575) were higher than the mean of teacher ratings (3.954 – 4.062) for learning-centered leadership. This pattern of high self-report ratings of principal was prevalent and was found similarly in other leadership research in education (Hallinger & Lee, 2014).

Based on the evidence and knowledge of Thai schools as mentioned in the beginning of the research, mean levels of both samples and its rating pattern was assumed to be higher than the current status of Thai education. Later, in the research qualitative phase, support from in-depth information about the study was acquired to gain further insight and understand the occurrences.

Table 4 Comparative statistics for teacher and principal data

Constructs/Statistics	Teacher (n=1,011)			Principal (n=60)			t-test
	Mean	SD	α	Mean	SD	α	t
Learning-Centered Leadership	4.003	0.826	0.979	4.551	0.539	0.946	10.822***

Table 4 Comparative statistics for teacher and principal data (continue)

Constructs/Statistics	Teacher (n=1,011)			Principal (n=60)			t-test
	Mean	SD	α	Mean	SD	α	t
Builds a Learning Vision	4.062	0.791	0.929	4.575	0.524	0.913	8.470***
Provides Learning Support	3.992	0.852	0.943	4.544	0.541	0.830	10.520***
Manages Learning Program	4.000	0.806	0.926	4.544	0.564	0.850	9.172***
Modeling	3.954	0.850	0.941	4.543	0.521	0.821	10.371***
Teacher Trust	4.016	0.755	0.952	-	-	-	-
Calculative Trust	4.093	0.727	0.902	-	-	-	-
Relational Trust	3.974	0.771	0.879	-	-	-	-
Faith Trust	3.994	0.762	0.907	-	-	-	-
Teacher Agency	4.178	0.685	0.968	-	-	-	-
Learning Effectiveness	4.142	0.691	0.889	-	-	-	-
Teaching Effectiveness	4.158	0.673	0.916	-	-	-	-
Optimism	4.267	0.667	0.903	-	-	-	-
Constructive Engagement	4.163	0.708	0.921	-	-	-	-
Teacher Engagement in Professional Learning	4.098	0.729	0.972	-	-	-	-
Collaboration	4.187	0.708	0.913	-	-	-	-
Reflection	4.102	0.705	0.930	-	-	-	-
Experimentation	4.052	0.749	0.935	-	-	-	-
Reach Out to Knowledge Base	4.056	0.766	0.915	-	-	-	-

Note: * = $p < 0.05$, 95% confidence interval

From the above statistics, the pattern of learning-centered leadership and teacher learning for each main variable and its dimensions were further described in graphs as follows.
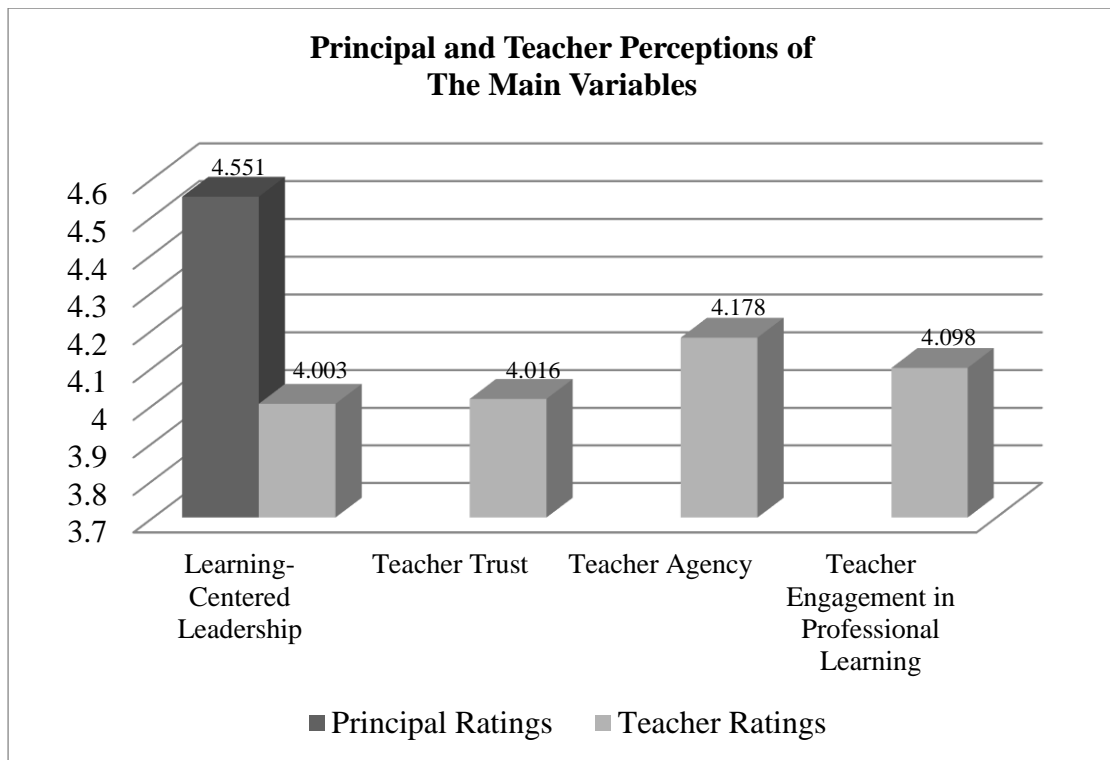
Figure 2 Principal and teacher perceptions of the main variables

To understand the overall image of the pattern of learning-centered leadership and teacher learning in Thai primary schools, principal and teacher perceptions for all of the research main variables were analyzed (see Figure 2). As shown in Figure 2, both principal and teacher perceptions of the four main variables evidenced mean levels of 4 and above. Principal self-reports scores were significantly higher than teacher report on learning-centered leadership. However, despite the statistically significant differences between the teacher and principal samples, the actual differences and were not substantially different since both represented high rating scores. This high self-rated score from the principals compared with the teachers was similar in all LCL sub-dimensions (see Table 4).
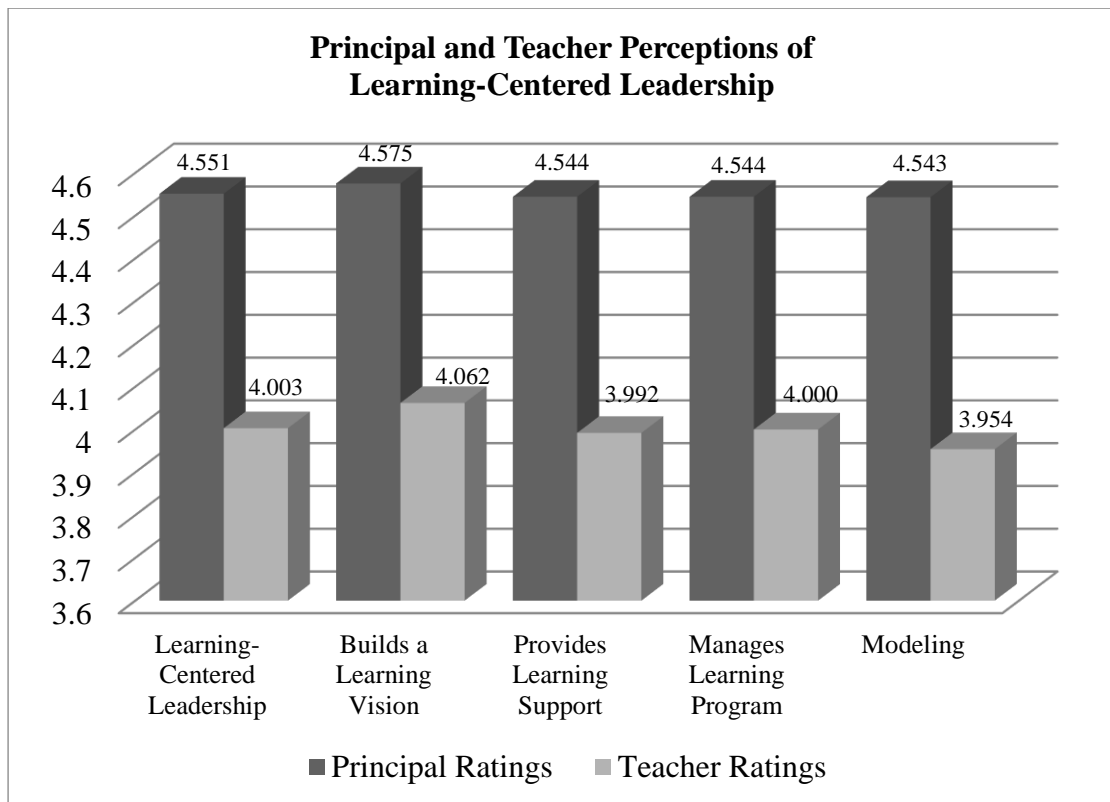
Figure 3 Principal and teacher perceptions of learning-centered leadership

As shown in Figure 3, "Builds a Learning Vision" provided the highest mean for both principal (4.575) and teachers (4.062), "Provides Leaning Support" provided the second highest mean for both principal (4.544) and teachers (3.992). "Manages the Learning Program" provided the third highest mean for both principal (4.544) and teachers (4.0), and "Modeling" provided the lowest mean for both samples (principal: 4.543, teachers: 3.954). The pattern of the rank order from both principal and teacher perceptions were also similar for learning-centered leadership (i.e. Builds a learning vision > Provides learning support > Manages the learning program > Modeling). This suggested that both principal and teachers had similar opinions about how their leader demonstrated features of learning-centered leadership; for example builds a learning vision was the most obvious practices whereas modeling was least evidenced.
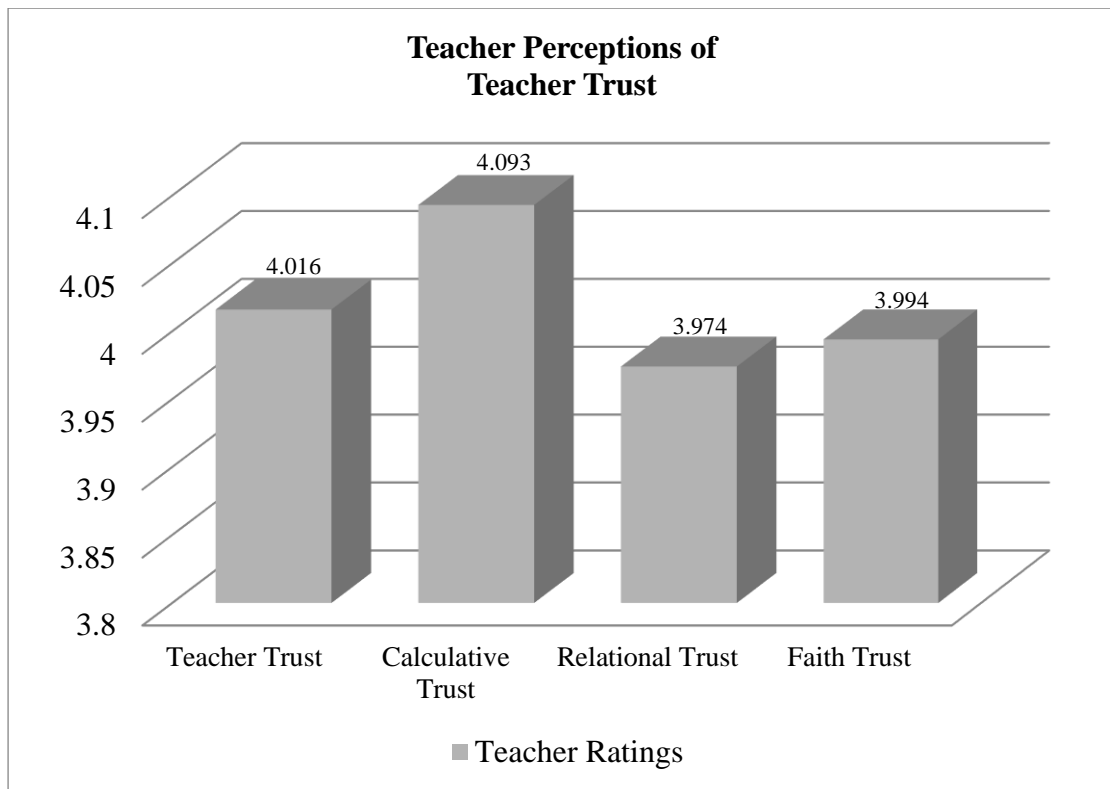
Figure 4 Teacher perceptions of teacher trust

Figure 4 showed teacher perceptions of teacher trust with high rating scores of the main variable its three sub-dimensions (mean levels at approximately 4 and above). "Calculative Trust" provided the highest mean score (4.093), followed by "Faith Trust" (3.994), and "Relational Trust" (3.974). From these statistics, the pattern of teacher trust can be arranged as: Calculative trust > Faith trust > Relational trust. This suggested that the teachers in Thailand perceived calculative trust as the strongest attribute and relational trust as the weakest dimension.

Followed by Teacher Trust, Teacher Agency and its sub-dimensions were presented in Figure 5. Similarly, teacher perceptions were high for the main variable and its four sub-dimensions with mean levels at 4 and above. According to Table 4,

teacher agency received the highest mean score (4.178) compared to other main variables.
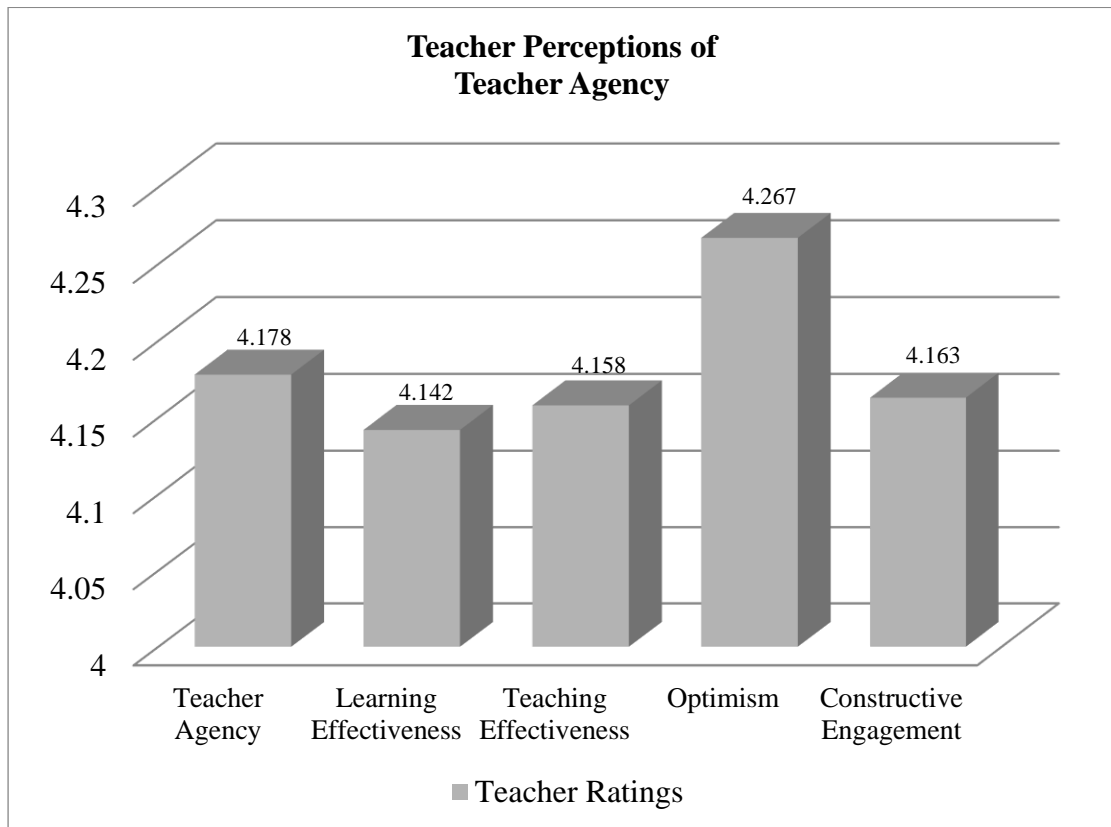
Figure 5 Teacher perceptions of teacher agency

As shown in Figure 5, "Optimism" provided the highest mean (4.267), followed by "Constructive Engagement" (4.163), "Teaching Effectiveness" (4.158), and "Learning Effectiveness" (4.142). The rank order pattern of teacher agency can be presented as Optimism > Constructive engagement > Teaching Effectiveness > Learning Effectiveness. This pattern reflected teacher perceptions on teacher agency; for example optimism was seen as the most obvious feature whereas learning effectiveness was agreed to be the least evidenced practice.
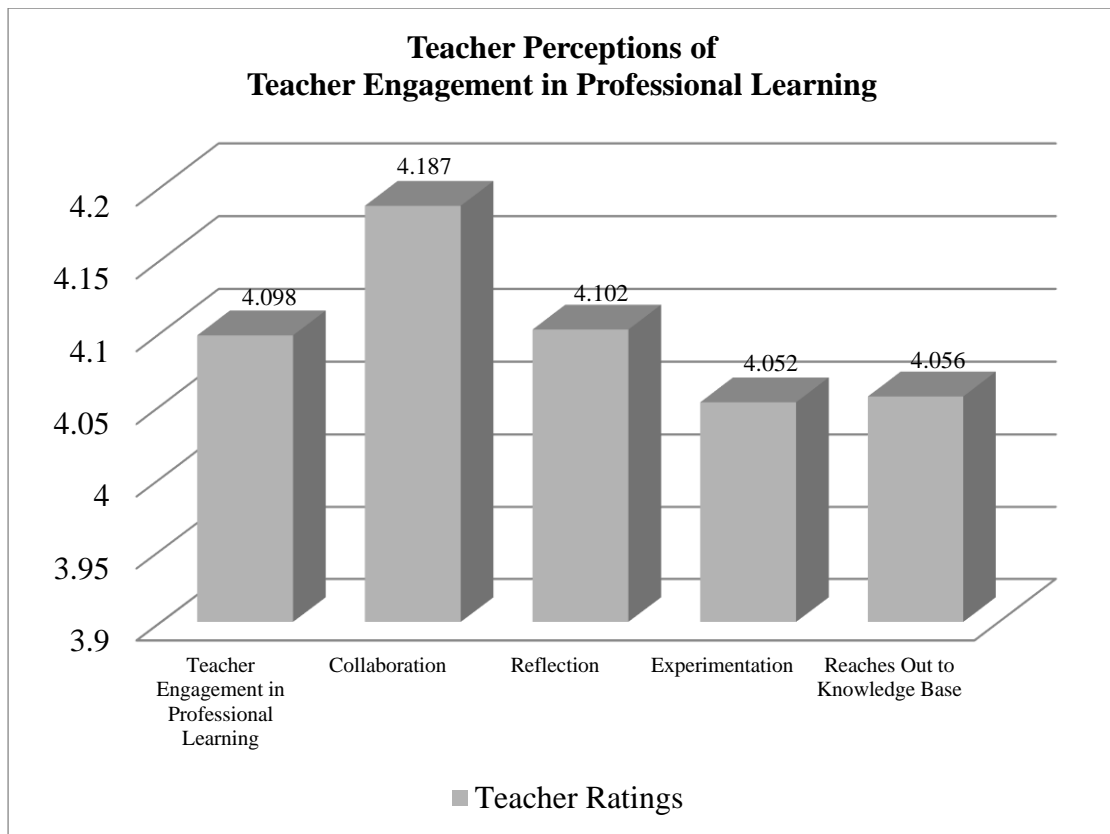
Figure 6 Teacher perceptions of teacher engagement in professional learning

Figure 6 showed teacher perceptions of the fourth main variable: teacher engagement in professional learning. As shown, teacher perceptions of the variable and its four dimensions were highly-rated with mean levels at approximately 4 and above. Referring to Table 4, teacher engagement in professional learning were rated with the second highest mean ranking (4.098) compared to other main variable.

For each sub-dimensions of teacher engagement in professional learning, "Collaboration" provided the highest mean (4.187). "Reflection" was second ranked (4.102), followed by "Reaches Out to Knowledge Base" (4.056), and "Experimentation" (4.052). The pattern from teacher perception can be arranged as: Collaboration > Reflection > Reaches out to knowledge base > Experimentation. This

suggested that teachers perceived collaboration as the strongest and experimentation as the weakest feature of teacher engagement in professional learning in the school.

Research Question 2: What is the effect of learning-centered leadership on teacher trust, teacher agency, and teacher engagement in professional learning?

Results from quantitative data analysis are presented concerning the effect of learning-centered leadership on teacher trust, teacher agency, and teacher engagement in professional learning. To respond to this research question, the general measurement model for the full dataset was examined to ensure reliability and construct validity of the constructs and model fit. This is followed by SEM of the total model in order to establish the relationship among the variables.

4.3 General Measurement Model

Quantitative data analysis began with establishing the reliability and construct validity of the measurement model. The alpha coefficients for all constructs on the teacher and principal forms of the survey exceeded .85, thereby meeting Nunnally and Bernstein's (1994) minimum reliability standard of .70 (see Table 4).

The validity of measurement model was then accessed through convergent validity, which purpose was to evaluate whether each measure of construct has high correlations with each other (Trochim, 2006). In order to investigate this validity of measurement, confirmatory factor analysis (CFA) was assisted by the estimation of factor loadings and average variance extracted (AVE) for Learning-Centered Leadership (LCL), Teacher Trust (TT), Teacher Agency (TA), and Teacher Engagement in Professional Learning (TEPL).

According to Hair, Ringle, Hult, and Sarstedt (2013), the convergent validity is found acceptable at factor loading higher than 0.7 and average variance extracted (AVE) higher than 0.5. As indicated in Table 5, the measurement model proved its validity with factor loadings at approximately 0.9 and above. The average variance extracted (AVE) for all constructs were also higher than 0.8, which exceeded the acceptable range.

Table 5 Factor loadings and average variance extracted (AVE) for research constructs

Constructs/Statistics	Factor Loading	AVE
Learning-Centered Leadership		
Builds a Learning Vision	0.940	
Provides Learning Support	0.950	0.886
Manages Learning Program	0.943	
Modeling	0.933	
Teacher Trust		
Calculative Trust	0.918	
Relational Trust	0.925	0.840
Faith Trust	0.906	
Teacher Agency		
Learning Effectiveness	0.913	
Teaching Effectiveness	0.928	0.836
Optimism	0.894	
Constructive Engagement	0.921	

Table 5 Factor loadings and average variance extracted (AVE) for research constructs
(continue)

Constructs/Statistics	Factor Loading	AVE
Teacher Engagement in Professional Learning		
Collaboration	0.903	
Reflection	0.935	0.844
Experimentation	0.912	
Reach Out to Knowledge Base	0.924	

Prior to the presentation of the general measurement model and its interpretation of the causal paths, a good-fitting measurement should be proved to evaluate whether the model is reasonably consistent with the data. Several model-fit indices were employed to measure model-fit. According to these researchers, a model is regarded as acceptable if:

- Chi-square (χ^2/df) is less than 2 or 3 (Kline, 1998; Ullman, 2001),

- Root Mean Square Errror of Approximation (RMSEA) should not exceed 0.1 (Browne & Cudeck, 1993),

- Comparative Fit Index (CFI) value of .85 represents progress and thus should be acceptable (Bollen, 1989),

- Standardized Root Mean Residual (SRMR) less than .08 is generally considered a good fit (Hu & Bentler, 1999)

Table 6 Model-fit indices for the general model

Model	χ^2	df	CFI	SRMR	RMSEA
Standard	--	--	*>0.85*	*<0.080*	*<0.10*
General	16027.267	3983	0.865	0.045	0.055

In Table 6, values of the model-fit indices for the general model was presented with its cut-offs as specified by the standards suggested above. Data showed that chi-square (χ^2/df) is slightly higher than the acceptable range at 4.024. However, other model-fit indices (e.g. Root Mean Square Error of Approximation (RMSEA) = 0.055 [<0.1], Comparative Fit Index (CFI) = 0.865 [>0.85], and Standardized Root Mean Residual (SRMR) = .045 [<0.08]) suggested a satisfactory fit for the general model. As a result, the research can be concluded that the model is consistent with its data and can be considered as a good-fitting model.

These analyses provide evidence that the constructs and general measurement model meet common standards. Next, the presentation of general measurement model is provided with explanation about the causal path and effects between the main variables.
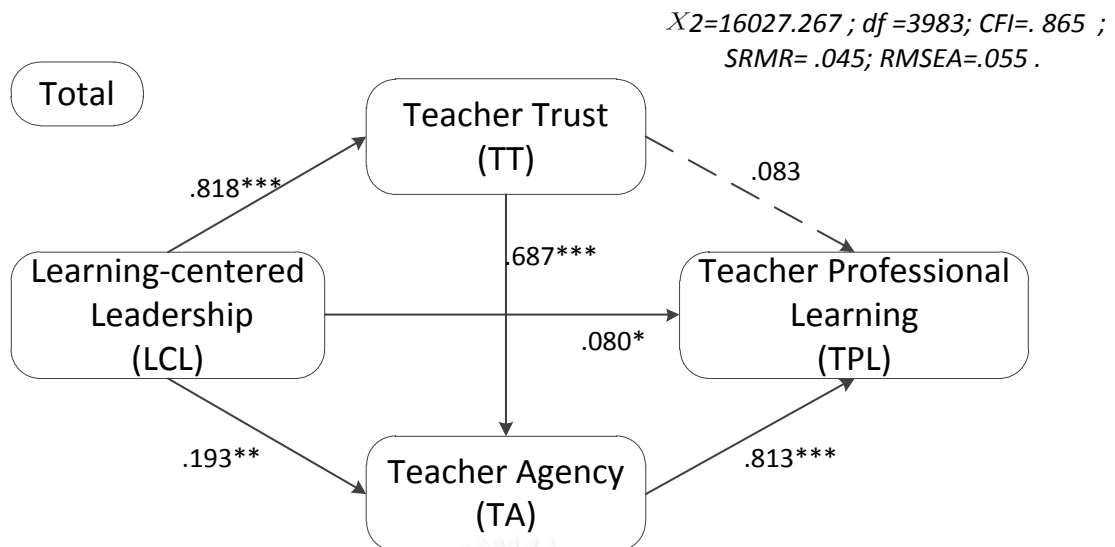
Figure 7 SEM model of learning-centered leadership and teacher learning for the
teacher sample (n = 1,011)

Figure 7 presented the research's general measurement model. Referring to the
conceptual model guided in this study, the hypothesis was proposed that principal LCL
would produce both direct effects and indirect effects (i.e., through TT and TA) on
TEPL. Results of the SEM analysis (see Figure 7) indicated that although principal LCL
had no meaningful 'direct effect' on TEPL (β= 0.080, p<.05), it did have a significant,
'indirect effect' through the two mediating variables of TT and TA. The pattern of
mediated effects showed that although LCL had only a weak, significant direct effect
on TA (β=0.193, p<.01), it demonstrated a very strong, positive significant effect on
TT (β=0.818, p<.001). However, while TT had no significant direct relationship on
TEPL (β=0.080), TA showed a strong and significant effect on TEPL (β=0.813,
p<.001). In summary, the SEM model affirmed the significance of indirect effects of
LCL on TEPL through the two mediators (TT and TA).

For secondary affirmation, the study employed bootstrapping method as
recommended by Preacher and Hayes (2008) to verify the effects between the research

main variables. A 95th percentile confidence interval for each path was obtained from the distribution for the 2,000 repeated samples (Hayes, 2009). Followed by these bootstrap estimates of the mediated paths, the research then used bias adjustment described by MacKinnon (2008) to construct a bias corrected confidence interval for each of the variable paths.

From the results of bootstrap analysis (see Table 7), the nature of direct and indirect effects of LCL on TEPL as well as the role of the research mediators (TT and TA) were confirmed. In detail, the direct effect of learning-centered leadership on teacher professional learning was found no significant after 2,000 repeated sampling in bootstrap. The total effect of LCL on TEPL was .762; p = 0.001, and the total indirect effect was .682; p = 0.001, which accounted for 89.5% of the total effect. In the analysis, an interesting joint mediating effect of TT and TA was highlighted. Specifically, the path through a single mediator (TA) was .157; p = 0.01 (20.60% of the total effect). However, the specific indirect effect where both TT and TA were involved (i.e. LCL→TT→TA→TEPL) was .457 (59.97% of the total effect).

Table 7 Bootstrapping results for the standardized direct, indirect, and total effects of learning-centered leadership on teacher engagement in professional learning through teacher trust and teacher agency (N=1,011)

	Point Estimate	Product of Coefficients		95% Bootstrap CI		Two-tailed Sig (P)
		SE	Z	Lower	Upper	
Standardized Total Effects						
LCL-TEPL	.762	.023	33.263	.698	.800	***

Table 7 Bootstrapping results for the standardized direct, indirect, and total effects of
learning-centered leadership on teacher engagement in professional learning
through teacher trust and teacher agency (N=1,011) (continue)

	Point Estimate	Product of Coefficients		95% Bootstrap CI		Two-tailed Sig (P)
		SE	Z	Lower	Upper	
Standardized Total indirect Effects						
LCL-TEPL	.682	.030	22.866	.622	.735	***
Specific Indirect Effects of LCL→TA→TEPL						
LCL-TEPL	.157	.048	3.281	.035	.244	**
Specific Indirect Effects of LCL→TT→TEPL						
LCL-TEPL	.068	.036	1.875	-.008	.139	--
Specific Indirect Effects of LCL→TT→TA→TEPL						
LCL-TEPL	.457	.046	9.951	.365	.560	***
Standardized Direct effects						
LCL-TEPL	.080	.035	2.270	.004	.144	*

Note: 2000 bootstrapped samples. CI=confidence-interval; LCL =Learning-centered
Leadership; TT=Teacher Trust; TA=Teacher Agency; TEPL= Teacher Engagement in
Professional Learning. Standardized indirect effects. 95% CI does not include zero.
***=P<0.001

To fully understand the mediation process, it was important to note that a
reversed direction of indirect effect where the two mediators switched position (i.e.
LCL→TA→TT→TEPL) has been tested. In this alternative model, however, the path
from TA to TT turned out to be non-significant and the model fit appeared weaker than
the fit demonstrated by the first model (not Tabled). These results suggest that for
learning-centered leadership to successfully impact teacher engagement in professional
learning in Thailand, a process of building trust needs to be fostered as a foundation for

teacher agency. And teacher agency acts a catalyst or energizer for teacher engagement in professional learning.

Research Question 3: How does learning-centered leadership and teacher engagement in professional learning differ between urban and rural schools?

To respond to the question, the research begins with comparative analysis between urban and rural schools on each variables. The urban/rural measurement model is then presented by SEM models, which proved acceptable with several model fit indices, invariance analysis, invariance of path coefficients.

4.4 Comparative Analysis of Urban and Rural Samples

This section represents comparative analysis about the perceptions of teachers and principals in urban and rural samples on various constructs. The analysis began with teacher comparative analysis. Not surprisingly, the means of teachers in urban schools were higher than those in rural schools. A similar pattern of result has been reported by an equivalent research by Hallinger and Liu (2016).

Independent samples T test was employed to compare the means of the two independent groups. From the teacher perceptions, the result shows that there was a significant difference at $p < 0.05$ between urban and rural group in all constructs, with Teacher Agency (TA) provided the highest t-score at 11.013, followed by Teacher Engagement in Professional Learning (TEPL) at 9.122 (see Table 8).

Table 8 Descriptive and comparative statistics by urban and rural school
(teacher sample)

Constructs/Statistics	Urban School (566)			Rural School (445)			Total	T-test
	Mean	SD	α	Mean	SD	α	α	
Learning-Centered Leadership	4.157	0.764	0.975	3.807	0.858	0.979	0.979	8.375***
Builds a Learning Vision	4.193	0.736	0.923	3.895	0.826	0.928	0.929	6.984***
Provides Learning Support	4.145	0.794	0.935	3.796	0.881	0.945	0.943	7.744***
Manages Learning Program	4.183	0.734	0.920	3.767	0.831	0.919	0.926	9.831***
Modeling	4.103	0.785	0.935	3.765	0.893	0.941	0.941	7.010***
Teacher Trust	3.896	0.712	0.942	3.862	0.779	0.955	0.952	7.718***
Calculative Trust	4.214	0.690	0.891	3.938	0.743	0.904	0.902	7.173***
Relational Trust	4.090	0.742	0.867	3.827	0.781	0.881	0.879	6.887***
Faith Trust	4.120	0.700	0.888	3.834	0.806	0.915	0.907	7.140***
Teacher Agency	4.333	0.616	0.956	3.982	0.715	0.970	0.968	11.013***
Learning Effectiveness	4.291	0.633	0.866	3.954	0.696	0.890	0.889	9.852***
Teaching Effectiveness	4.318	0.607	0.899	3.955	0.700	0.914	0.916	10.832***
Optimism	4.392	0.610	0.872	4.107	0.701	0.919	0.903	7.994***
Constructive Engagement	4.342	0.614	0.901	3.936	0.752	0.920	0.921	11.019***
Teacher Engagement in Professional Learning	4.240	0.664	0.962	3.917	0.766	0.976	0.972	9.122***
Collaboration	4.318	0.635	0.889	4.020	0.758	0.922	0.913	7.726***
Reflection	4.241	0.657	0.917	3.924	0.723	0.931	0.930	9.018***
Experimentation	4.214	0.646	0.902	3.847	0.815	0.950	0.935	8.707***
Reach Out to Knowledge Base	4.196	0.711	0.885	3.879	0.794	0.931	0.915	7.834***

Note: * = p < 0.05, 95% confidence interval

Next, the research presented comparative analysis of the principal perceptions
in urban and rural schools on learning-centered leadership (see Table 9).

Table 9 Descriptive and comparative statistics by urban and rural school
(principal sample)

Constructs/Statistics	Urban School (566)			Rural School (445)			Total	T-test
	Mean	SD	α	Mean	SD	α	α	
Learning-Centered Leadership	4.653	0.503	0.935	4.450	0.549	0.948	0.946	2.293***
Builds a Learning Vision	4.756	0.434	0.881	4.394	0.549	0.907	0.913	3.474***
Provides Learning Support	4.617	0.528	0.862	4.471	0.549	0.867	0.830	1.559***
Manages Learning Program	4.667	0.507	0.817	4.422	0.593	0.855	0.850	2.288***
Modeling	4.573	0.543	0.839	4.513	0.503	0.798	0.821	0.580***

*Note: * = $p < 0.05$, 95% confidence interval

As shown in Table 9, the general means of principals in both urban and rural schools were higher than teachers for learning-centered leadership, suggesting high rated self-report of principal in both area. Standard deviation of principal were also lower than teachers on learning-centered leadership, which implied higher similarity of ratings within the principals. Means of principals in urban schools were higher than those in rural schools. The independent samples T-test also proved statistical differences between the two groups. However, despite the statistically significant differences between urban and rural principal samples, the actual differences and were not substantially different since both represented high rating scores.

From the above analysis, data were further presented into graphs in order to provide information on the perception of urban and rural samples on the research constructs. Differences between perceptions of principal and teacher samples in urban and rural schools on learning-centered leadership were explained, followed by perceptions of teacher samples in urban and rural schools on teacher trust, teacher agency, and teacher engagement in professional learning.
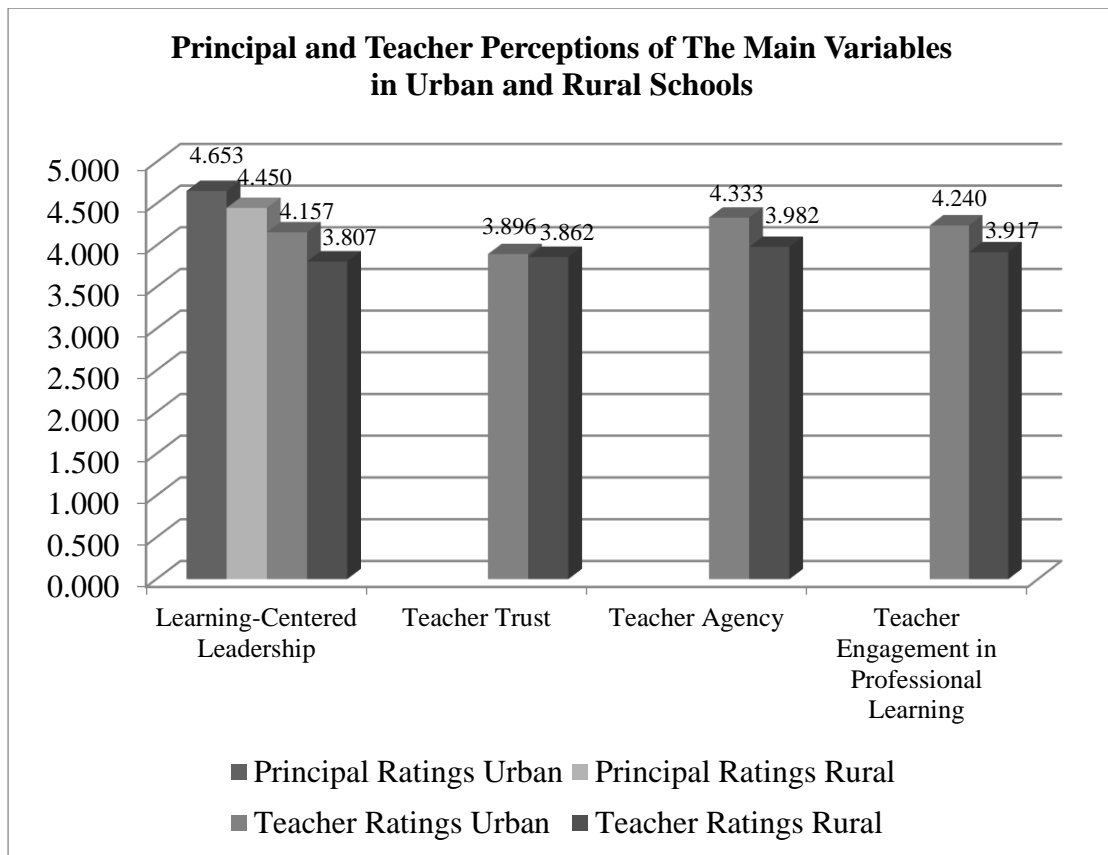
Figure 8 Principal and teacher perceptions of the main variables in urban and rural schools

Figure 8 showed perceptions of principal and teachers in urban and rural schools for the research main constructs. In general, quantitative results represented high score across both urban and rural schools, which contrast to the knowledge of Thai primary school based on other literature. For learning-centered leadership, the means of both urban and rural principals were higher than teachers, which indicate high self-report of principals. Means of teachers in urban schools were also higher than those in rural schools for all constructs, which implied some human resource gap between the two settings.

From the broad perceptive of principal and teacher perceptions in urban and rural schools on the main variables, the following further presented differences between perceptions of both samples in urban and rural schools for each of the main construct and its sub-dimensions.
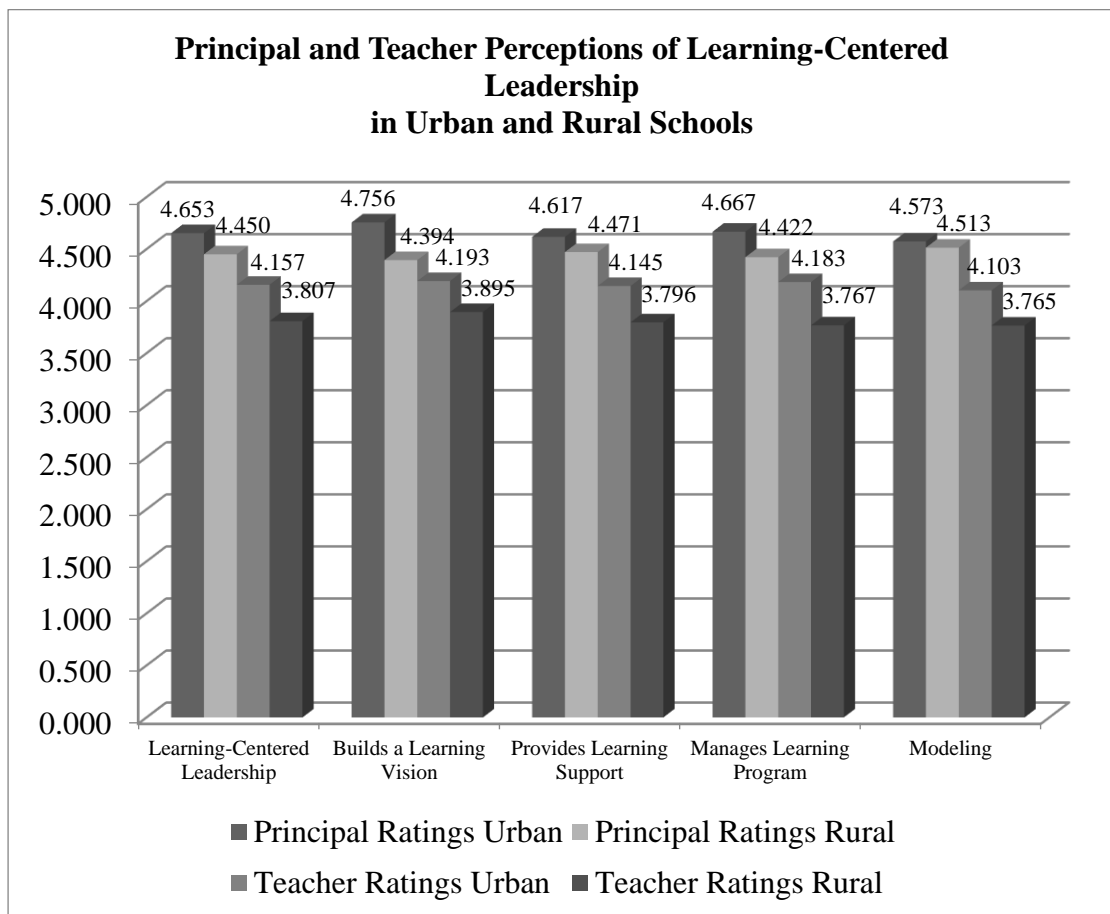
Figure 9 Principal and teacher perceptions of learning-centered leadership in urban and rural schools.

In general, as shown in Figure 9, the principal and teacher perceptions of learning-centered leadership and its sub-dimensions in urban schools were higher than those in the rural schools. However, t-tests did not show meaningful differences. The independent t-test for learning-centered leadership and its dimensions showed only small statistical differences between principal in urban and rural schools $(0.580 - 3.747)$

(see Table 9). Similarly, urban teacher and rural teacher also did not present substantial difference as mean levels were high across the two groups.

Rating pattern by urban principals for learning-centered leadership was 'Builds a learning vision > Manages learning program > Provides learning support > Modeling' whereas rating pattern of rural principals is 'Modeling > Provides learning support > Builds a learning vision> Manages learning program'. Differences between urban and rural principals on learning-centered leadership proved how urban principals viewed building vision as their strongest leadership practices, while rural principals viewed modeling as their strongest leadership practices.

Rating pattern perceived by teachers were more similar to urban principal. The pattern perceived by urban teacher is 'Builds a learning vision > Manages learning program > Provides learning support > Modeling', which was identical to urban principal. The pattern perceived by urban teacher was 'Builds a learning vision > Provides learning support > Manages learning program > Modeling'. The pattern of urban and rural teachers' perception were almost identical. The result proved that both teacher groups had similar opinions on learning-centered leadership, where builds a learning vision was seen as the strongest practices by principal, and modeling was the weakest.

The research, then, investigated differences between perceptions of teachers in urban and rural schools for teacher trust. As shown in Figure 10, teacher perceptions of teacher trust and its sub-dimensions in urban schools were higher than those in the rural schools. The independent t-test for teacher trust and its three dimensions also proved statistical differences between urban and rural teacher perceptions (6.887– 7.173) (see

Table 8), indicating some human resource gap issue. However, the differences were not large since mean levels were high across the two groups.
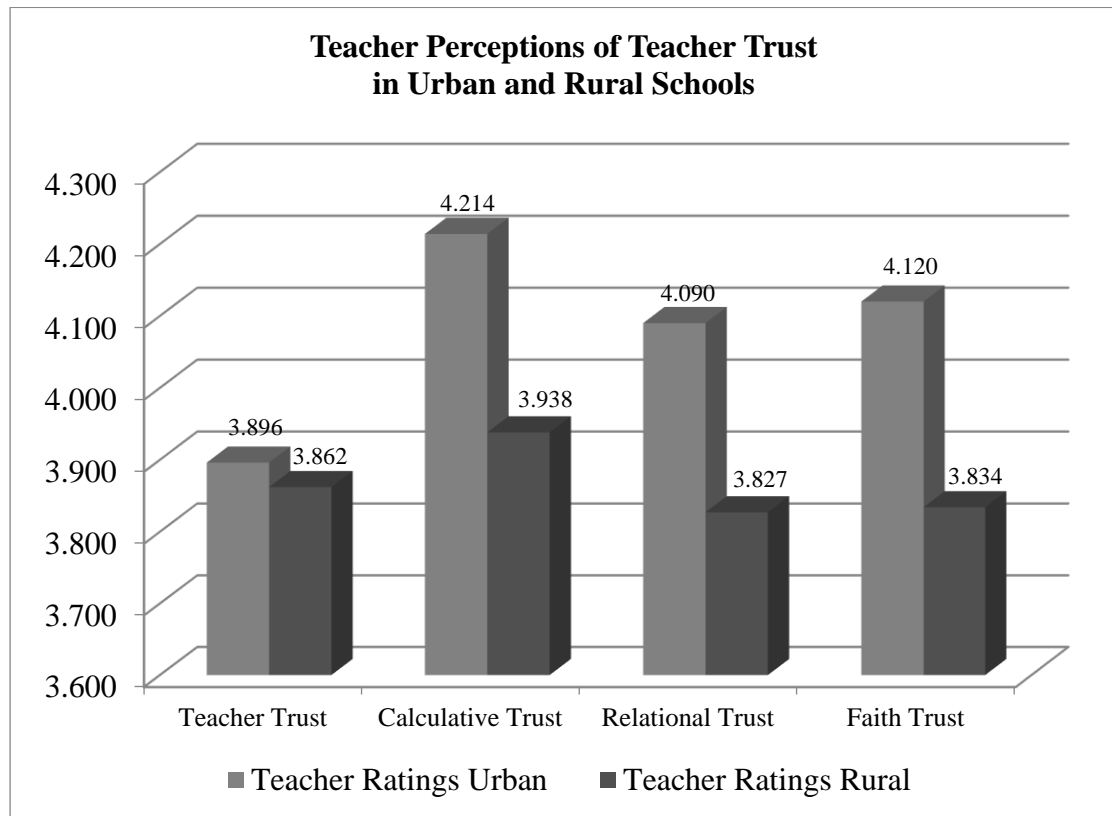
Figure 10 Teacher perceptions of teacher trust in urban and rural schools

According to Figure 10, the rating patterns perceived by both urban and rural teachers were 'Calculative trust > Faith trust > Relational trust'. Similarity of the pattern perceived by the two teacher groups proved that they shared similar opinions where calculative trust was considered the strongest feature and relational trust was the weakest dimension of teacher trust.
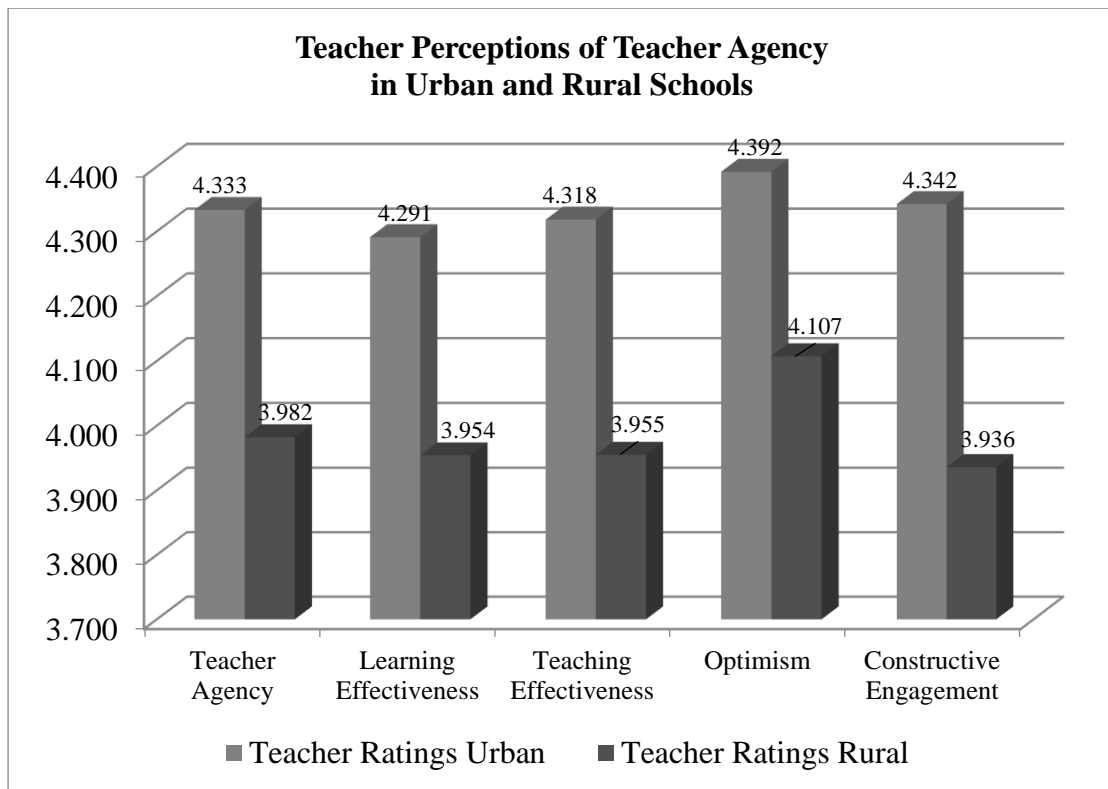
Figure 11 Teacher perceptions of teacher agency in urban and rural schools

Figure 11 showed teacher perceptions of teacher agency in urban and rural schools. Similarly to other variables, the independent t-test proved statistical differences between urban and rural teacher perceptions on teacher agency (7.994-11.019), and the mean scores provided by urban teachers were higher than rural teachers.

Rating pattern perceived by urban teachers was 'Optimism > Constructive engagement > Teaching effectiveness > Learning effectiveness'. However, rating pattern of rural teacher was 'Optimism > Teaching effectiveness > Learning effectiveness > Constructive engagement'. The result proved that urban and rural teachers shared similar opinions on optimism as being their strongest dimension of teacher agency. Differences between urban and rural teachers' perception on other sub-

dimensions showed small difference in opinions. However, it can be concluded that both teacher groups rated learning effectiveness as one of their weakest dimension.
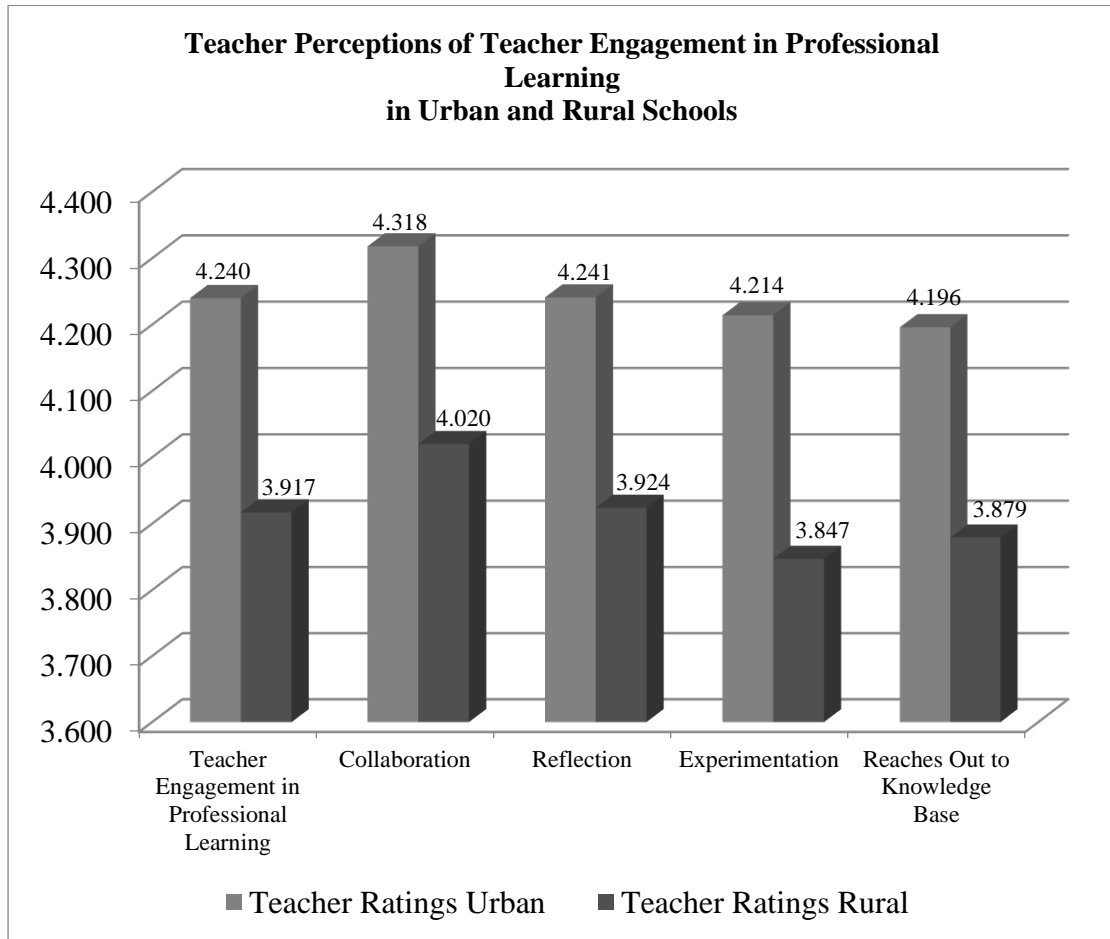
Figure 12 Teacher perceptions of teacher engagement in professional learning in urban and rural schools

Figure 12 presented teacher perceptions of teacher engagement in professional learning in urban and rural schools. As shown, teacher perceptions of teacher engagement in professional learning and its sub-dimensions in urban schools were higher than those in the rural schools, affirming a human resource gap across the two school settings. According to Table 8, the independent t-test also proved statistical

differences between urban and rural teacher perceptions (7.726-9.018). However, t-test did not indicate meaningful difference as mean levels were high across the two groups.

Rating patterns perceived by urban and rural teachers were slightly different. The pattern perceived by urban teacher was 'Collaboration > > Reflection > Experiment > Reaches out to knowledge base', and the pattern of rural teacher was 'Collaboration > > Reflection > Reaches out to knowledge base > Experiment'. The result proved similarity of opinions on collaboration being the strongest dimension, whereas experimentation and reaches out to knowledge base were the weakest dimensions practiced in the school.

4.5 Urban/Rural Measurement Model

Prior to the presentation of urban/rural measurement model, model fit was examined first with several indices. Then, invariance analysis was conducted to compare structural relationship between variables across urban and rural schools. Finally, invariance of path coefficients were examined to test the equivalence within the path structure of the two models.

To identify whether both urban and rural models provided an acceptable fit to its data, multiple indicators of comparative fix index (CFI), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA) were employed. Standard which were set as cut offs for each construct were those similar to the general model, where model fit was considered satisfactory with the scores of CFI > 0.85, SRMR < 0.08, and RMSEA < 0.1 (Bollen, 1989; Browne & Cudeck, 1993; Hu & Bentler, 1999). As indicated in Table 10, model fit was slightly off for urban model (TEPL construct), where CFI is .804 (lower than 0.85) and RMSEA is .120 (higher than 0.10). However, model fit for all other constructs in both models reached acceptable

range. Model fit for urban and rural models can therefore be concluded as satisfactory.

These results meant that both models are consistent with its data and can be considered

as a good-fitting model.

Table 10 Model fit for the main variables in urban and rural schools

Subsample	χ^2	df	CFI	SRMR	RMSEA
Standard	--	--	*>0.85*	*<0.080*	*<0.10*
Learning-Centered Leadership					
Urban Schools	1556.540	271	.905	.039	.092 (.087~.096)
Rural Schools	1098.327	271	.927	.033	.083 (.078~.088)
Teacher Trust					
Urban Schools	675.201	116	.885	.051	.092 (.086~.099)
Rural Schools	512.505	116	.913	.046	.088 (.080~.095)
Teacher Agency					
Urban Schools	1367.136	248	.878	.051	.089 (.085~.094)
Rural Schools	995.166	248	.916	.042	.082(.077~.088)
Teacher Engagement in Professional Learning					
Urban Schools	2490.871	271	.804	.075	.120 (.116~.125)
Rural Schools	1447.147	271	.896	.043	.099 (.094~.104)

Note: Urban schools n=566; Rural schools n=445; df=degree of freedom;
CFI=comparative fit index; SRMR=standardized root mean squared residual;
RMSEA= root mean squared error of approximation

Next, multi-group confirmatory factor analysis was performed in order to test the

measurement invariance of the research main variables across the urban and rural

schools. Measurement invariance tests were necessary for cross-group comparison and

were frequently used to compare structural relationship between variables across

groups, (Milfont & Fischer, 2010). In other words, the purpose of these tests were to

assess relationships between the models regarding to their measured variables and latent constructs.

Data shown in Table 11 affirm the measurement invariance of the four constructs on the three standards tested in this study namely: configural invariance, metric invariance, and scalar invariance. Configural invariance was used to test model structure across groups. Metric invariance was used to test factor loadings across groups, and scalar invariance was used to test whether the two have the same item intercepts across groups (Milfont & Fischer, 2010).

In this research, configural invariance serves as the baseline against which all remaining models were compared to determine evidence of invariance. Change in the CFI values of learning-centered leadership was 0.002 for metric invariance and 0.001 for scalar invariance. Change in the CFI values of teacher trust was 0.002 for metric invariance and 0.000 for scalar invariance. Change in the CFI values of teacher agency was 0.002 for metric invariance and 0.001 for scalar invariance. Change in the CFI values of teacher engagement in professional learning was 0.002 for metric invariance and 0 for scalar invariance.

These invariance results showed that the nested models for the four main variables ranged from negligible to minimal on configural invariance. The indices used for measuring metric and scalar invariance revealed satisfactory fit after constraining parameters and factor loading across the two groups. The results were consistent with Cheung and Rensvold (2002), who stated that the comparison was considered reliable across the two groups when the results of the change in CFI (ΔCFI) do not exceed 0.01. With this criterion for measurement, it can be concluded that there were no meaningful discrepancies in model fit for the four variables between the urban and rural schools.

Table 11 Tests for invariance of variables by urban/rural location: Goodness-of- Fit Statistics

Models	χ^2	df	CFI	SRMR	RMSEA (90% CI)	Model Comparison	ΔCFI
Learning-Centered Leadership							
1 Configural invariance	2125.698	567	.917	.087	.074(.070~.077)		
2 Metric invariance	2037.272	563	.922	.045	.072(.069~.075)	2 VS 1	.002
3 Scalar invariance	2179.131	588	.915	.090	.073(.070~.076)	3 VS 1	.001
Teacher Trust							
1 Configural invariance	1271.456	249	.892	.085	.090(.085~.095)		
2 Metric invariance	1209.339	246	.898	.052	.088(.083~.092)	2 VS 1	.002
3 Scalar invariance	1292.113	263	.891	.087	.088(.083~.093)	3 VS 1	.000
Teacher Agency							
1 Configural invariance	1982.251	520	.897	.113	.075(.071~.078)		
2 Metric invariance	1887.761	516	.903	.055	.073(.069~.076)	2 VS 1	.002
3 Scalar invariance	2050.274	540	.893	.123	.074(.071~.078)	3 VS 1	.001
Teacher Engagement in Professional Learning							
1 Configural invariance	2946.276	566	.852	.101	.091(.088~.094)		
2 Metric invariance	2838.781	563	.858	.069	.089(.086~.093)	2 VS 1	.002
3 Scalar invariance	3035.864	588	.847	.111	.091(.088~.094)	3 VS 1	0

Note: CFI = robust CFI; SRMR = standardized root mean square residual; RMSEA = robust root mean square error of approximation; 90% CI = 90% confidence interval.

Finally, the equivalence of structure models was examined. In reviewing the results in Table 12, the configural model was imposed with no equality constraints, representing a good fit to the data. This configural model serves as the baseline model. Next, the path coefficients, in which models were constrained to be invariant across the groups, were analyzed. These also presented an acceptable fit to the model (χ^2/df = 2.354; SRMR = 0.080; CFI = 0.849; RMSEA = 0.052), with a resulting Δ CFI value of -0.001. These findings yield the conclusion that the model exhibits invariance of path coefficients across the urban and rural schools (Cheung & Rensvold, 2002), and that the path structures of the two models indicate similar pattern of relative effects between variables within the structural equation model.

Table 12 Goodness-of-fit statistics for invariance of variable relationships by urban/rural schools

Models	χ^2	df	SRMR	CFI	RMSEA (90 CI)	ΔCFI
Pooled sample model	16027.267	3983	.045	.865	.055(.054~.056)	
Configural invariance (urban/rural)	18803.964	7985	.079	.849	.052(.051~.053)	--
Path coefficient (urban/rural)	18791.903	7983	.080	.849	.052(.051~.053)	-.001

Note: df = degree of freedom; SRMR = Standardized Root Mean Square Residual; CFI = Comparative Fit Index; RMSEA = Robust Root Mean Square Error of Approximation; 90% CI = 90% Confidence Interval.

Based on the analyses presented above, the research can be concluded that both urban and rural models demonstrated a good model-fit to its data. Invariance analysis

confirmed the relevant of structural relationship between variables across the two groups. As well, invariance of path coefficients also proved the equivalence within the path structure of the two models. Confirmation of these results lead to the presentation of urban/rural measurement model as follows.

$X2=12505.054$; $df =3983$; $CFI=. 811$; $SRMR= .061$; $RMSEA=.061$.

Urban

Teacher Trust (TT)

Learning-centered Leadership (LCL)

Teacher Professional Learning (TPL)

Teacher Agency (TA)

.767***

.044

.664***

.116*

.161*

.799***
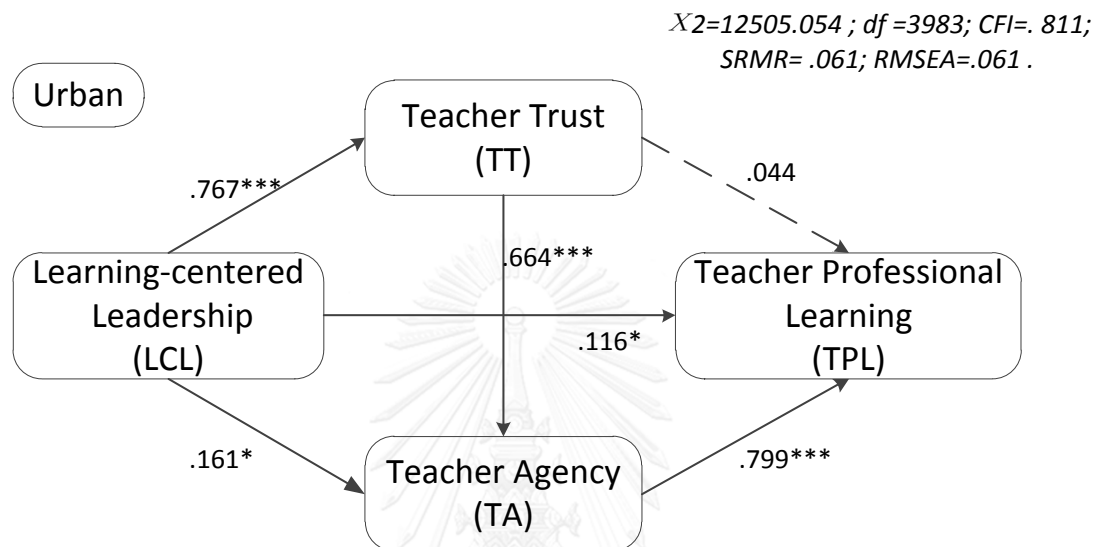
Figure 13 SEM model of leadership and teacher learning in Urban sample

$X2=928.527$; $df =3983$; $CFI=. 860$; $SRMR= .045$; $RMSEA=.057$.

Rural

Teacher Trust (TT)

Learning-centered Leadership (LCL)

Teacher Professional Learning (TPL)

Teacher Agency (TA)

.851***

.099

.767***

.048

.135

.837***
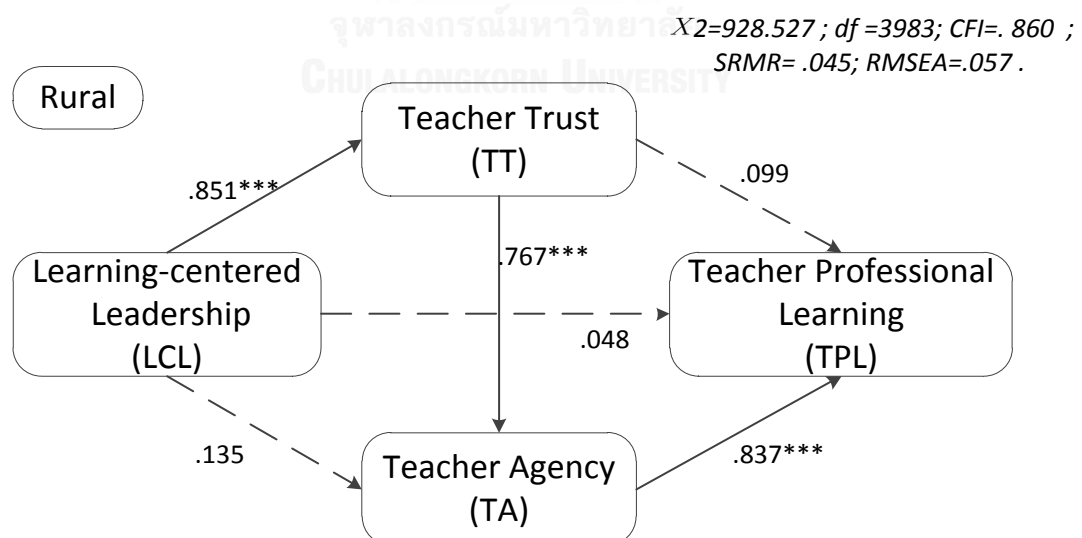
Figure 14 SEM model of leadership and teacher learning in Rural sample

Figure 13 and Figure 14 present SEM models for the urban and rural samples. From the SEM models above, it can be shown that both urban and rural models yielded a similar pattern corresponding to the general model (see Figure 2), but with vary results in the magnitude of effect. The direct effect of principal Learning-Centered Leadership (LCL) on Teacher Engagement in Professional Learning (TEPL) in urban area provided low significance level (β= 0.116, p<.05) and no significance in rural sample (β= 0.048). According to these low significance and effect levels, it can be concluded that both models indicated no meaningful 'direct effect' of LCL on TEPL. However, both models proved a significant, 'indirect effect' through the two mediating variables of Teacher Trust (TT) and Teacher Agency (TA).

More specifically, the pattern of mediated effects in both models proved a weak, but significant direct effect of LCL on TA (β=0.161, p<.05 in urban; β=0.135 in rural). They demonstrated a very strong, positive significant effect on TT (urban, β=0.767, p<.001; rural, β=0.851, p<.001). TT shows very strong, significant effect on TA (urban β=0.664, p<.001; rural β=0.767, p<.001). And in turn, while TT showed no significant direct relationship to TEPL in both settings (urban β=0.044; rural β=0.099), TA showed a strong and significant effect on TEPL (urban β=0.799, p<.001; rural β=0.837, p<.001).

Additionally, bootstrapping results in Table 13 provided secondary affirmation of the strong indirect effects in both urban and rural samples. According to the analysis, the total effect of LCL on TEPL was 0.685 in urban schools and 0.791 in rural schools. The total indirect effect accounted for 83.1% of the total effect (β=0.569) in urban area and accounted for 94.1% of the total effect (β=0.744) in rural schools. The path through which LCL affects TT, followed by TA, and then on TEPL accounted for 59.4% of the

total effect (β=0.407) in urban schools and accounted for 69.0% of the total effect (β=0.546) in rural schools. Corresponding with SEM models, the direct effect of LCL on TEPL and the indirect effect of LCL through TA or TT alone indicated no meaningful significance in both samples.

Table 13 Bootstrapping results for the standardized direct, indirect, and total effects of learning-centered leadership on teacher engagement in professional learning through teacher trust and teacher agency by urban and rural samples

	Point Estimate	Product of Coefficients		95% Bootstrap CI		Two-tailed Sig (P)
		SE	Z	Lower	Upper	
Standardized Total Effects						
LCL-TEPL(Rural)	.791	.037	21.514	.714	.849	***
LCL-TEPL(Urban)	.685	.031	21.877	.626	.742	***
Standardized Total indirect Effects						
LCL-TEPL(Rural)	.744	.043	17.335	.658	.819	***
LCL-TEPL(Urban)	.569	.048	11.867	.467	.651	***
Specific Indirect Effects of LCL→TA→TEPL						
LCL-TEPL(Rural)	.113	.080	1.408	-.043	.267	--
LCL-TEPL(Urban)	.129	.062	2.081	.010	.244	*
Specific Indirect Effects of LCL→TT→TEPL						
LCL-TEPL(Rural)	.084	.062	1.357	-.044	.201	--
LCL-TEPL(Urban)	.034	.055	.605	-.086	.118	--
Specific Indirect Effects of LCL→TT→TA→TEPL						
LCL-TEPL(Rural)	.546	.084	6.499	.407	.740	***
LCL-TEPL(Urban)	.407	.067	6.032	.301	.582	***

Table 13 Bootstrapping results for the standardized direct, indirect, and total effects of learning-centered leadership on teacher engagement in professional learning through teacher trust and teacher agency by urban and rural samples (continue)

	Point Estimate	Product of Coefficients		95% Bootstrap CI		Two-tailed Sig (P)
		SE	Z	Lower	Upper	
Standardized Direct effects						
LCL-TEPL(Rural)	.048	.053	.890	-.046	.171	*
LCL-TEPL(Urban)	.116	.054	2.164	.016	.241	--

Note: 2000 bootstrapped samples. CI=confidence-interval; LCL =Learning-centered Leadership; TT=Teacher Trust; TA=Teacher Agency; TEPL= Teacher Engagement in Professional Learning. Standardized indirect effects. 95% CI does not include zero. ***=P<0.001

4.6 Conclusion

According to the data analyses presented in this chapter, descriptive statistics show mean of principal self-report ratings higher than those obtained from the teacher sample on LCL. This pattern of high self-report ratings of principal was prevalent and was found similarly in other leadership research in education (Hallinger & Lee, 2014).

The research established the reliability and construct validity of the measurement model through analysis of reliability and confirmatory factor analysis. Data fit to the proposed conceptual model also suggested a satisfactory fit on the model-fit indices. Both urban and rural models also demonstrated good model-fit to the data. Invariance analysis confirmed the invariance of path coefficients across the urban and rural schools. Moreover, the path structures of the two models indicate similar pattern of relative effects between variables within the structural equation model.

In terms of the effects of learning-centered leadership on teacher engagement in professional learning, the result suggests that leadership had no discernable direct effects on teacher engagement in professional learning but had a significant, positive effect on each of the mediators (i.e., Teacher Trust and Teacher Agency). In addition, although Teacher Agency had a significant direct effect on Teacher Learning, Teacher Trust did not. In sum, the results suggest that the path through which Learning-Centered Leadership impacts Teacher Engagement in Professional Learning was through a process of building Trust, which was necessary condition for creating Teachers Agency which then carried over into engagement in Professional Learning (i.e., LCL-TT-TA-TEPL).

The results indicated that the same measurement model and leadership for teacher learning process applied across both urban and rural schools. Independent t-tests showed statistical differences in the magnitude of the constructs as perceived by the urban and rural teachers. This suggests some level of human resource gap with the rural schools evidencing lower capacity, as perceived by the principals and teachers.

Despite this finding, it should still be noted that the ratings were high in both settings. This raises a question as to whether the respondents in both urban and rural schools might have been overly generous in their ratings. This was not, however, supported by other statistical analyses and cannot be determined in the current study. Therefore, for the purposes of the current study, it is concluded that although a similar process of leadership and learning applies in these urban and rural primary schools, there does appear to be a human resource gap that disadvantages the rural schools.

CHAPTER 5

QUALITATIVE RESULTS

This chapter presents qualitative analysis of principal and teacher practices. Specifically, it responds to research question 4: How do learning-centered leadership practices shape teacher agency, trust, and teacher engagement in professional learning?

To reflect information on learning-centered leadership practices of school principals in Thailand, qualitative research was conducted to offer opportunity in gaining further insight. Case studies of two urban schools and two rural schools were investigated. In each area, the research chose one top-performance and one low-performance in order to compare how learning-centered leadership practices can effectively shape teacher agency, trust, and teacher engagement in professional learning in these schools.

5.1 Learning Centered Leadership and Teacher Engagement in Professional Learning: Qualitative Analysis of Principal and Teacher Practices

Qualitative research was conducted in this research to gain further insight about the relationship of principal leadership and teacher learning. Case studies of four schools were performed, where in each school, interviews and focus-group were conducted with school principals and teachers. School A is the top-performance school in the urban area. School B is the low-performance school in the urban area. School C is the top-performance school in rural area. And school D is the low-performance school in rural area. The following described these four case studies in terms of principals' learning-centered leadership practices and its four dimensions.

School A: Schools A was located in Bangkok. It was established since early 1900s by one of the King's daughter and was one of the oldest school in the area. After several renovation and changes in educational program, the school's current vision was to meet international standard with quality and academic excellence, while sustaining moral, democratic, and sufficiency economy. Its mission shows values in quality and standard, instructional management and staff development, as well as in ethic and Thai culture. The school teaches from kindergarten to primary 6. It has approximately 500 students and 25 teachers. One distinction from other public school was that the school offers two programs: Thai program, which focuses on the standard Thai academic, and Mini English Program (MEP), which focuses on the English proficiency. The instruction of MEP program in subjects such as English, Math, Science, and Physical Education were in English and were taught by native English teachers. The school receives good reputation about student performance and has been evaluated by the Ministry of Education as one of the prototype school, where other schools frequently visit for observation.

According to the ratings from quantitative research on principal leadership and teacher learning, School A receives the top three ratings in both leaning-centered leadership and teacher engagement in professional learning. To gain further insight about leadership practices and teacher learning, the research examines each of the four dimensions of learning-centered leadership of the principal of School A, which can be explained as follows:

Builds a Learning Vision. Like most schools, School A's vision and mission were created by school principal and the administrators. Based on the principal's intention to raise its standard and to improve student achievement, the school's vision

reveals his value in staff development and teacher learning. According to the interview, Principal A said:

> I consistently seek new knowledge myself and I always encourage teachers to do so. As you can see, we were one of the model schools that provide both Thai and bilingual systems of teaching and learning. The learning of teachers was essential if we expect to keep up with demands for quality and change. Teachers need to work well together as a team and also to learn from each other as well. How else can we ensure that the school moves forward in the same direction? School was all about learning. It was a learning community for all of us. We can enjoy being both learners and teachers in the school, whether we were students or teachers, children or adult. Although the school show significance in raising its standard and academic achievement, I believe student's cognitive learning and their ability to apply knowledge in real life were also highly important. To meet these goals and vision, I certainly value the quality of teacher instruction, their learning, and their professional development. (Principal A, School A, September 19, 2016)

While vision and mission were there as the school's representation of its image and identity, it was significant that the teachers have mutual understanding and develop collective effort in achieving these goals. The principal, therefore, plays an important role in building trust among teachers and stimulate culture of learning where school goals can be achieved. How the principal put the school's learning vision into action was revealed by the focus-group interview, where one of the teachers provided that: "Although vision and mission were built by the principal and the school administrators, he would always explain its meaning, its focus, and its usage. Not only he makes sure that our understanding was align, he also continuingly motivates us to work on our projects and classes based on these vision and mission". (Teacher 2, School A,

September 19, 2016). Other teachers support about how the school achieves its learning vision, in which they stated:

> When we learn something new or when the principal has new information about new regulations or programs, we come back and share this with each other in a school meeting to see how we can implement and improve our practices. His vision and engagement in learning and change himself really give us the motivation to learn and to improve ourselves. (Teacher 1, School A, September 19, 2016)

> With the school's vision, teachers were able to have common focus and common goal in teaching practices. If the principal only asks us to memorize without true understanding of its meaning and real effort to make it happen, it would only be there as a slogan for advertisement. Our principal shows effort in embedding these goals into our practices. Moreover, he certainly values teamwork and collaborative learning where we all learn from each other, which really gives us motivation to develop both ourselves and the school. (Teacher 3, School A, September 19, 2016)

Provides Learning Support. Public school receives most tangible support from the government, from financial resources, technology, facilities, and workshop program. However, for productive learning of teachers, it depends on the principal's skill in managing these resources as well as providing additional support such as flexible time, opportunities to choose, open and supportive environment, and expert guidance that would ease and motivate them for their learning. For School A, teachers mention how the principal provides learning support in many ways, such as:

> The principal provides full support for our learning in this school. We have a good budget for teacher learning, which we can access when we attend workshops or go on any learning trip. These include everything from registration fees, travel and accommodation, as well

as food. This was not necessarily the case for my friends who teach
in other schools (Teacher 3, School A, September 19, 2016)

Our principal supports our learning by sending us to workshops based
on our specialty and preference. After these workshop, we'll have to
pass on the knowledge to other teachers in the school meeting and
discuss about how we can apply and make a difference to our school.
In attending these workshops, the principal shows interests that he
sometimes joins these workshops with us, which really encourage our
learning and give us motivation to continue to develop ourselves.
(Teacher 2, School A, September 19, 2016)

If we ever feel the need to improve ourselves, the principal always
provides further opportunities for learning and additional support
whether it was about studying a higher degree, attending workshop
programs, or observing classrooms from both inside and outside our
school. As well, when there were any new ideas or innovation about
teaching and learning, he always encourages us to try, make
experiment, and exchange our learning with each other all the time.
(Teacher 4, School A, September 19, 2016)

As mentioned earlier, School A offered diversity in instructional programs:
standard Thai and Mini English program. Although instruction of these two programs
was separated by buildings, differentiation between teachers in their teaching style,
student approaches, background and culture exist. The principal realizes this issue. He
provides support and assistance to any teacher who faces problems fitting in or getting
along with others. From the interview, developing and maintaining teacher trust was
highly valued as one of his priority as he mentioned:

Due to the diversity in our programs, dealing with people problem
was sometimes unavoidable. Other than demonstrating my
professionalism, one of my strategies was to understand my teachers

and to be part of their team. I think it was very important that the leader knows their teachers well: who gets along with whom, their learning and teaching style, their preferences, as well as their relationship with students and parents. Learning about them allows me to organize and adjust their work routine and teamwork efficiently. I always give them emotional support, encourage them to collaborate their work, to share their knowledge and discuss about their problems, as well as to confront and share their feelings with each other. My teachers know how I value open environment and collective teamwork for the school to be united and reaches its goal. This was also a key to motivating them to learn and supporting each of them in their own ways. (Principal A, School A, September 19, 2016)

From the interview, it can be concluded that principal A shows a good example of providing both "tangible" and "invisible" support, which according to Liu and Hallinger (2017b), was a form of support that can activate the potential of tangible resources and was useful in increasing teachers' trust, sense of agency, and collective. It includes a form of support such as encouragement, feedback, and personalized assistance (Liu & Hallinger, 2017b), which creates stronger emotional bonds and positive relationship between leaders and colleagues. Provided by focus-group interview with teachers, one teacher explained: "When the school becomes an open community where everyone feels safe and fully supported, it becomes a place we can learn and improve our work effectively. Everyone here support each other both in work and in real life". (Teacher 2, School A, September 19, 2016). Another teacher recalled:

There was a time when we felt separated by department between the two programs. It was hard for us to work together at the time, but the principal encourages us to work together on projects, workshops, and other activities, so we can learn about each other. He takes time to

talk to us individually to see if there's any problem and try to understand each of us without any bias. So as time passes, we begin to build good relationship with each other. We learn that all of us need to learn from each other and work collectively in team as we all have common goal in developing ourselves and improving the school. (Teacher 4, School A, September 19, 2016)

Our principal develops strong relationship with his colleagues and teachers by listening to our problems, learning about our difficulties, and showing respect to our opinions. He also shows appreciation to those who exhibit engagement in professional learning and makes us feel totally supported when we implement new ideas to our lessons. He encourages us to learn from our experiment as well as exchanging our learnings with each other. (Teacher 5, School A, September 19, 2016)

Manages the learning program. In Thailand, public schools were directly regulated by the government. Most learning programs were therefore designed by the Ministry of Education, and were given to public schools as command. Although the school needs to comply by the Ministry of Education, it depends on how each apply and implement the program to suit their context and student needs. For school A, the learning program for teachers were managed by the principal and the academic department, who were responsible for selecting teaching specialty and assigning personnel. In assigning personnel, Principal A shows how he gives his teachers opportunity to choose and empowers them to develop agency in their learning. According to teacher focus-group, the teachers provided:

The principal in this school does not give us orders without asking our opinions. He reminds of us of our group goals and provide us with reasoning and understanding. His sharing of information and

consideration for our preferences was very important as a way of encouraging our involvement in professional learning. When we just go to workshops selected by other people for us, it's usually boring and useless. We need to be able to find reasons or interests in what we were learning and doing. (Teacher 3, School A, September 19, 2016)

In the school meeting, the principal usually asks 'who was interested in attending?' before making a decision. He sometimes joins the workshop with us, if he was free from his management duties. After that, we come back and share what we learn in a general school meeting. (Teacher 1, School A, September 19, 2016)

However, it was commonly found that the learning programs assigned by the government were not always useful, needs further supervision, or were too difficult to implement. Therefore, it was important that the principal participates in these learning programs and provide teachers with other learning forms that would benefit their professional learning. For school A, one teacher informed: "In terms of teaching supervision and advancement, the principal in this school would always seek for interesting projects and workshops that involve the new regulations and new knowledge for us to attend. He sometimes participates in these workshops with us and gives us guidance on how we can apply them". (Teacher 4, School A, September 19, 2016). Another teacher also supported: "While giving us authority to apply new knowledge in projects and classroom, our principal makes regular visits and monitor our classroom instruction where he gives assistance in improving our techniques. He would also discuss about our learnings in school meeting and give compliment to those who do well". (Teacher 5, School A, September 19, 2016). According to the principal, he explained how he consider visiting classrooms as a key means of understanding the

needs of 'each teacher' as well as supporting their implementation of new skill:

> My daily routine involves observing classrooms. This allows me to learn what was going on in classrooms, understand about the needs of my teacher colleagues and support them in making the changes that we were trying to do in this school. (Principal 1, School A, September 19, 2016).

Modeling. For all of the schools in the study sample, principal modeling was likely to be perceived as a person's admiration from their experience, leadership, and management practice, not in term of instructional practice. According to one teacher: "Our principal was a problem-solver, a good leader that we admire. He has several years of experience in his position. He knows best how to manage and improve the school". (Teacher 2, School A, September 19, 2016). Because principals in Thailand do not involve much in teaching and instructional practices, when teachers were asked about who was their leader in teaching and learning, one teacher commented: "In our eyes, we were all leaders, depending on which specialty. For example, I can be leader in taking care of small children because I am the head of kindergarten department, while Teacher 5 would display a good leadership in the use of new technology because of her specialty". (Teacher 1, School A, September 19, 2016). Another teacher also explained:

> In this school, each of us demonstrates a sense of leadership in our area of specialty. So really I can say that there's not just one leader in this school when it comes to professional development. Everyone leads and everyone learns, but in their own ways. This was a kind of culture that the principal has helped us create in this school. As a result, we trust each other in doing our work and in learning together what works in our school. The principal serves as a kind of guide, keeping us moving in the same direction and supporting us to achieve our goal. (Teacher 3, School A, September 19, 2016)

However, among all of the schools, it can be said that Principal A displays strongest enthusiasm for learning new ideas about teaching and outstanding performance in professional learning. According to the teachers:

> Our principal always seek for new ideas for teaching that would improve our student. He shows interests in learning new policy, new program, and new techniques. He always inspire us to try new things and make use of school resources and technology. As a result, he was a person we can consult and ask for assistance whenever we need help. (Teacher 1, School A, September 19, 2016).

> He was our role model in leadership. His long years of experience and his power in authority makes us admire and respect him, while his style of working that was friendly and open gains our trust and support. He shows energy to learn and was seen as a hard-worker, who contributes for the best of the school. His involvement in bringing change to improve the school was what makes him different from some other principals. (Teacher 2, School A, September 19, 2016).

For school A, it can be stated that the principal's strengths are ensuring trust was built within the school, providing both tangible and intangible support, allowing teacher agency in choosing the training programs, and showing participation and involvement in classroom management. The principal also showed effort in learning new practices and bringing change to the school. These characteristics of learning-centered leadership which Principal A employed explained how the school were rated as top-performance.

School B: School B was located in Nonthaburi, a city at a suburb of Bangkok. The school teaches from kindergarten to primary 6, with approximately 550 students

and 20 teachers. Little was found about the school's history and background. However, it was believed to be one of the well-known school in the local area. Its vision was to develop academic, intergrade moral, induce sufficiency economy, keep abreast with Thai culture and the environment, step aside technology, and reach international standard. Although the school's vision seems vague and vary in purposes; based on the school visitation and in-depth interview, the school seems to focus most on the moral, culture, and environment aspects. School B also participates in the "Buddhist Oriented School" project, which integrates the principles of Buddhist religion in managing the school and improving students' moral, concentration, and intellectual thinking. The school was also selected by the government to join its "Pracharath School" project, which involves participation of public and private sectors in developing administrators and teachers' leadership, providing resources and digital technology, enhancing English language capacity, and improving the overall quality of education.

According to the performance ratings by quantitative research, School B results in low ratings in both leaning-centered leadership and teacher engagement in professional learning compared with other schools in urban area. However, when urban and rural schools were compared, it should be noted that the lower ratings of urban schools do not represent much difference from the top ratings of rural school. To gain further insight about leadership practices and teacher learning, the research examines each of the four dimensions of learning-centered leadership of the principal of School B, which can be explained as follows:

Builds a Learning Vision. Vision of School B serves as a guideline in teaching and in daily practice of teachers. As described above, Principal B stresses on the importance of the school moral, Thai culture, and environment. Furthermore, with the

school's participation in "pracharath" project, the principal also focuses on the investment of resources, innovation, and technology. According to the interview, Principal B mentioned:

> In urban area, competition between schools was mainly judged by student performance and their examination results. Although academic performance was seen as priority to most schools, we should not forget that student learning should involve happiness and willingness to learn. Moreover, with rapid changes in our society, it was important that the school make sure their students were developed not only as an intellect individual, but also a good citizen, who can contribute to the society. (Principal B, School B, September 20, 2016).

Based on the focus-group interview, teachers in school B demonstrate good understanding of the school vision, in which they embed in their classes and daily practices. The teachers responded to the school vision and commented:

> The school vision serves as a principle that guides our activities. This can be obviously seen by several projects in our school; such as environmental and recycle projects, sufficiency economy activities, participation of Buddhist practices, and Thai culture day. Our principal also encourages us to develop students based on these principles and embed in our classroom practices. (Teacher 1, School B, September 20, 2016).

> Upon joining the recent "Pracharath" project, the principal show interests in the use of digital technology and new learning method. She further encourages us to make use of the new technology such as the internet and projector in our lesson. Also, she motivates us to use our knowledge of Thai local wisdom in building innovation based on sufficiency economy. (Teacher 2, School B, September 20, 2016).

Provides Learning Support. Principal B provides learning support by giving resources, time, and training opportunities for the learning of teachers. These resources and workshop programs were mainly those compulsory programs assigned by the government. According to the teachers in School B, although these compulsory programs were sometimes useful, they were overwhelming and require too much paperwork. They also find that not all training programs were necessary or interesting. Some take away too much of their teaching time, and some require further demonstration and professional training for their use in school can be successful.

> The school receives a lot of training programs from the government that we must attend as an order. In their document, information about the program and the teacher position/specialty in which they require to attend were stated. The school's academic division was the one to select which teachers who meet the qualification to attend. We do not have much choice. After the participation of these workshops, we also have to come back and submit the paperwork, which takes a lot of our time. (Teacher 2, School B, September 20, 2016).

> I find these training programs were sometimes a waste because it was difficult to apply in our school. Some changes too often that it takes away our interests, some require further understanding and demonstration, and some were not important to us. It might even be more useful if I spend my time preparing for class and teaching my students, instead of going to these workshops. And with a great amount of paperwork, we consider it more as a burden than an interesting task. (Teacher 4, School B, September 20, 2016).

Based on the teacher interview, School B seems to have low teacher agency due to their limited opportunities to choose and heavy load of paperwork. As a result, teachers were less motivated in their professional learning, show no desire to improve

themselves, and were less likely to reflect and collaborate their learning with others. Instead of showing interests in learning, they continue to work on their routine tasks on a daily basis and focus on finishing the projects as instructed.

Principal B was aware of this issue. According to the interview, she confessed: "I realize that the teachers find their work were too heavy-loaded. I always tell them that I also share their feelings, but they have to understand, it was for the improvement of the school". (Principal B, School B, September 20, 2016). The principal tries to avoid giving further unnecessary workshops that teachers show no interests. However, her approach in encouraging teachers to willingly participate in their professional learning and implement new ideas was still a challenge for Principal B.

Manages the learning program. Like other public schools, School B's learning programs were designed by the government and assigned by the schools' academic department. Due to the direct system which result in teachers' lack of agency and motivation in their own learning, the principal diversify the learning form by providing opportunity for outside school visitation to arouse teachers' interests. According to the teachers' focus-group interview, one commented:

> The principal gives us opportunity to visit other schools which show good performance or good practices in the government projects. This gives us opportunity to obtain new information and new ideas to improve our schools. It was also a fun experience. I enjoy observing and learning about other schools. (Teacher 3, School B, September 20, 2016)

However, class observation within the school and work engagement with other teachers seems to be considered less important for School B as one of the teachers mentioned: "We do not, however, observe each other much because we were

responsible for our subjects according to our area of specialty. But we do help each other; for example, the older teachers support the new teachers about classroom management and the school culture, and the new generations help the older with the use of technology." (Teacher 4, School B, September 20, 2016). Another teacher also commented:

> Teachers here were divided into area of specialty according to the major in which we graduated from. We were responsible for our class, and other duties assigned by the principal, vice-principal, or the academic department. Some of these duties, such as participating in learning programs, consume a large amount of our time as it requires a lot of paperwork and forms to submit, in which we were responsible for individually. (Teacher 1, School B, September 20, 2016)

In terms of principal's participation in managing the learning program, Principal B stated:

> I sometimes join the workshop and training programs with the teachers. Most of which were required by the government. Not only I participate because it was compulsory, but I also find it was my duty to bring the content such as new policy and other updated regulations in managing the school. Upon joining these workshops, we will come back and discuss in the school meeting about how we can implement where we'll design into both short-term and long-term plan. Teachers were then responsible in taking the plan into classroom activity, while I am in charge of monitoring and evaluating the documents. (Principal B, School B, September 20, 2016).

From interviewing the principal and teachers in School B, it may be discussed that although Principal B participates in some learning programs, most of her management activities were those as regulated by the government. The teachers take

these plans into actions, but show lack of motivation or interests in their learning. Moreover, their requirement in submitting documents and heavy-loaded of paperwork in which teachers were responsible individually, results in teachers having less teaching time and low work engagement with others.

Modeling. In terms of modeling, the teachers' comment about their leader for teacher learning was in line with School A. One stated: "We do not have a single individual who we consider as a prime leader for our learning. All of us can be leaders in our own specialty". (Teacher 1, School B, September 20, 2016). From the interview, the teachers seem to have not much to say about the principal's role in instructional leadership. In their point of view, the principal's demonstration in modeling and leadership was likely expressed by her management aspect, instead of teaching and learning practices. According to the teachers:

> Our principal values teacher professional learning as she frequently send us to attending training and workshop programs as well as visiting other schools. She sometimes participates in these activities with us. Upon implementing learning programs into our class, it depends on our discussion in the meeting and the school's specialty to teach others. The principal, however, was in charge of deciding how to implement the plan and assigning who was responsible for which task. (Teacher 3, School B, September 20, 2016).

> Our principal do not involve much in teaching and learning because her duty was mainly about management. She was the one who adopts the new policy and programs from the government to apply in the school. We all learn about these new regulations, policy, and programs from her. The changes in which she has brought has continuingly improve the learning of student and the school. (Teacher 1, School B, September 20, 2016).

It can be concluded that, for school B, providing teacher agency for their own learning was a challenge for Principal B. Thus, teachers showed obvious lack of motivation in professional learning as they were forced to do tasks according to the assigned duty. The principal also showed weak engagement in teaching and learning and failed in being a model for learning. As a result of low learning-centered leadership in school B, teacher engagement professional learning was relatively weak compared to other urban schools.

To gain further insight about the learning-centered leadership practices and understand the differences between urban and rural schools, the following provided another two case studies of the top and low-performance in rural area.

School C: School C was located in the local area in Supanburi province. Its location was approximately 140 kilometers from Bangkok and 30 kilometers from the main district. It was established since mid-1900s by the government. The school consists of two main buildings for classroom instructions and provides housing for teachers. It teaches from kindergarten to primary 6, with roughly about 300 students and 17 teachers. Not only the school provides knowledge to students, School C serves as a place of community where parents and the local gather for activities. The school's vision was built around the principle of developing students to be an intellectual, good citizen with moral, who conserves Thai culture and the environment, maintains sufficiency economy, and develops skill in digital technology.

According to the ratings from quantitative research on principal's learning-centered leadership and teacher engagement in professional learning, School C receives the top three ratings in both variables. Through the research's qualitative focus-group and in-depth interview, each of the four dimensions of principal's learning-centered

leadership was examined to gain further insight about leadership practices and teacher learning in School C.

Builds a Learning Vision. For School C, the school vision was created by the principal based on his goal in developing students to be an intellectual, good citizen. From the interview, he stated: "It was more important to me that my students will become good citizens who contribute to the society. In the urban, most school may concentrate on getting good grades, but for me, skill to apply knowledge in real life and in their career was very significant for their survival" (Principal C, School C, September 21, 2016). His vision also shows how he gives importance to Thai culture and the environment, sufficiency economy, and digital technology.

> From the school vision, I've always encourage teachers to embed their classroom and activities with Thai culture and local wisdom. I find it was also a way to maintain close relationship between teachers and students because most of us grow up in this area, we have our unique way of living, accent, and tradition, so we understand each other more when relating content with something students were familiar or grow up with. Sometimes, I also invite specialty in the local wisdom to help providing special lessons to students; for example, local food, music, or handcraft class. (Principal C, School C, September 21, 2016).

Based on his vision, classroom instruction and projects were built around these principles. From interviewing with the teachers, their comments were align with the principal, in which one stated: "We teach students not only what's in the textbook, but also embed our class with cultural activities, with aims in providing students know-how in applying knowledge in their real life. For example, based on sufficiency economy principle, the students learn how to weave their clothes, make use of the recycled

products, and help parent's chores." (Teacher 3, School C, September 21, 2016).

Moreover, the school vision also reveals how the principal of School C gives importance to digital technology. In the interview, he commented that:

> Although technology has brought a lot of changes to our way of living, it has become more and more important to our lives that we can't avoid learning it. I am not very good at using computer and the Internet myself, but I realize its importance and always encourage teachers to learn and teach the students. I wish for my students to develop these skills so they can keep up with this dynamic world and gain appropriate knowledge to achieve their goals in life. (Principal C, School C, September 21, 2016).

Provides Learning Support. Like other public school, School C receives most tangible support from the government, which includes financial resources, technology, facilities, and training program. However, these resources were insufficient in the rural schools, causing rural schools facing shortage problems and difficulties in improving quality. According to the principal interview, he explained:

> Schools in rural areas were different from urban schools. We have to deal with shortage problems in human resources, financial support, and technology. The government provides supports based on number of students, and because in the rural schools, we do not have that many students compared to the urban schools, but we still have to teach the same subjects and curriculum. Many schools have less than 100 students and less than 10 teachers. We were lucky to have more students than that, but most of them were those with financial problems who require more support. We also have to deal with teacher shortage issue. Due to these problems, quality of teaching and curriculum management was very difficult. But even though it was impossible to compare us with the urban schools in terms of quality, we were still proud to be a small community where everyone lives

and works together happily. (Principal C, School C, September 21, 2016)

Due to the shortage issue, the principal gains further support from the community and through making relationship with powerful people in the area. The school receives financial support from their donation. According to Principal C:

> Their contribution was important for the school existence as relying solely on government support was not sufficient. Support from the community was very important for small school like us. Therefore, for our improvement, it was important that we take parts in participating in the community activities and services. As a principal, one of my successes was about making good relationships with powerful people in the local community like the village headman, political official, and the local government. Their contribution was very helpful to the school. Also, I am always on the look-out for specialists who we can benefit from. I try to bring these resources to the school as much as I can, and encourage teachers to learn from them and also from each other. (Principal C, School C, September 21, 2016)

Through making good relationship with the communities and getting help from specialists, the principal was able to provide more opportunities for teachers' learning. With his passion in learning, he supports teachers to learn, whether it was about advancing their educational degree or training for their professional knowledge. From the teachers' interview, one commented that "Our principal sees the importance of our learning and education. If we wish to pursue our educational degree, we can certainly reach for his help and guidance. He would totally support us that sometimes he would provide with his own money" (Teacher 2, School C, 21 September, 2016). Another also stated:

The principal in this school totally supports the learning of teachers and wants to see our advancement in career. He always comes to us with interesting programs or workshops to attend. 'We all keep learning together' has always been part of his vision. (Teacher 4, School C, September 21, 2016)

From the teachers' interview, it can be said that Principal C not only provides with tangible support, additional support such as flexible time, opportunities to choose, open and supportive environment, and expert guidance were also given to the teachers. More importantly, for teachers to stay in the rural schools, it was significant that the principal also gives encouragement, personalized assistance, and individualized consideration. These "invisible support" heightens teachers trust and motivation to learn. From the principal's interview, he mentions how invisible supports were provided as he considers the school and its teachers as his family.

We stay here in this school like a big family. I grew up in this area when I was a child, started working as a teacher, and became a principal more than ten years ago. For this reason, I am able to make strong relationship with the community as well as the teachers in this school. I believe that part of it was my experience and willingness to change myself that makes the teachers respect me and be more open to me. Together, we work with understanding and compassion. (Principal C, School C, September 21, 2016)

Manages the learning program. As rural schools has fewer numbers of teachers than urban schools, the principal takes more responsibility in managing the teachers' learning program. For School C, not only the principal sends teachers to the government workshops, to arouse teachers' interests and provide content that serve their needs, he

also gives them opportunities to join other training programs outside those provided by the government. From the interview, the principal mentioned:

> I consider the learning of my teachers as a very significant means for our school's improvement. It was my responsibility to always look for interesting programs and workshops both inside and outside of government projects for teachers to join. I also encourage teachers to look for opportunities to develop themselves and I support them in advancing their career by getting a higher degree. (Principal C, School C, September 21, 2016)

According to the interview, the teachers explained:

> Our principal realizes the importance of teachers' professional learning. He would continuously come to us with interesting programs or workshops to attend, from government projects and other private organizations. He then considers our specialty and asks if any of us was interested before sending us to the workshops or other learning activities. (Teacher 1, School C, September 21, 2016)

> He would sometimes join the workshops or training programs with us if he's free from his duties. When the leader participates in these learning process, it shows how he pays attention in the teachers learning and gives us a comfort feeling that he would understand when we face difficulties. I find his participation in the learning activities helps reinforce our relationship and motivates us to develop ourselves, as well as encourages us to improve the school. (Teacher 4, School C, September 21, 2016)

For the purpose of teaching improvement, Principal C also reaches for other specialists to provide teachers' appropriate knowledge for their professional learning; such as English language instructor, researcher, local knowledge provider, and computer specialist. According to the interview, the principal emphasizes that the

teachers develop skills in using digital technology and embed in their class. He said: "The teachers in this school need to learn how to use computer and the internet. Not only it will ease their learning and teaching process, students can also benefit and improve their learning as well" (Principal C, School C, September 21, 2016).

But no matter how much the principal tries to manage the learning program, due to the teacher shortage issue in rural schools, the improvement of teacher's learning also relies on a united effort of every person in the school. Teachers in School C realizes that they have several tasks to do, therefore it was important that they collaborate and help each other in their work so they can enjoy maximum benefit in their learning. According to the teachers' focus-group interview, they commented:

> Because we were small school and we do not have that many teachers, each of us has many tasks to do. Many teachers not only teach, we sometimes need to take care of the school maintenance, cleaning, and even providing food for students. Therefore, in terms of professional learning, it was very important that we help each other to improve ourselves and improve the school together. Otherwise, I think our professional learning would be impossible because we would be occupied with many other things. (Teacher 3, School C, September 21, 2016)

> The teachers here develop strong relationship due to our long years of working together. It was never a problem to cover another's classes when someone needs time for his/her professional learning. We learn from each other and willing to share our knowledge. As well, we support each other when facing difficulties whether in life or at work. (Teacher 2, School C, September 21, 2016)

Modeling. Principal C holds a doctoral degree in educational administration. He has passion in learning and enthusiasm in bringing new knowledge to improve the

school. During the interview, he also shows interests in conducting educational research and learning about any update information in education. From Principal C's background, characteristics, and experiences in both teaching and leading, the teachers admire and respect him as a good leader. According to the teachers' interview, they commented:

> My leader in learning would be our principal because he was the one who constantly brings new information and knowledge to us. We can reach for guidance from him whether it was about teaching and learning, or even about personal problem. Not only we admire him because he was our principal, we also appreciate his support and respect him for his knowledge and experience. (Teacher 1, School C, September 21, 2016)

> I also consider him as our leader and frequently ask for his guidance with my teaching techniques or when conducting research for my degree. He graduates with a professional degree from Bangkok and was more skillful in many area. Also, while his teaching approaches were updated, he insists that our class still needs to sustain with Thai culture and the local wisdom. I find his ideas very useful and suit for a rural school like us. (Teacher 1, School C, September 21, 2016)

From the teacher focus-group interview, it can be said that Principal C demonstrates enthusiasm in learning and teaching and shows outstanding performance in professional learning. Although he was considered as a learning leader to the teachers, he realizes he was not skillful in everything and was incapable of teaching in some area. As a result, he finds other expertise in the area to teach the teachers. He explained:

> I frequency seek for help from other specialists in the area which I'm not good at. For example, those computer technicians to provide

support about its usage, English instructor to help teachers with the
pronunciation, the local culture specialist to teach us local wisdom
and provide fun activities. I think it was better for them to learn from
the one who knows best. (Principal C, School C, September 21,
2016).

In summary, it can be stated that Principal C presented strong sense of learning-
centered leadership. He showed effort in bringing school vision into practices and
engaging teachers to align the school vision in their teaching. Building strong
relationship with his teachers and the community was one of his strengths. Though the
school needed to deal with resource issue, the principal continuously seek for ways to
improve and manage the school resource. In terms of modeling, he also showed strong
enthusiasm in his professional learning and was able to motivate teachers for their own
learning.

School D: School D was located in a rural location, approximately 20 kilometers
away from the main district of Supanburi province. Established since mid-1900s, this
small school consists of one instructional building, one multi-purpose building,
cafeteria, library, student' playground, and toilets. It teaches from kindergarten to
primary 6, with roughly about 150 students and 10 teachers. The school was situated
inside a temple, in which its name was adopted from. With its close relations to the
temple, School D's vision was built around the Buddhist principles and H.M. King
Bhumibol's philosophy of sufficiency economy: developing students to be morally,
good citizen with quality and responsibility for the environment, live life based on
sufficiency economy, and become a lifelong learner.

According to the ratings from quantitative research on principal's learning-

centered leadership and teacher engagement in professional learning, School D presents with low ratings in both variables. Through the research's qualitative focus-group and in-depth interview, each of the four dimensions of principal's learning-centered leadership was examined to gain further insight about leadership practices and teacher learning in School D.

Builds a Learning Vision. As mentioned above, School D's vision was characterized by the values of Buddhist religion, sufficiency economy, and lifelong learning. The vision represents how the school and its teachers prioritize their goals in developing students to be a decent individual who base their life on moderation, prudence, and social immunity, and pursue their learning throughout their life. Based on the principal's interview, he explained: "Our school's vision has been stable for many years. It stands for our viewpoint, our aim to develop students to be a morally good citizen who contribute to the society, and more importantly become an independent learner who knows how to apply knowledge to their future career." (Principal D, School D, September 22, 2016). Compared to urban schools, it can be said that School D's vision gives less focus on students' competition and test results, but more concentrate on improving students' knowledge, skills, and competencies for their social and/or employment-related purpose, which was significant for their survival. The principles of the school's vision and the principal's statement were align with the teachers' focus-group interview, where one mentioned:

> The school's vision was there to guide our teaching. From the vision, we do not teach students what's only in the textbook. We also give importance to improving students' knowledge and skills that would benefit for their future career. This was because most of our students need to help their parents and pursue family's career. Therefore, we

try to embed our class with activities that students were interested and can be used in their real life, such as growing crops, farming, fishing, and weaving clothes. (Teacher 3, School D, September 22, 2016)

Provides Learning Support. Because School D was a small, local school, where resources were insufficient. Although the school receives financial and other support from the government, its facilities and instructional resources were still in need for the learning of teachers and students. Principal D realizes that the school has a limited opportunity and need to deal with resource situation as he stated:

Resource are a problem for small rural schools like us as we rely on support from the government, but because we have small number of students, so we receive little support compared to bigger schools. We also have less teachers as most tend to move to bigger school in the urban area. I try to give them as much support as I can, but sometimes the situation makes it difficult, so we have to learn to live with what we have and help each other. (Principal D, School D, September 22, 2016)

From the teachers' interview, the principal helps providing support by facilitating with resources that he can give to support the teachers' professional learning. One teacher commented: "Our principal provides opportunities for our learning by giving us time and training opportunities such as those assigned by the government. But we know our resources was limited, so we get what we can get." (Teacher 1, School D, September 22, 2016). Another also provided that: "The principal supports us to learn from each other. When we come back from the workshops, we'll have to discuss about what we have learnt. However, some were not applicable to our school, so it was up to us to choose what's best for our students". (Teacher 2, School D, September 22, 2016).

According to the teachers, the professional learning for rural school requires support from each other. Collaborative teamwork and work engagement were very important for the success of their learning. From the teachers' interview, one said:

> It was very significant that we support and help each other in our work. Because as a small school with few staff, our duties do not only involve teaching, but many other tasks; such as cleaning, cooking, fixing classroom and school resources, and even sending students home. As a result, for us to improve our professional learning, we need to communicate and learn from each other. (Teacher 1, School D, September 22, 2016).

Manages the learning program. Due to teacher shortage, the responsibility of managing the learning program falls to the assigned teacher and the principal. Most learning programs were those provided by the government. The principal makes final decision in selecting personnel to attend workshops. However, for School D, due to teacher shortage, not all learning programs can be attended. According to the principal's interview:

> We constantly receive an amount of training programs and workshops to attend from the government. But because we only have 10 teachers in this school, all of us has many duties responsible and subjects to teach. It was impossible to attend all workshops. However, I would try to attend all the compulsory ones which require attendance of the principals by myself, especially those relating to the new educational policy or new learning methods. (Principal D, School D, September 22, 2016)

In correspondence with the teachers' interview, they affirm the role of principal in attending these workshops as it requires cost and budget, and more importantly, the teachers themselves do not find interest or need to attend these programs. One said:

"These trainings were not always necessary for us. I sometimes find it useless, especially for a small school like us as we have our own way of doing things. Too many changes will also makes us feel overwhelm." (Teacher 2, School D, September 22, 2016). Another also explained:

> The principal was the one who mostly go to these meetings and workshops. Sometimes he brings one or two teachers with him, but because it takes time and money, so not all of us would always participate. After that, he will come back and tell us about the information in the school meeting. However, we do not apply all of it because that would require too much changes." (Teacher 1, School D, September 22, 2016).

From the interview, it can be said that teachers in the rural school rely on themselves and show less interest in learning new things. Although the principal participates in learning programs, teachers still show lack of motivation in their professional learning and a person to reinforce their learning. This may be due to his low engagement with the teachers as one commented: "The principal was very busy. He was not always at the school because he has many meetings to attend to. Although he does monitors our class and helps substitute in teaching when we're in short of teachers sometimes, we would benefit more from other specialist or others who knows more about our subject. (Teacher 3, School D, September 22, 2016). Another teacher also provided:

> Our teaching and learning was quite stable so those who were more knowledgeable and was capable of joining the urban school would tend to move to a bigger city. I would say that the teachers who were left behind may show less progress and were considered less professional, but we were all good teachers who care about the

students, and we were happy as a small family. (Teacher 2, School D, September 22, 2016)

Modeling. Corresponding with another low performance school, teachers in School D perceived principal as a school leader who makes decision and gives order, but not their model in teaching and learning. Little was mentioned about the principal's role in instructional leadership as teachers tend to depend on each other for their learning. For rural school, information gained from qualitative research suggests that further support and modeling were required for teachers' professional learning. According to the teachers' interview, one commented: "The principal was occupied by management duties. As a school leader, we admire him for his skill and knowledge in administration, but not so much in teaching. I learn best from my own experience and sometimes from colleagues". (Teacher 3, School D, September 22, 2016). Another also explained:

> Our principal was the school leader. We listens to him and pay his respect. However, if one asked who was our model in teaching and learning, the answer would be all of us. Because each of us has our own specialty in our area and subject. And although there's still a lot for us to improve, we try to provide the students with knowledge the best we can. (Teacher 2, School D, September 22, 2016).

Information from qualitative research about School D reflected the low ratings of learning-centered leadership and teacher engagement in professional learning of the school. Teachers were occupied by other duties unrelated to teaching. In return, they showed weak motivation in learning new things. The school received insufficient resources and low support from the principal. Though it seemed that the school require

external support for teacher learning, the principal had no means to solve the problems and showed low participation in teaching and learning.

5.2 Conclusion

Qualitative research presented by four case studies in this chapter elaborates on the main quantitative results in previous chapter. Principals who demonstrate aspects of learning-centered leadership (i.e., Builds a Learning Vision, provides learning support, manages the learning program, and modeling) were able to enhance teacher engagement in professional learning through building trust and agency.

Qualitative findings also showed relatively small differences between the high and low-rated schools. Though, the result implied that principals who showed weak performance in providing practical means on the four dimensions of learning-centered leadership failed to create learning environment and caused weaker performance of teacher learning.

Align with quantitative analysis, qualitative research showed small differences among urban and rural schools. Although the difference is not large, the findings indicated human resource gap issue, where rural schools struggle from insufficient resources, teacher shortage, and incompetent learning system, resulting in lower performance of teacher engagement in professional learning compared to urban schools.

As well, it is suspected that qualitative findings did not seem to indicate as high level of learning-centered leadership and teacher engagement in professional learning as suggested by quantitative data. Due to this discrepancy between quantitative results and qualitative findings as well as based on literature and the knowledge of Thai education, quantitative research seems to be overrated by the high-ratings of principals

and teachers, which do not well-represent the current situation of Thai education. Contrast to the high mean scores from quantitative data, qualitative findings showed that principals' practices of learning-centered leadership was weak in most Thai schools as most prioritize their duties on management and administration. As well, teacher learning process was largely limited by the bureaucratic system and tend to be formalistic, top-down, and episodic. According to these qualitative findings and literature review, it can be concluded that distinctive practices of learning-centered leadership for embedded learning of teachers should be improved. Based on this conclusion, the research introduces a model of leadership for teacher learning in Thailand, which will be presented later in the following chapter.
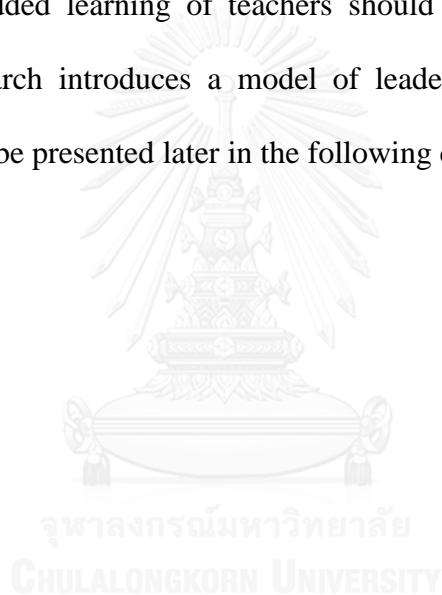
CHAPTER 6

SUMMARY AND DISCUSSION

This study validated a conceptual model of learning-centered leadership in Thailand and then used that model to explore how principals influence teacher engagement in professional learning. Beyond this broad purpose, the study also examined how principal leadership and teacher learning varied across urban and rural primary schools in Thailand. To gain better perspective of leadership and teacher learning situation in Thailand, results were also compared with a study in China where distinctive practices for collaborative learning were found (Liu et al., 2016b). This Chapter will highlight limitations of the study, offer interpretation of the findings, and suggest several implications.

6.1 Limitations

This study involved quantitative and qualitative data analysis from a subset of urban and rural schools in Thailand. School principals, middle-level leaders, and teachers participated in the investigation of learning-centered leadership, teacher agency, teacher trust, and teacher engagement in professional learning. The research focused on a sample of 60 medium-sized, urban and rural primary schools in the formal education system listed in the Office of the Basic Education Commission of Thailand (OBEC). Given this sample, the findings require replication before they can be applied to secondary schools, alternative schools, vocational schools, and international schools in Thailand.

In this research, schools were categorized into two sectors based on its location. Urban schools were those located in the Bangkok and Nonthaburi districts. Rural

schools were located in the Ubon Ratchathani and Supanburi districts, both of which are largely rural. School locations were situated further away from the main city of each province in order to assure that they met our requirement for being rural.

Nonetheless, the sampling criteria yielded tradeoffs. The research intended that the schools to be roughly comparable in size in order to control school size as a variable influencing resources. Nonetheless, research does suggest that smaller rural schools may be most influenced by the factors that impact teacher quality and student learning. Therefore, it is possible that the results comparing the rural and urban primary schools could have been larger if the smallest schools located in the most rural communities had been included in the study. As a result, another study may look at other smaller rural schools to compare the differences.

In this research, survey data were collected via mail rather than in person. It was noted that both the principals and teachers accorded high scores to the principals. Self-report ratings from principals on similar leadership practices have been reported elsewhere in the literature [e.g. Hallinger and Wang (2015)]. Thus, the high mean scores attained by both urban and rural principals were not so surprising.

However, the high mean scores obtained from teachers were a cause for some concern. The researcher considered the possibility that teachers could have been influenced by the settings in which surveys were completed. As outlined earlier, the research procedure involved sending a packet of surveys to the schools along with instructions for their completion. Although collecting data through the use of questionnaire is according to the standard and is accepted by literatures; however, since the researcher was not on site to observe, it is difficult to know whether the conditions under which they were completed might have subjected the teachers to undue influence.

With this in mind so, it was also noted that the magnitude of mean teacher ratings of the principals in this study was found consistent with those reported by Liu and colleagues (2016b) in China. Moreover, reliability and validity statistics and qualitative data analysis offered no indications of problems. Therefore, the results remain credible.

6.2 Interpretation of the Findings

This study tested a model of principal leadership and teacher professional learning in a sample of 30 urban and 30 rural primary schools in Thailand. The main results can be summarized as follows.

- Learning-centered leadership evidenced a strongly positive (0.685 to 0.791), statistically significant (p<.001) total effect on the professional learning of teachers in both urban and rural primary schools.

- The effects of principal leadership on teacher professional learning were wholly mediated by teacher trust and teacher agency in both urban and rural schools, with leadership having weak, significant direct effect on teacher agency, but strong, significant direct effect on trust.

- Each of the main paths in the mediation model confirmed as statistically significant in this study (i.e., LCL>TT>TA>TEPL) evidenced moderate to strong, direct effects on the adjacent variable.

- There were no meaningful differences in the nature of variable relationships within the path model when comparing the urban and rural schools. Thus, it was concluded that the leadership and teacher learning

processes appeared to unfold in a similar fashion across urban and rural schools.

- Finally, the magnitude of mean teacher ratings of the constructs was significantly higher in the urban schools than in the rural schools, thereby affirming a 'human resource gap' across the two types of school settings.

In detail, the results affirm that schools can develop teacher engagement in professional learning when principals create conditions where a climate of trust and agency are fostered. In general, the findings support Barth and Guest (1990) and Saphier et al. (2006) contention that principals can impact the schools' learning environment and enhance teacher learning. Findings in this research suggest that principal's practices of learning-centered leadership must be activated first in order for teachers to perceive a trusting climate where everyone hold strong beliefs in collaborative engagement and willingness to work towards school development. Though, the path of building trust alone does not affect teacher engagement in professional learning, it must be incorporated with teacher agency, which acts as a catalyst or energizer for teacher learning.

Specifically, the result implies a "spillover" effect of teacher trust on teacher agency [see Liu et al. (2016a)], which in return creates teacher engagement in professional learning. As with prior studies, the SEM and bootstrapping analyses in this research support a strong effect of the full mediation model (β=0.682 or 89.5% of the total effect). This means that it can be concluded that when principals are able to build a trusting environment, teachers show greater motivation and initiative in their learning.

These finding correspond with prior research in China (Hallinger et al., 2016; Liu et al., 2016a, 2016b) and Hong Kong (Li & Hallinger, 2016; Li et al., 2015). Consistent with their research, the paths through which principal leadership impacted teacher learning were similar, and the mediator effects were strong and significant. The only difference was that the effect sizes were somewhat higher in the Thailand study.

Results from qualitative research further elaborated quantitative findings. First, it should be noted that the qualitative results did not suggest as high a level of leadership and teacher learning as had been indicated by the quantitative results. For example, teacher learning practices did not appear to be as embedded in the culture of the schools as one would have expect from such high quantitative survey results.

Furthermore, despite the use of a contrasting groups qualitative research design (i.e., urban/rural schools, high/low rated schools), the qualitative results only suggested relatively small differences in leadership and teacher learning practices across the different categories of schools. Differences between the urban and rural schools were observed, but they were not as large as one might have expected. Similarly, differences between the high rated and low rated schools were not that large. Therefore, although the qualitative results do not support the very high level of leadership and teacher learning obtained through the survey, they are consistent with the conclusion of small observable differences between the urban and rural schools that emerged from the quantitative analysis. Compared to urban schools, the schools in rural areas showed lower teacher engagement in professional learning. This seemed to be linked to insufficient resources, professional shortage, and inadequate learning management from the principals.

More generally, however, the qualitative data do reinforce the impression of the importance of school leaders in supporting teacher engagement in professional learning. In the eyes of the teachers, the environment for teacher professional learning was linked to attitudes and behaviors of the principal. In schools where principals built trust and supported teacher ownership for their learning, teachers showed higher commitment and engagement in meaningful learning activities.

Leadership practices of the principals focused developing common goals and a shared school vision of learning and change. Trust was built among colleagues and with leaders. Combined with leaders' support through learning and management in learning program, teacher motivation and efficacy in learning were enhanced. Additionally, leaders who modeled their own value of learning were able to achieve full respect and admiration from staff and colleagues. This further enhanced teachers' confidence and comfort within the school to learn individually and with colleagues.

In contrast, principals who lacked skills in learning-centered leadership tended to develop weaker relationships with teachers. Lower trust within faculty resulted in teachers having less collaboration in work and less motivation in their learning. In these settings, principals tended to use a top-down management system that restricted teacher trust and sense of agency. Consequently, teacher engagement in professional learning was more formalistic and periodic. Norms of continuous learning were observed as ongoing features in the life of teachers in the schools.

6.3 Comparison between Thailand and China Results of Leadership and Teacher Learning

In order to gain better perspective on these findings, results were compared with a study in China, where the same variables and measures were employed. From the

descriptive and comparative statistics for the main variables in Thailand and China schools shown in Table 14, both mean and standard deviation of the two countries showed high level of leadership and teacher learning in all constructs. Means of the total sample were at or above 4.0, indicating high ratings from the respondents in general in both countries. With the exception of Teacher Trust in the Thailand sample (mean=3.9), the mean scores of the urban schools were all above 4.10 for the urban schools across the two samples. In contrast, the mean scores of urban schools across the two countries were consistently slightly higher than means of the rural schools in both Thailand and China.

Table 14 Comparison of mean scores on main constructs for Thailand and Chinese schools

Variable	Thailand	China[1]	Thailand	China[2]	Thailand	China[2]
	Full Sample	Full Sample	Urban Schools	Urban Schools	Urban Schools	Urban Schools
	Mean	Mean	Mean	Mean	Mean	Mean
LCL	4.003	4.04	4.157	4.160	3.807	3.908
TT	4.016	4.25	3.896	4.386	3.862	4.100
TA	4.178	4.04	4.333	4.124	3.982	3.940
TPL	4.098	4.06	4.240	4.217	3.917	3.886

[1] Liu and Hallinger (2017a)

[2] Hallinger and Liu (2016)

For better comparison, the following showed pattern of leadership and teacher learning process between Thailand and China in structural model presentation (see figure 15 and 16).
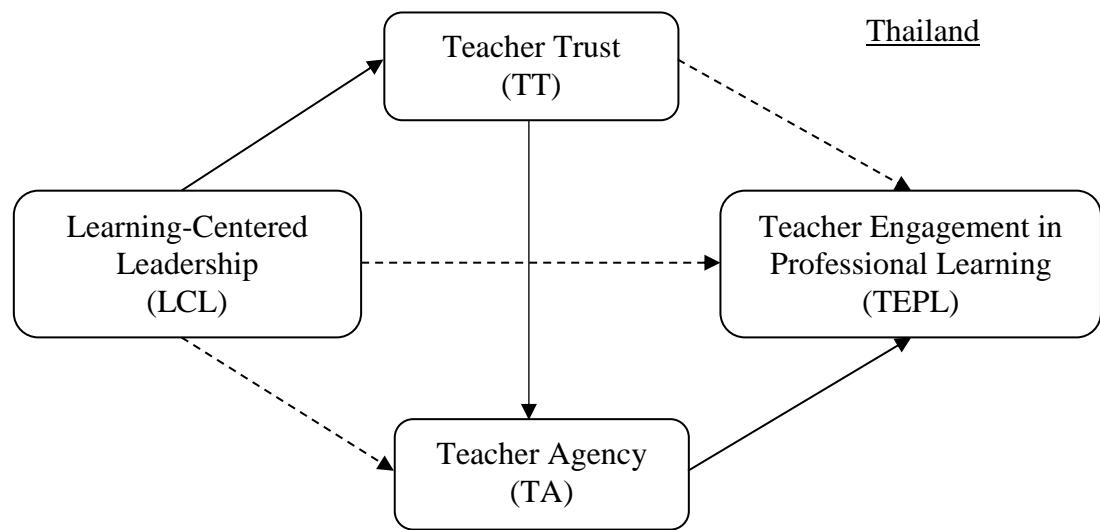
Figure 15 Structural model of leadership and teacher learning in Thailand
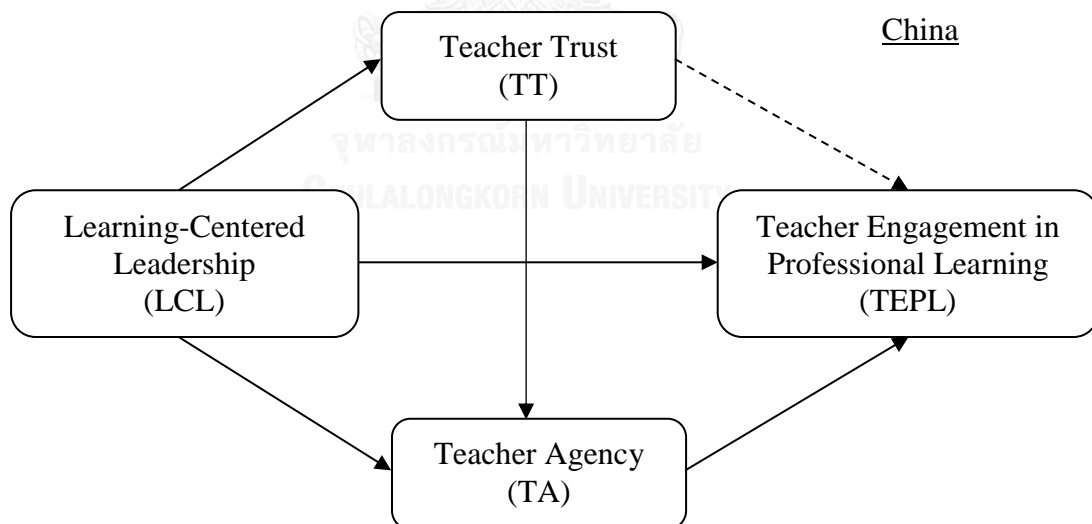
Figure 16 Structural model of leadership and teacher learning in China

As shown in Figures 15 and 16, the structural models of leadership and teacher learning in Thailand and China demonstrated a similar process of learning-centered leadership having indirect effect on teacher engagement in professional learning through teacher trust and teacher agency (i.e., LCL → TT → TA → TEPL) in both countries. However, in China, LCL also showed direct effect on TEPL (i.e., LCL→ TEPL) and partial mediated effect through TA (i.e., LCL → TA → TEPL). These processes were not found in Thailand. As a result, the model is only partially mediated for China but fully mediated for Thailand.

The structural model of leadership and teacher learning in China proved that learning-centered leadership could significantly impact teacher agency and teacher engagement in professional learning directly. Since these processes were not found in Thailand, it can be concluded that more effective leadership practices could be developed in Thailand for better results of teacher engagement in professional learning. Leadership practices and the result of teacher learning in China were then investigated and compared to this research through qualitative findings.

Qualitative research conducted in China offered insights on how successful principal influenced teacher learning. In China context, principals who demonstrated successful learning-centered leadership were involved in creating a learning community by stimulating the learning and development of teachers through practical means. They encouraged teachers to devote time for their own learning for the benefit of their teaching and student learning. They focused on reducing bureaucracy and decentralizing decision-making so that teacher agency can be induced as teachers were encouraged to take initiative and responsibility for their own learning.

In contrast to the findings in China, leadership practices investigated from the qualitative research in Thailand did not represent as strong level of learning-centered leadership. Learning vision was memorized and understood in most Thai schools, but was not embedded in the practices of leaders and teachers. The importance of providing support for teacher learning (e.g. flexible time, funds for coursework, expert guidance, and local universities with up-to-date programs and facilities) was less emphasized compared to China study. Leaders were less motivated in building learning environment for productive teacher learning and were often occupied by governmental meetings and assignments. Teacher learning was also largely limited by government regulation and its bureaucracy system. Learning-centered leadership and teacher engagement in professional learning of teachers were not as high as indicated in the quantitative findings in this study.

Qualitative findings further showed differences in the teacher learning processes between the two countries. For example, in China, teacher learning processes involved workshops, teaching competitions, and team meetings. Schools often designated 'master teachers' so that expert senior teachers could share knowledge with other teachers. Furthermore, schools developed teacher research groups, allowing learning processes between teachers in examining curriculum materials, instructional processes, and student results. These collaborative research activities contributed to all teachers improving their teaching.

In Thailand, despite the high quantitative mean scores obtained in the research, teacher learning practices did not appear as well developed and embedded in the culture of the schools. For example, in the Thai schools, both urban and rural, school meetings were more likely set for updating information about the school, rather than for the

purpose of teacher professional learning. Teaching competitions were not developed, and workshops were typically assigned by the government with teachers expressing less initiative and motivation for their learning. Moreover, the researcher found less evidence of teachers sharing knowledge and exchanging information for the purpose of shared learning. In Thailand, although school-level research is compulsory, these tasks mostly fell to the academic or research department where only the assigned teachers were responsible. Thus, for Thailand, the question remains whether conducting these research served for the purpose of teacher learning or for completing the assigned duty.

From the comparative findings above, it can be concluded that the development of distinctive practices for embedded learning should be considered for the improvement of Thailand education. From this conclusion, the following section introduces a model of leadership for teacher learning in Thailand as suggestions for enhancing teacher engagement in professional learning, which further benefits in student learning.

6.4 Towards a Model of Leadership for Teacher Learning in Thailand

Qualitative findings and literature review in this research suggest that distinctive practices of leadership for embedded learning of teachers should be developed. As a result, the following introduces a model of leadership for teacher learning in Thailand, which includes eight learning-centered leadership practices: teacher/leader collaboration, open/supportive environment, support through various sources/approaches, internal/external observation, coaching/mentoring program, teacher research program, continuous learning system, and cultural competency. Through the development of these practices, teacher trust and agency could evolve, leading to achievement of teacher engagement in professional learning. In addition, the

model also includes student learning in the center of the model as teacher learning is one of the critical factors in the success of student learning (DuFour & Eaker, 2009; Fishman, Marx, Best, & Tal, 2003; Joyce & Showers, 2002; Richardson, 1998; Vescio et al., 2008).
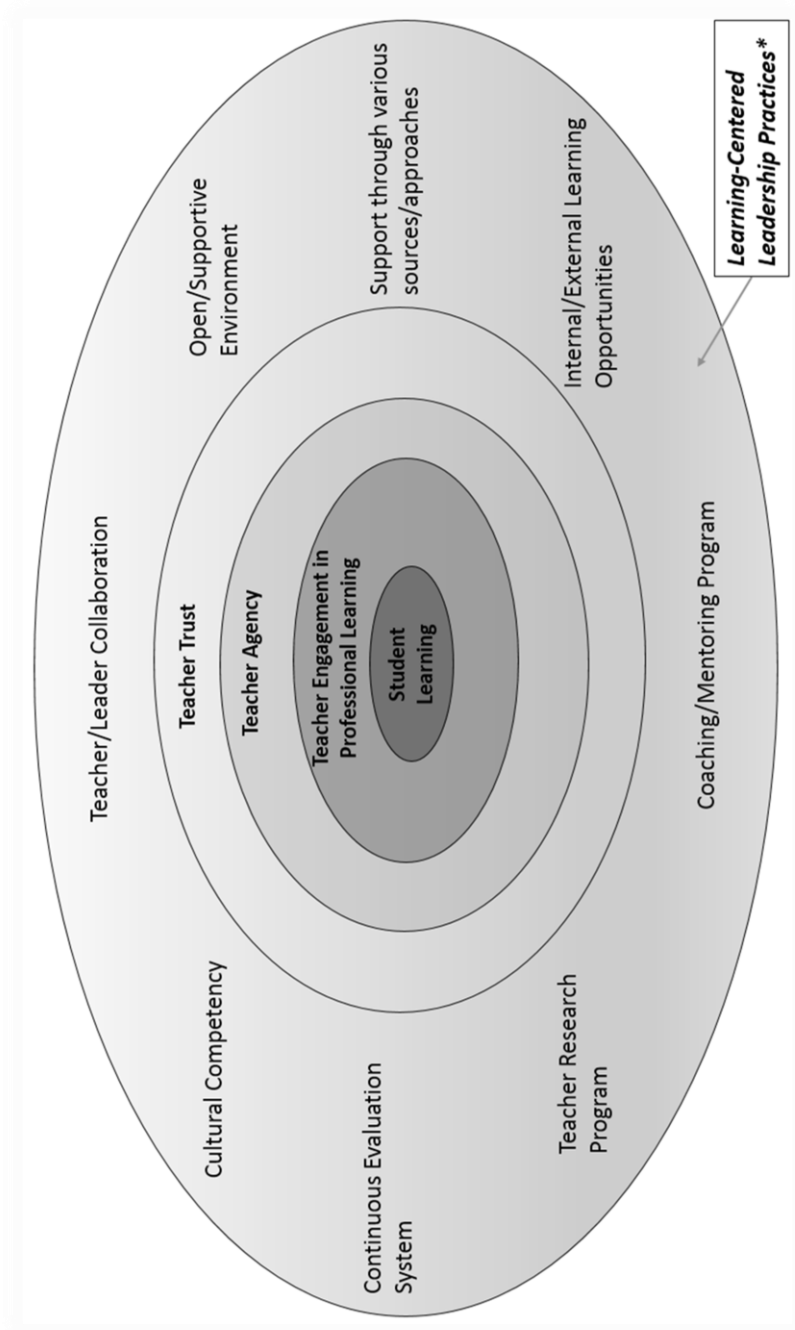
Figure 17 Model of leadership for teacher learning in Thailand

The following describes each of the learning-centered leadership practices as identified in the model in detail:

1. <u>Teacher/Leader Collaboration</u>: Teacher engagement in professional learning can be achieved when teacher collaborate with colleagues and with leaders, leading to school's collaborative professional learning culture. This is achieved when teachers engage in formal and informal discussion about teaching practices, reflect on instructional pedagogy, and work together to share knowledge and provide feedback about teaching strategies, etc. The role of leader in providing instructional advice and interacting with colleagues on teaching and learning is also important in motivating and enhancing teacher commitment in learning. As indicated in this research, principals who engage in classroom observation and participate in instructional practices are able to reinforce learning visions and focused goals, and are frequently seen as model for professional learning.

2. <u>Open/Supportive Environment</u>: Findings of this research suggest that open and supportive environment should be created in order to build teacher trust and agency. Leaders who invest effort in learning about their colleagues and building strong relationship with teachers gain better respect and trust. In the open environment, teachers feel comfortable in sharing information, ideas, and knowledge with each other, allowing reflection and collective teamwork. In the supportive environment, professional learning of teachers are prioritized with full support for teacher learning. In addition, in this open/supportive environment, there should be a shift in traditional leadership structure from leader-centered (top-down) to shared leadership (DuFour & Eaker, 1998). Qualitative analysis proves that school leaders who lead with

understanding and flexibility in teachers' decision making achieve better teacher agency, which increase their motivation in learning.

3. <u>Support through various sources/approaches</u>: This research indicated that solely relying on government support is ineffective and insufficient, especially in the rural area. As a result, leaders should seek for various sources and approaches in providing teacher support for their learning. For example: focusing on both educational and practice-based development, gathering additional support from private sectors, local politicians, or other foundations, participating in other training workshops and opportunities outside governmental programs that would benefit teacher learning, reducing requirement for paper documents and protecting instructional time, gaining help from other professionals and specialists in providing subject-specific content and instructional techniques, etc.

4. <u>Internal/External Learning Opportunities</u>: Teacher engagement in professional learning can be enhanced when teachers receive both internal and external learning opportunities. Internal learning opportunities include class observation within the school, regular faculty and school meeting, and exchange facilitation on instructional ideas and techniques. In Parise and Spillane (2010), the term can be referred as "on-the-job learning opportunities", which include aspects of schools' organizational conditions and interactions with colleagues around teaching and learning, such as conversations about instruction, peer observation and feedback, and advice seeking about instruction. Findings of this research also indicates importance of external learning opportunities as teachers tend to show interests and motivation in professional development when observed practices from outside schools. External learning opportunities may include practices such as schools visitation, educational

observation in other area or other countries, out-of-school teacher networks for learning exchange, etc.

5. Coaching/Mentoring Program: Interviews in this research revealed several complaints about the effectiveness of Thailand's current training program and workshops, and suggested the implementation of coaching/mentoring program to facilitate teachers and leaders in receiving further support. Specifically, those in the rural area and those with low learning competency should be focused to reduce the inequality gap. The program may involve mentor's observation and feedback on lesson plan, guidance for teachers to develop understanding about new learning methods and instructional practices, close-coaching and consulting for school leaders to pass on the knowledge effectively. These mentors can be those specialists in the content-specific knowledge, professionals from demonstrated or top-performance schools, or other academic persons. School exchange project may also be encouraged for schools to collaborate and learn from each other. However, it is important that the mentoring process should not be of control, and focus on the coaching which facilitate school learning only. Moreover, schools should continue to develop its own coaching program. For example, leaders coach teachers, teachers coach teachers, or "older teaches younger" (pee-sorn-nong) project.

6. Teacher Research Program: Both quantitative and qualitative findings in this research indicated that teachers in Thailand have low practices in experimentation and in reaching out to the knowledge base. For most teachers, application of new teaching ideas and methods, learning from literatures to obtain educational/subject matter pedagogical knowledge, and observing others' lesson are not common. Through conducting research, teachers gain insights on teaching practices, are encouraged to

experiment and reflect on teaching skills and methodologies, and are stimulated to develop professional learning. According to Phoenix (1998), the process yields new foci, direction, and guidance as well as sharing of information relating to teaching ideas and classroom practices. However, although research interviews reveal that teacher research program is implemented in most schools, its success remains a challenge as not all teachers are involved in the process, research duties fall to the academic department, and its usage are only presented as reading document, showing lack of usage and application. As a result, teacher collaboration in conducting research and school leaders' support and collaboration are highly recommended in applying knowledge into practice.

7. Continuous Evaluation System: To sustain the professional learning of teachers, schools should develop a continuous evaluation system. As both quantitative and qualitative research indicated that self-evaluation tend to be overrated and misrepresent the situation, assessment should be conducted in various form of self-analysis, peer reflection, and leader's evaluation. Presentation of results and good practices are encouraged to discuss in teacher focus-group and school meeting, in which school leader's participation is found significant. The research shows that principals who involve in classroom observation and evaluation in a routine basis are able to enhance teacher learning. As a result, continuous evaluation system should be embedded in a regular practice for leaders to evaluate learning and teaching capability of each individuals, to detect problems in applying new teaching pedagogy, and to sustain teacher commitment in their professional learning.

8. Cultural Competency: Findings of this research suggest that school culture plays roles in influencing teachers' learning style and working behavior. Beliefs in

Buddhism and the principles of sufficiency economy, for example, are reflected in their learning attitudes and teaching methods. Specifically, in rural school, principals who develop understanding of the local culture and manage schools based on shared values and belief are able to build trust and achieve better results of teacher performance. As a result, school management should focus on strengthening culture competency by providing support align with school vision and culture (e.g. encouraging the learning of local wisdom and participation of local specialists).

6.5 Implications

System leaders in Thailand may use the results of this research to refine the focus of training programs for school leaders and to improve policies related to teacher learning. For example:

- Policies related to teacher learning should be given higher priority as a focus in improving the nation's education.

- Align with the policy, teacher learning programs should be systematic with clear, practical steps and action plans so that leaders can successfully implement and teachers can continuously develop professional learning.

- Avoid confusion and ensure full cooperation and understanding about the policy and the training programs with the schools.

- Provide a wider variety of learning programs, and shift the professional learning culture of Thai schools away from 'workshops' and towards forms of collaborative learning that are 'embedded' in the ongoing life of schools.

- Allow opportunities for teachers to choose more of the foci for their learning and given greater support for 'teacher agency' as acritical factor in developing a learning culture.

- Make 'learning-centered leadership' a specific focus in leadership training and an explicit role for Thai school leaders.

- Conduct workshops and focus-group interview between school leaders to exchange knowledge, experiences, and successful approaches that enhance teacher professional learning.

- Motivate leaders and teachers to improve their professional learning by rewarding good-performance schools and provide opportunities for others to learn from them.

- Provide additional coaching/mentoring system by other professionals and specialties for those who require further instructional assistance.

- School monitoring and evaluation should base on the quality of teaching and student performance in learning. Paper-based documents are used to provide additional evidence, but should not be the main focus.

- Allow feedback and reflection from the schools to ensure whether the programs are appropriate and successfully implemented, or require further adjustment.

The research also verified a human resource gap between the urban and rural schools, both with respect to the leadership of principals and the level of teacher engagement in learning. Several implications follow aimed at reducing this urban-rural gap and improve the quality of education throughout the country.

First, because in Thailand, there are many small schools with less than 120 students located in the rural area. The issue results in difficulties in teacher management and resource allocation. Bisonyabut (2015) suggested that the government should enlarge these school size to reduce difference in school performance gap. According to this research, another approach is to adjust criteria for resource allocation to base on school needs, instead of number of students.

Second, policy making should prioritize goals to enhancing school' learning competency, developing professional learning, and building unique identity. Knowledge and innovation based on local wisdom should be encouraged, especially in rural schools. Suggested by Bisonyabut (2015), these schools should also be provided with support in skill-based activities to improve their learning.

Third, parents are one of the key factors in providing support and improve student learning. In rural area, most parents lack skill and professional knowledge to help teach their children. Therefore, enhancing parents' education and occupation-wise knowledge can be seen as one of the indirect, but effective approach in increasing student learning (Bisonyabut, 2015).

Fourth, family-income and social status are one of the personal attributes that affect education performance. Institutional barriers makes it difficult for low-income families to access the urban education system due to higher educational fee and living cost. As a result, the government should reduce this barrier by providing equal rights and access to quality schools for those with financial issues. Furthermore, living conditions of students from low-income family also affects education performance. Therefore to reduce education inequality between rural and urban areas, it is suggested that the government should also pay attention to students' living environment.

According to Bisonyabut (2015), motivating children to live with parents and reducing family-conflict problems, for example, are one of the ways to help improve the living condition of those in need.

Fifth, rural schools face more difficulties in improving education performance due to teacher shortage. Align with Bisonyabut (2015), this research suggested that the teacher-student ratio should be increased, especially for rural schools. Moreover, policymaking should be adjusted to provide support and suitable benefits for teachers in rural area to reduce teachers moving to urban schools.

In addition to the above implications, quantitative data analysis proved that the instrument offered internal consistency with a measure of scale reliability (alpha coefficients for all constructs) at .85, which exceeded minimum reliability standard of .70. Validity of measurement through the use of confirmatory factor analysis (CFA), assisted by factor loadings at >0.9 and average variance extracted (AVE) for all constructs at >0.8, also proved that each measure of construct has high correlations with each other. Based on these results, this research provides new, validated instruments for use in measuring key variables related to improving conditions for teacher engagement in professional learning, where researchers in Thailand may use for further studies.

Finally, the research findings may also be added to the global knowledge base on learning-centered and instructional leadership. Specifically, the results can be extended and compared to those from the USA, Hong Kong and China.

6.6 Recommendations for Further Research

Based on the findings from this research, recommendations for further research can be included as:

- Due to the high ratings across all schools, the validity of the results need to be verified by further study. For example, other studies may be conducted with a mixed methods design to investigate patterns of leadership and teacher learning in schools that are performing highly on Thai education quality measures. This could lead to the identification of effective practices that work in the Thai context.

- This study focused on 'medium-sized' schools. It is possible that the differences between urban and rural school could have been larger if the sample had examined small rural schools.

- As the current study focused on primary schools, similar research could be conducted at the secondary level where different patterns of leadership and teacher relationships are likely to be observed. Secondary school studies should also focus more on the distribution of learning-centered leadership responsibilities among the staff.

- Pending access to suitable student learning data, it would also be useful to study how differences in leadership and teacher engagement in professional learning impact student performance across different schools.

- The current study employed interviews with school staff in order to gain insight into the pattern of qualitative results. However, longer-term case studies of schools using observations and document analysis as well as interviews would enable researchers to gain a richer understanding of relevant constraints, strategies and practices associated with the context of each school (Liu & Hallinger, 2017a, 2017b).

In conclusion, this research contributes to the understanding of the processes of learning-centered leadership and teacher learning in urban and rural primary schools in Thailand. Quantitative results revealed patterns of learning-centered leadership and teacher engagement in professional learning in Thai schools, while qualitative research elaborated on how Thai school leaders enact the role of learning leaders and how these practices impact teacher engagement in professional learning. The research highlighted the significance of learning-centered leadership, which presently remains a challenge for education in Thailand as well as in other developing countries.

Results from the research reinforces the fact that school leadership plays an important role in supporting, inspiring and enhancing the professional learning of teachers (Frost, 2006; Hallinger & Lee, 2011, 2014; Hallinger et al., 2016). However, the perspectives and values of school leaders in Thailand mainly focus on managerial duties rather than leading teaching and learning development. The study suggests a lack of policymaking that emphasizes the role of learning-centered leadership as well as difficulties of policy adoption and implementation.

Regarding the differences between urban and rural schools, quantitative research showed that urban and rural models yielded a similar pattern of learning-centered leadership and teacher engagement in professional learning, but differed in the magnitude of the effect. Statistical data confirmed that the differences in the levels of the constructs between the urban and rural schools were statistically significant. This statistical differences were elaborated by qualitative findings where the human resource gap seemed more pronounced between the two settings.

Due to the high ratings reported in this research, it is possible that the perceptions reported in all schools in the sample may have overestimated the actual

level of the variables. This conclusion is also based on other literature, qualitative results, personal experience, as well as comparative analysis from China. Thus, the results reported in this study of leadership and teacher learning should be taken as the starting point for research in this domain in Thai schools, not as the final answer.

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APPENDIX

APPENDIX A

Research Questionnaire (in English)
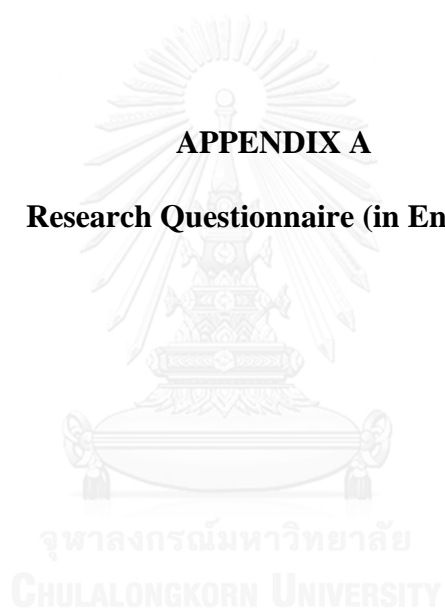
PART 1 Personal Information

Instructions: Please make a ✓ mark in a box based on your personal information

1. Gender

   ☐ Male   ☐ Female

2. Age

   ☐ Less than 30 years old   ☐ 31-39 years old

   ☐ 40-49 years old   ☐ 50 years old or above

3. Highest Education

   ☐ Less than Bachelor's Degree   ☐ Bachelor's Degree

   ☐ Master's Degree   ☐ Doctoral Degree

4. Current work position

   ☐ School Principal   ☐ Teacher

5. Years of work experience

   ☐ Less than 2 years   ☐ 2 - 5 years

   ☐ 6 – 10 years   ☐ More than 10 years
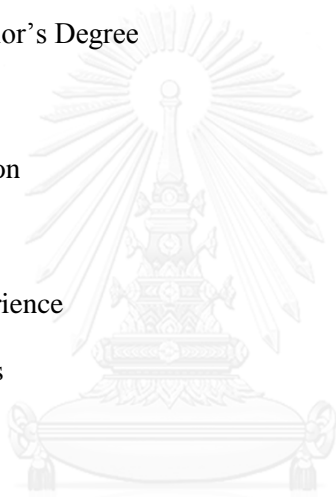
PART 2 Study of the impact of learning-centered leadership on teacher engagement in professional learning in Thailand

Instructions: Please read each item and make a ✓ mark in a box that best fit your opinion.

The ratings are based on the following:

5 = Totally Agree

4 = Agree

3 = Uncertain

2 = Disagree

1 = Totally disagree

Variables	Question Items	Rating				
		5	4	3	2	1
1. Learning-Centered Leadership[i]	*Your principal…*					
1.1 Builds a Learning Vision	1. Sets a clear vision for teacher learning in the school					
	2. Communicates a learning vision with teachers					
	3. Demonstrates high expectations for teachers					
	4. Provides useful assistance to teachers in working towards the learning vision					
	5. Encourages teachers to develop individual professional goals consistent with school goals					
	6. Helps to clarify the reasons for implementing the learning vision to teachers					
1.2 Provides Learning Support	1. Provides resources (time, money and training opportunities) to support my professional learning					
	2. Facilitates opportunities (demonstration lesson and training project) for staff to learn from each other					
	3. Shows respect for teachers who pursue their goals for professional learning					
	4. Rewards teachers who engage in ongoing teacher professional learning					
	5. Aligns resource allocation to the priority of teacher engagement in professional learning					
	6. Encourages ongoing teacher professional learning to implement new ideas and practices					
	7. Supports an open and supportive environment for staff to communicate					
	8. Makes teachers feel appreciated for the contributions of their professional learning to school improvement					

Variables	Question Items	Rating				
		5	4	3	2	1
1.3 Manages the Learning Program	1. Participates and guides teachers in formal or informal professional learning					
	2. Designs a systematic evaluation system to assess the impact of teacher professional learning					
	3. Diversifies the learning forms to arouse teachers' interest					
	4. Promotes professional learning content to fit teachers' needs					
	5. Emphasizes the purpose of professional learning for teaching improvement					
	6. Makes regular visits to ensure systematic monitoring of teacher professional learning					
1.4 Modeling	1. Displays energy and enthusiasm for learning					
	2. Demonstrates a willingness to share personal learning achievements with teachers					
	3. Shows outstanding performance in professional learning					
	4. Focuses on the latest ideas in teaching					
	5. Has own unique opinions about teaching and learning					
2. Teacher Trust[ii]						
2.1 Calculative Trust	1. I can believe that my colleague communicate with me frankly					
	2. I can trust that my colleague would willingly share me with wisdom that (s)he believe would be useful to me					
	3. Teachers in this school is competent in doing his or her job					
	4. Given this person's track record, I see no reason to doubt his/her competence and preparation for the job					
	5. Communicating with my colleague might help improve my teaching					

Variables	Question Items	Rating				
		5	4	3	2	1
2.2 Relational Trust	1. I can talk freely to this individual about difficulties I am having at work and know that (s)he will want to listen					
	2. We would both feel a sense of loss if one of us was transferred and we could no longer work together					
	3. We can both freely share our ideas, feelings, and hopes					
	4. If I shared my problems with this person, I know (s)he would respond constructively and caringly					
	5. I can share my confusions in teaching with colleague					
	6. I would have to say that we have both made considerable emotional investments in our working relationship					
2.3 Faith Trust	1. I believe my colleague has high integrity					
	2. I believe my colleague has high engagement in the work					
	3. In general, I can reach an agreement with my colleague about the expectations toward students' academic achievement					
	4. In general, I believe my employer's motives and intentions are good					
	5. The principal in this school typically acts with the best interests of the students in mind					
	6. In general, I recognized my colleague's working attitude and teaching ideas					
3. Teacher Agency[iii]						
3.1 Learning Effectiveness	1. Only if I try hard enough, will I continue to improve my teaching as time goes by					
	2. Even if I am in a bad mood, I can still actively engage in professional learning					
	3. In a busy period, I continue to keep learning on the job					

Variables	Question Items	Rating				
		5	4	3	2	1
	4. I am convinced that I can develop creative ways to cope with system constraints (such as funding shortage and other administrative problems) and continue to engage in professional learning					
	5. I know that I can carry out professional learning projects, even when I am opposed by skeptical colleagues					
	6. I am convinced that I can learn more effectively with the help of colleagues compared with learning by myself					
3.2 Teaching Effectiveness	1. If a student in my class becomes disruptive and noisy, I know techniques to redirect him/her quickly					
	2. I am confident that I can find effective teaching methods to develop my students					
	3. I am convinced that I can teach a new course successfully					
	4. When I try really hard, I am able to reach even the most difficult students					
	5. I know that I can maintain a positive relationship with parents, even when tensions arise					
	6. If one of my students can't do a class assignment, I am able to accurately assess whether the assignment was at the correct level of difficulty					
	7. When a student gets a better grade than he/she usually gets, it is usually because I found better ways of teaching that student					
3.3 Optimism	1. I am optimistic about my future					
	2. In uncertain times, I usually expect the best					
	3. Overall, I expect more good things to happen to me than bad					
	4. Overall, I maintain a positive relationship with my colleagues					

Variables	Question Items	Rating				
		5	4	3	2	1
	5. Overall, I communicate well with my colleagues					
3.4 Constructive Engagement	1. I set clear learning goals for myself					
	2. In order to realize a learning goal, I willingly confront difficulties					
	3. I make a study plan in detail to reach a learning goal					
	4. I make full use of resources available to improve my teaching					
	5. I try out new ideas when I am doing a routine task					
	6. I try my best to expand my professional influence in the process of school change					
4. Teacher Engagement in Professional Learning[iv]						
4.1 Collaboration	1. I work together with colleagues to plan educational activities					
	2. I work together with colleagues to modify subject matter for students					
	3. I work together with colleagues to share teaching experiences					
	4. I work together with colleagues to discuss ways to improve the curriculum and instruction					
	5. I participate in meetings with colleagues to decide how the school evaluates student achievement and the curriculum					
	6. I participate meetings with colleagues to discuss students' learning					
4.2 Reflection	1. I modify instructional methods on the basis of feedback from colleagues					
	2. I maintain previous reports about learning and teaching for learning purposes					

Variables	Question Items	Rating				
		5	4	3	2	1
	3. I reflect individually after observing colleagues' lesson to improve my teaching					
	4. I record my teaching problems for learning purposes					
	5. I update my instructional files according to the situation to improve my teaching					
	6. I record my learning experience in professional learning projects					
	7. I adapt my teaching methods in response to pupils' reactions					
	8. I reflect on my own teaching practice					
	9. I analyze the reasons of failures or successes in my teaching					
	10. I collect more information to analyze and verify pupils' feedback					
4.3 Experimentation	1. I experiment with new teaching ideas					
	2. I try out new teaching methods in my lesson					
	3. I apply new methods to solve teaching problems					
	4. I test alternative teaching materials in class to stimulate students' interest					
	5. I try out new applications of ICT in my lessons					
4.4 Reach Out to the Knowledge Base	1. I collect learning feedback from students					
	2. I search online information resources for way to develop my teaching					
	3. I observe other teachers' lessons to learn					
	4. I read educational/subject matter pedagogical literature to obtain the new ideas					
	5. I ask for help from colleagues					
	6. I maintain professional learning linkages with other schools					

[i] Items adapted from Leithwood et al., 2010; Leithwood & Jantzi, 2006; Robinson, Hohepa, & Lloyd, 2009; Walker & Ko, 2011; Yu, Leithwood, & Jantzi, 2002

[ii] Items adapted from Tschannen-Moran,2009; McAllister,1995

[iii] Items adapted from Peng et al., 2006; Schwarzer & Hallum, 2008; Shen, 2015; Woolfolk, & Hoy, 1990; Scheier, Carver, & Bridges, 1994; Zhang, 2008)

[iv] Items adapted from in de Wall et al., 2004; Schechter, 2008; Evers et al., 2015

APPENDIX B

Research Questionnaire (in Thai)

แบบสอบถามเพื่อการวิจัย

เรื่อง THE IMPACT OF LEARNING-CENTERED LEADERSHIP ON TEACHER ENGAGEMENT IN

PROFESSIONAL LEARNING IN THAILAND

ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย

คำชี้แจง

1. การวิจัยครั้งนี้ เป็นส่วนหนึ่งของการศึกษาหลักสูตรครุศาสตรดุษฎีบัณฑิต สาขาวิชาบริหารการศึกษา ภาควิชานโยบาย การจัดการและความเป็นผู้นำทางการศึกษา คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย โดยมี วัตถุประสงค์เพื่อสอบถามความคิดเห็นของท่านเกี่ยวกับผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของ ครูในการเรียนรู้ทางวิชาชีพในประเทศไทย

2. ภาวะผู้นำทางการเรียนรู้ หมายถึงภาวะผู้นำของผู้อำนวยการหรือผู้นำในโรงเรียนที่มุ่งเน้นด้านการส่งเสริม การเรียนรู้ของครู ผ่านการสร้างวิสัยทัศน์การเรียนรู้ การสนับสนุนการเรียนรู้ การจัดการแผนการเรียนรู้ และการเป็น แบบอย่างที่ดีเพื่อให้ครูมีความผูกพันต่อการเรียนรู้ทางวิชาชีพ

3. แบบสอบถามแบ่งออกเป็น 2 ตอน ได้แก่

ตอนที่ 1 ข้อมูลส่วนบุคคลของผู้ตอบแบบสอบถาม

ตอนที่ 2 ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพ

ในประเทศไทย

4. ในการตอบแบบสอบถามครั้งนี้ ความคิดเห็นของท่านมีคุณค่าและความสำคัญต่อการพัฒนาระบบการ บริหารจัดการศึกษาของประเทศอย่างยิ่ง และข้อมูลที่ตอบจะไม่มีผลกระทบใด ๆ ทั้งสิ้น ต่อการปฏิบัติงานในหน้าที่ ของท่าน ดังนั้น จึงขอความกรุณาท่านตอบแบบสอบถามตามความเป็นจริงหรือตามความต้องการที่แท้จริงของท่านให้ ครบทุกข้อ เพื่อผู้วิจัยสามารถนำข้อมูลไปใช้ให้เกิดประโยชน์สูงสุดต่อการพัฒนาระบบการบริหารจัดการศึกษาของ ประเทศให้มีคุณภาพและประสิทธิภาพมากยิ่งขึ้นต่อไป

5. ผู้วิจัยใคร่ขอความอนุเคราะห์ท่านตอบแบบสอบถามแต่ละตอนที่กำหนดให้ครบถ้วน และได้โปรดนำ แบบสอบถามของผู้อำนวยการโรงเรียน 1 ฉบับ และครูผู้สอน จำนวน 20 ฉบับ รวมทั้งสิ้น 21 ฉบับ ใส่ในซองที่แนบ มาพร้อมนี้ และขอความกรุณาส่งคืนผู้วิจัยด้วย จักเป็นพระคุณอย่างยิ่ง

ขอขอบพระคุณเป็นอย่างสูง

นางภัทน์นรี ปิยะมาน

นิสิตดุษฎีบัณฑิต สาขาวิชาบริหารการศึกษา

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

รับรองคำแปลถูกต้อง

นางสาว ศิรินนา เรณ่า สุริยาอมฤทธิ์

ห้างหุ้นส่วนจำกัด แกรนด์ เมอร์แคนไทล์

โทร : 081-625-2552

ตอนที่ 1 ข้อมูลส่วนบุคคลของผู้ตอบแบบสอบถาม

<u>คำชี้แจง</u> โปรดทำเครื่องหมาย ✓ ลงในช่อง ☐ ตามความเป็นจริง

1) เพศ
☐ ชาย   ☐ หญิง

2) อายุ
☐ น้อยกว่า 30 ปี   ☐ 31-39 ปี   ☐ 40-49 ปี   ☐ 50 ปีขึ้นไป

3) ระดับการศึกษา
☐ ต่ำกว่าปริญญาตรี   ☐ ปริญญาตรี   ☐ ปริญญาโท   ☐ ปริญญาเอก

4) ตำแหน่งปัจจุบัน
☐ ผู้อำนวยการ/ผู้บริหารโรงเรียน   ☐ ครูผู้สอน

5) ประสบการณ์การทำงาน
☐ น้อยกว่า 2 ปี   ☐ 2 - 5 ปี   ☐ 6 – 10 ปี   ☐ มากกว่า 10 ปี

ตอนที่ 2 ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย

<u>คำชี้แจง</u> ขอให้ท่านพิจารณาข้อรายการดังต่อไปนี้ และทำเครื่องหมาย ✓ ลงในช่องที่ตรงกับระดับความคิดเห็นของท่านมากที่สุด โดยกำหนดเกณฑ์การให้คะแนน ดังนี้

ระดับ 5 หมายถึง เห็นด้วยเป็นอย่างมาก
ระดับ 4 หมายถึง เห็นด้วย
ระดับ 3 หมายถึง ไม่แน่ใจ
ระดับ 2 หมายถึง ไม่เห็นด้วย
ระดับ 1 หมายถึง ไม่เห็นด้วยเป็นอย่างมาก

ตัวแปร	ข้อรายการ	ระดับความคิดเห็น				
		5	4	3	2	1
1. ภาวะผู้นำทางการเรียนรู้ (Learning-Centered Leadership)[1]	*ผู้อำนวยการโรงเรียนของท่าน...*					
1.1 สร้างวิสัยทัศน์ในการเรียนรู้	1. สร้างวิสัยทัศน์ในการเรียนรู้ของครูในโรงเรียน					
	2. สื่อสารวิสัยทัศน์ในการเรียนรู้กับครู					
	3. แสดงออกถึงความคาดหวังที่มีต่อครู					
	4. ให้ความช่วยเหลือที่เป็นประโยชน์ในการทำงานของครู สู่การบรรลุวิสัยทัศน์ในการเรียนรู้					

ตัวแปร	ข้อรายการ	ระดับความคิดเห็น				
		5	4	3	2	1
	5. สนับสนุนครูในการพัฒนาเป้าหมายทางวิชาชีพส่วนบุคคลที่ไปในทิศทางเดียวกับเป้าหมายของโรงเรียน					
	6. ช่วยให้ครูเกิดความเข้าใจถึงเหตุผลของการนำวิสัยทัศน์มาปฏิบัติ					
1.2 การสนับสนุนการเรียนรู้	1. ให้ทรัพยากรต่างๆ (เวลา เงิน และโอกาสในการฝึกอบรม) เพื่อสนับสนุนการเรียนรู้ทางวิชาชีพของครู					
	2. ให้โอกาส (ผ่านการสาธิตและการฝึกอบรม) เพื่อให้พนักงานได้เรียนรู้จากกันและกัน					
	3. แสดงความนับถือแก่ครูที่ทำตามเป้าหมายในการเรียนรู้ทางวิชาชีพ					
	4. ให้รางวัลแด่ครูที่มีส่วนร่วมในการเรียนรู้ทางวิชาชีพอย่างต่อเนื่อง					
	5. จัดสรรทรัพยากรโดยให้ความสำคัญต่อการเรียนรู้ทางวิชาชีพของครูเป็นหลัก					
	6. กระตุ้นให้เกิดการเรียนรู้ทางวิชาชีพของครูอย่างต่อเนื่อง เพื่อการนำความคิดและกระบวนการทำงานแบบใหม่มาใช้					
	7. สนับสนุนให้โรงเรียนมีบรรยากาศในการทำงานที่พนักงานสนับสนุนซึ่งกันและกันและสามารถพูดคุยกันอย่างเปิดกว้าง					
	8. แสดงความชื่นชมแด่ครูที่มีส่วนร่วมในการเรียนรู้ทางวิชาชีพเพื่อพัฒนาโรงเรียน					
1.3 การจัดการแผนการเรียนรู้	1. มีส่วนร่วมและชี้นำครูในการเรียนรู้ทางวิชาชีพอย่างเป็นทางการและ ไม่เป็นทางการ					
	2. ออกแบบระบบการประเมินที่มีคุณภาพในการศึกษาผลกระทบของการเรียนรู้ทางวิชาชีพครู					
	3. ออกแบบรูปแบบการเรียนรู้ที่หลากหลายเพื่อกระตุ้นความสนใจของครู					
	4. ส่งเสริมด้านเนื้อหาการเรียนรู้ทางวิชาชีพเพื่อตอบสนองความต้องการของครู					

รับรองคำแปลถูกต้อง

นางสาว ศิรินนา เรณา สุริยาอมฤทธิ์
ห้างหุ้นส่วนจำกัด แกรนด์ เมอร์แคนไทล์
โทร : 081-625-2552

ตัวแปร	ข้อรายการ	ระดับความคิดเห็น				
		5	4	3	2	1
	5. เน้นย้ำวัตถุประสงค์ของการเรียนรู้ทางวิชาชีพเพื่อการพัฒนาการสอนของครู					
	6. มีการเยี่ยมชมห้องเรียนอย่างสม่ำเสมอเพื่อรับรองระบบการติดตามตรวจสอบด้านการเรียนรู้ทางวิชาชีพครูที่ดี					
1.4 การเป็นแบบอย่าง	1. แสดงให้เห็นถึงพลังและความกระตือรือล้นในการเรียนรู้					
	2. แสดงออกถึงความตั้งใจที่จะแบ่งปันความสำเร็จในการเรียนรู้กับคุณครูท่านอื่น					
	3. แสดงการปฏิบัติด้านการเรียนรู้ทางวิชาชีพที่โดดเด่น					
	4. มุ่งเน้นการสอนตามแนวคิดแบบใหม่ๆ					
	5. มีความคิดเห็นเกี่ยวกับการสอนและการเรียนรู้ที่เป็นเอกลักษณ์เฉพาะ					
2. ความเชื่อมั่นของครู (Teacher Trust)[ii]						
2.1 ความเชื่อมั่นเชิงตรรกะ	1. ฉันสามารถเชื่อได้ว่าเพื่อนร่วมงานของฉันสื่อสารกับฉันอย่างตรงไปตรงมา					
	2. ฉันสามารถวางใจได้ว่าเพื่อนร่วมงานของฉันมีความเต็มใจในการแบ่งปันความรู้ที่เป็นประโยชน์แก่กัน					
	3. ครูในโรงเรียนนี้มีความสามารถในการทำงานของตนได้เป็นอย่างดี					
	4. จากประสบการณ์การทำงานกับเพื่อนร่วมงาน ทำให้ฉันไม่มีเหตุผลที่จะต้องสงสัยในความสามารถและการเตรียมพร้อมในการทำงานของเขาหรือเธอเลย					
	5. การสื่อสารกับเพื่อนร่วมงานจะช่วยพัฒนาการสอนของฉัน					
2.2 ความเชื่อมั่นเชิงสัมพันธภาพ	1. ฉันสามารถพูดคุยได้อย่างเปิดเผยกับเพื่อนร่วมงานเกี่ยวกับความลำบากในการทำงานโดยเชื่อว่าเขาหรือเธอเต็มใจที่จะรับฟังฉัน					

ตัวแปร	ข้อรายการ	ระดับความคิดเห็น				
		5	4	3	2	1
	2. ฉันและเพื่อนร่วมงานของฉันจะรู้สึกถึงความสูญเสีย ถ้าหากว่าใครคนใดคนหนึ่งต้องถูกย้ายไปและเราจะไม่ สามารถทำงานร่วมกันได้อีก					
	3. ฉันและเพื่อนร่วมงานของฉันสามารถแบ่งปันความคิด ความรู้สึก และความหวังให้แก่กันและกันฟังได้อย่าง เปิดเผย					
	4. หากฉันได้พูดคุยถึงปัญหาของฉันให้เพื่อนร่วมงานฟัง ฉันรู้ว่าเพื่อนร่วมงานของฉันจะตอบสนองอย่าง สร้างสรรค์และห่วงใย					
	5. ฉันสามารถเปิดเผยความสับสนในการสอนกับเพื่อน ร่วมงานได้					
	6. ฉันสามารถพูดได้ว่าฉันและเพื่อนร่วมงานของฉันต่าง มีความรู้สึกที่ดีต่อกันเป็นอย่างมากในสัมพันธ์การทำงาน ของพวกเรา					
2.3 ความเชื่อมั่นเชิงศรัทธา	1. ฉันเชื่อว่าเพื่อนร่วมงานของฉันมีความซื่อสัตย์สูง					
	2. ฉันเชื่อว่าเพื่อนร่วมงานของฉันมีความผูกพันในการ ทำงานสูง					
	3. โดยทั่วไป ฉันสามารถหาข้อตกลงร่วมกับเพื่อน ร่วมงานเกี่ยวกับความคาดหวังที่มีต่อความสำเร็จของ ผู้เรียนได้					
	4. โดยทั่วไป ฉันเชื่อว่าเจ้านายของฉันมีแรงจูงใจและมี ความตั้งใจที่ดี					
	5. ผู้อำนวยการโรงเรียนนี้ปฏิบัติงานโดยคำนึงถึง ผลประโยชน์ของนักเรียนเป็นที่ตั้ง					
	6. โดยทั่วไป ฉันสามารถรับรู้ถึงทัศนคติในการทำงาน และแนวคิดด้านการสอนของเพื่อนร่วมงานได้					
3. พลังในการเรียนรู้ของครู (Teacher Agency)[iii]						
3.1 ประสิทธิภาพในการเรียนรู้	1. ถ้าฉันพยายาม ฉันก็จะสามารถพัฒนาการสอนให้ดีขึ้น ได้					

ตัวแปร	ข้อรายการ	ระดับความคิดเห็น				
		5	4	3	2	1
	2. แม้ในช่วงเวลาที่ฉันอารมณ์ไม่ดี ฉันก็ยังสามารถทำการเรียนรู้ทางวิชาชีพได้อย่างเต็มที่					
	3. แม้ในช่วงเวลาที่วุ่นวาย ฉันก็ยังสามารถพัฒนาการเรียนรู้ในการทำงานได้					
	4. ฉันเชื่อว่าฉันสามารถค้นหาแนวทางที่สร้างสรรค์เมื่อต้องเผชิญกับความจำกัดของระบบ (เช่น การขาดแคลนเงินทุน และปัญหาด้านการบริหารอื่นๆ) ได้ โดยยังสามารถจะทำการเรียนรู้ทางวิชาชีพได้อย่างเต็มที่					
	5. ฉันรู้ว่าฉันสามารถดำเนินโครงการที่เกี่ยวกับการเรียนรู้ทางวิชาชีพได้ แม้ในกรณีที่ถูกต่อต้านโดยเพื่อนร่วมงานที่ขาดความศรัทธา					
	6. ฉันเชื่อว่าฉันสามารถเรียนรู้ได้อย่างมีประสิทธิภาพผ่านการเรียนรู้เป็นทีมมากกว่าการเรียนรู้ตามลำพัง					
3.2 ประสิทธิภาพในการสอน	1. ถ้านักเรียนในห้องของฉันก่อกวนและส่งเสียงดัง ฉันมีวิธีการที่จะเบี่ยงเบนความสนใจของเขาหรือเธออย่างรวดเร็ว					
	2. ฉันมั่นใจว่าฉันสามารถหาวิธีการสอนที่มีประสิทธิภาพมาพัฒนานักเรียนของฉัน					
	3. ฉันเชื่อว่าฉันสามารถสอนวิชาใหม่ๆ ได้อย่างประสบความสำเร็จ					
	4. เมื่อใดที่ฉันใช้ความพยายามอย่างเต็มที่ ฉันก็จะสามารถจะเข้าถึงผู้เรียนได้ แม้จะเป็นผู้เรียนที่เข้าถึงได้ยากที่สุด					
	5. ฉันรู้ว่าฉันสามารถรักษาความสัมพันธ์ที่ดีต่อผู้ปกครองได้ แม้ในสถานการณ์ตึงเครียด					
	6. ถ้านักเรียนของฉันคนใดคนหนึ่งไม่สามารถทำการบ้านได้ ฉันสามารถที่จะประเมินได้ว่างานที่มอบหมายให้ผู้เรียนนั้นมีระดับความยากที่เหมาะสมหรือไม่					

รับรองคำแปลถูกต้อง

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ตัวแปร	ข้อรายการ	ระดับความคิดเห็น				
		5	4	3	2	1
	7. การที่นักเรียนทำคะแนนได้ดีกว่าคะแนนปกติเป็น เพราะฉันสามารถหาวิธีการสอนที่มีประสิทธิภาพมาก ขึ้น					
3.3 การคิดบวก	1. ฉันมีมุมมองในแง่ดีเกี่ยวกับอนาคตของฉัน					
	2. แม้ในช่วงเวลาที่ไม่มั่นคง ฉันก็ยังคาดหวังสิ่งที่ดีที่สุด					
	3. โดยทั่วไป ฉันคาดหวังว่าสิ่งที่ดีมักจะเกิดขึ้นกับฉัน มากกว่าสิ่งที่ไม่ดี					
	4. โดยทั่วไป ฉันคงความสัมพันธ์เชิงบวกกับเพื่อน ร่วมงาน					
	5. โดยทั่วไป ฉันสื่อสารกับเพื่อนร่วมงานได้เป็นอย่างดี					
3.4 ความผูกพันในการทำงาน อย่างสร้างสรรค์	1. ฉันวางเป้าหมายในการเรียนรู้ที่ชัดเจนให้กับตนเอง					
	2. ฉันมีความมุ่งมั่นที่จะเผชิญกับความยากลำบาก เพื่อ การเข้าถึงเป้าหมายการเรียนรู้					
	3. ฉันทำแผนการเรียนรู้อย่างละเอียดเพื่อการบรรลุ เป้าหมายในการเรียนรู้					
	4. ฉันใช้ประโยชน์จากทรัพยากรที่มีอย่างเต็มที่เพื่อ พัฒนาการสอนของฉัน					
	5. ฉันทดลองแนวคิดใหม่ๆเวลาที่ฉันปฏิบัติงานที่เป็น กิจวัตร					
	6. ฉันพยายามอย่างเต็มที่ในการขยายผลการเรียนรู้ทาง วิชาชีพของฉัน เพื่อให้เกิดกระบวนการเปลี่ยนแปลงใน โรงเรียน					
4. ความผูกพันของครูในการ เรียนรู้ทางวิชาชีพ (Teacher Engagement in Professional Learning)[iv]						
4.1 การร่วมมือกัน	1. ฉันร่วมมือกับเพื่อนร่วมงานในการวางแผนกิจกรรม ทางการศึกษา					

ตัวแปร	ข้อรายการ	ระดับความคิดเห็น				
		5	4	3	2	1
	2. ฉันร่วมมือกับเพื่อนร่วมงานในการแก้ไขเรื่องที่เกี่ยวกับนักเรียน					
	3. ฉันร่วมมือกับเพื่อนร่วมงานในการแบ่งปันประสบการณ์ในการสอน					
	4. ฉันร่วมมือกับผู้ร่วมงานในการพิจารณาแนวทางในการพัฒนาหลักสูตรและการเรียนการสอน					
	5. ฉันเข้าร่วมการประชุมกับเพื่อนร่วมงานเพื่อตัดสินวิธีการประเมินผลความสำเร็จของผู้เรียนและหลักสูตร					
	6. ฉันเข้าร่วมการประชุมกับเพื่อนร่วมงานเพื่อพิจารณาเกี่ยวกับการเรียนรู้ของผู้เรียน					
4.2 การสะท้อน	1.ฉันปรับปรุงวิธีการสอนโดยมีรากฐานจากข้อเสนอแนะของเพื่อนร่วมงาน					
	2. ฉันเก็บรักษารายงานฉบับก่อนหน้าที่เกี่ยวกับการเรียนรู้และการสอนเพื่อจุดประสงค์ในการเรียนรู้					
	3. ฉันสังเกตการณ์การเรียนการสอนของเพื่อนร่วมงานและนำมาทบทวนและปรับปรุงการเรียนสอนของตนเอง					
	4. ฉันบันทึกปัญหาและอุปสรรคด้านการเรียนการสอนของตนเองเพื่อจุดประสงค์ในการเรียนรู้					
	5. ฉันปรับปรุงแฟ้มการเรียนการสอนของฉันตามสถานการณ์ที่เปลี่ยนแปลงไปอยู่เสมอเพื่อพัฒนาการสอนของฉัน					
	6. ฉันเก็บบันทึกประสบการณ์การเรียนรู้ทางวิชาชีพของฉันอยู่เสมอ					
	7. ฉันปรับปรุงวิธีการสอนของฉัน ให้มีความสอดคล้องต่อการสนองตอบของผู้เรียน					
	8. ฉันคิดทบทวนวิธีการสอนของตนเอง					
	9. ฉันวิเคราะห์สาเหตุของความล้มเหลวหรือความสำเร็จในการสอนของฉัน					
	10. ฉันเก็บข้อมูลใหม่ๆเพื่อนำมาวิเคราะห์และตรวจสอบข้อเสนอแนะของนักเรียน					

ตัวแปร	ข้อรายการ	ระดับความคิดเห็น				
		5	4	3	2	1
4.3 การทำการทดลอง	1. ฉันทดลองใช้แนวคิดใหม่ๆ ในการสอน					
	2. ฉันได้ลองใช้วิธีใหม่ๆ ในการสอน					
	3. ฉันประยุกต์ใช้วิธีการใหม่ๆ เพื่อแก้ปัญหาในการสอนของฉัน					
	4. ฉันมีการทดลองใช้สื่อการสอนใหม่ๆ ในห้องเรียนเพื่อกระตุ้นความสนใจของผู้เรียน					
	5. ฉันทดลองใช้เทคโนโลยีการเรียนการสอนแบบใหม่ๆ ในบทเรียนของฉัน					
4.4 การเข้าสู่ฐานความรู้	1.ฉันรวบรวมข้อเสนอแนะในการเรียนรู้จากผู้เรียน					
	2. ฉันค้นหาข้อมูลจากระบบสารสนเทศเพื่อหาวิธีที่จะช่วยพัฒนาการสอนของฉัน					
	3. ฉันสังเกตการณ์การสอนของครูท่านอื่นเพื่อประโยชน์ในการเรียนรู้ของฉัน					
	4. ฉันอ่านบทความเกี่ยวกับการศึกษาและการเรียนการสอนเพื่อได้รับแนวความคิดใหม่					
	5. ฉันขอความช่วยเหลือจากผู้ร่วมงาน					
	6. ฉันรักษาความสัมพันธ์ในการเรียนรู้ทางวิชาชีพกับโรงเรียนอื่นๆ					

ขอขอบพระคุณทุกท่านที่ให้ความร่วมมือในการตอบแบบสอบถาม

APPENDIX C

Interview Survey

แบบคำถามการประชุมกลุ่มครู

สวัสดีคุณครูทุกท่าน ดิฉันนางภัทน์นรี ปิยะมาน นิสิตปริญญาเอก คณะครุศาสตร์ สาขาวิชาบริหารการศึกษา จุฬาลงกรณ์มหาวิทยาลัย อยู่ระหว่างการดำเนินงานวิจัยวิทยานิพนธ์เรื่อง "ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย" อยากขอความร่วมมือคุณครูทุกท่านในการให้ข้อมูลที่เป็นประโยชน์ เพื่อความเข้าใจเกี่ยวกับการเรียนรู้ทางวิชาชีพของครู ว่าท่านมีการเรียนรู้ทักษะใหม่ๆและพัฒนาความรู้ของท่านจากการทำงานอย่างไรบ้าง โดยคำถามที่จะกล่าวถึงจะมีเนื้อหาเกี่ยวกับการเรียนรู้และประสบการณ์ของครูในโรงเรียนนี้ คำตอบจึงไม่มีถูกหรือผิด เป็นเพียงความจริงและความคิดเห็นของท่านเท่านั้น โดยข้อมูลที่ได้มาจากการประชุมกลุ่มนี้จะถูกเก็บเป็นความลับ จะไม่มีการรายงานไปยังท่านผู้อำนวยการ รองผู้อำนวยการ หัวหน้าฝ่าย หรือผู้อื่น และจะไม่มีการระบุชื่อ ไม่ว่าจะเป็นชื่อของท่านหรือชื่อโรงเรียนในการเผยแพร่งานวิจัยใดๆทั้งสิ้น จึงขอให้ความไว้วางใจและกรุณาให้ความร่วมมือในการตอบคำถามตามความเป็นจริง

1. กรุณาเล่าประสบการณ์ของท่านเกี่ยวกับกิจกรรมการเรียนรู้ทางวิชาชีพที่ผ่านมาใน 2 ปีนี้ เช่น การอบรม การสังเกตการณ์การเรียนการสอนของเพื่อนร่วมงาน การเยี่ยมชมโรงเรียนอื่นๆ การศึกษาดูงาน หรือการเรียนเพิ่มเติมเพื่อเพิ่มพูนความรู้ด้านรายวิชาที่เกี่ยวข้อง ด้านทักษะการเรียนการสอนของท่าน หรือด้านอื่นๆที่เกี่ยวข้องกับอาชีพครู หรือหากท่านมีตัวอย่าง/ประสบการณ์อื่นๆที่เกี่ยวข้องก็ขอความกรุณาเล่าสู่กันฟังด้วย

2. จาก 1 ถึง 5 ท่านคิดว่าการเรียนรู้และการพัฒนาครูมีความสำคัญมากน้อยเพียงใดในสายตาคุณครูในโรงเรียนนี้ กรุณายกมือพร้อมโชว์นิ้วตามความเห็นของท่าน โดยให้ 1 หมายถึง สำคัญน้อยที่สุด และ 5 หมายถึง สำคัญมากที่สุด

3. ในโรงเรียนนี้ใครเป็นคนพิจารณาเกี่ยวกับการเรียนรู้ของครู ว่าควรเรียนรู้เรื่องใด ควรพัฒนาด้านไหน ควรเข้าร่วมการฝึกอบรมหรือไม่ คุณครูเป็นผู้เลือกและตัดสินใจด้วยตนเอง หรือมีคำสั่งให้ปฏิบัติตาม กรุณายกตัวอย่างและเล่าถึงประสบการณ์นั้นๆด้วย

4. จากการเป็นครูที่นี่ ท่านสามารถกล่าวได้หรือไม่ว่าคุณครูโรงเรียนนี้มีการเรียนรู้เป็นทีมเพื่อนำไปสู่การทดลองแนวคิดหรือวิธีใหม่ๆในการสอน เช่นการทดลองใช้เทคโนโลยีการสอนแบบใหม่ๆในห้องเรียน การประเมินผู้เรียนในลักษณะอื่นๆ หรือการประยุกต์วิธีสอนที่แปลกใหม่

    กรุณายกตัวอย่างและอธิบายรายละเอียด (ท่านได้เรียนรู้วิธีใหม่นี้ได้อย่างไร จากไหน และเมื่อใด)

5. โรงเรียนนี้มีแผนสำหรับการเรียนรู้และการพัฒนาครูหรือไม่

    a. ใครเป็นผู้พัฒนาแผน

    b. คุณครูมีส่วนร่วมในการพัฒนาแผนการเรียนรู้นี้บ้างหรือไม่ อย่างไร

    c. แผนดังกล่าวถูกนำไปสู่การปฏิบัติจริงหรือไม่ มากน้อยเพียงใด

6. กรุณายกตัวอย่างเกี่ยวกับการเรียนรู้ของครูที่นำไปสู่การเปลี่ยนแปลงด้านการเรียนรู้ทางวิชาชีพและการสอนของครูในโรงเรียนนี้

7. ในโรงเรียนนี้ ใครมีส่วนในการเป็นผู้นำในการเรียนรู้ของท่านมากที่สุด (ท่านผู้อำนวยการ รองผู้อำนวยการ หรือคุณครูท่านอื่น) โปรดระบุและชี้แจงความคิดเห็นของท่าน

8. เมื่อกล่าวถึงผู้อำนวยการโรงเรียน ท่านมีความคิดเห็นต่อผู้อำนวยการโรงเรียนนี้อย่างไรบ้าง ในแง่ของความเป็นผู้นำ

    a. ผู้อำนวยการโรงเรียนนี้มีการปฏิบัติงานที่แสดงถึงการคำนึงถึงผู้เรียนเป็นหลักอย่างไรบ้าง

b. ผู้อำนวยการโรงเรียนนี้มีการปฏิบัติงานที่แสดงถึงการคำนึงถึงครูเป็นหลักอย่างไรบ้าง

9. ผู้อำนวยการของท่านมีความตื่นตัวในการเรียนรู้หรือไม่

    a. กรุณายกตัวอย่างที่ผู้อำนวยการของท่านได้เรียนรู้สิ่งใหม่ๆที่เป็นประโยชน์และได้นำมาแลกเปลี่ยนกับคุณครูในโรงเรียน

10. ผู้อำนวยการของท่านได้มีส่วนร่วมในการจัดสรรและช่วยเหลือให้คุณครูได้มีโอกาสในการเรียนรู้หรือไม่

    a. ถ้าใช่ ท่านได้ให้ความช่วยเหลือหรือสนับสนุนท่านด้านไหน อย่างไรบ้าง กรุณายกตัวอย่างและอธิบายรายละเอียด

    b. เมื่อมีการจัดอบรมหรือกิจกรรมที่เกี่ยวกับการเรียนรู้ทางวิชาชีพครู ท่านผู้อำนวยการโรงเรียนของท่านได้เข้าร่วมและมีส่วนร่วมในการเรียนรู้สิ่งเหล่านี้หรือไม่ อย่างไร

    c. เมื่อท่านได้เข้าร่วมการอบรมหรือมีส่วนร่วมในกิจกรรมการเรียนรู้ทางวิชาชีพ ท่านผู้อำนวยการและรองผู้อำนวยการโรงเรียนของท่านได้ทำอย่างไรบ้างในการช่วยเหลือให้นำความรู้นั้นมาปฏิบัติในห้องเรียน กรุณายกตัวอย่างและอธิบายรายละเอียด

    d. หากท่านผู้อำนวยการไม่ค่อยได้มีส่วนร่วมในกิจกรรมต่างๆเหล่านี้ ท่านคิดว่าผู้อำนวยการโรงเรียนของท่านมีทัศนคติเกี่ยวกับการเรียนรู้ทางวิชาชีพครูอย่างไรบ้าง

11. ท่านมีความคิดเห็นหรือประสบการณ์ในประเด็นอื่นๆที่เกี่ยวข้องกับการเรียนรู้ทางวิชาชีพของครูในโรงเรียนนี้อีกหรือไม่

แบบสัมภาษณ์ผู้อำนวยการโรงเรียน

เรียนท่านผู้อำนวยการที่เคารพ ดิฉันนางภัทน์นรี ปิยะมาน นิสิตปริญญาเอก คณะครุศาสตร์ สาขาวิชาบริหารการศึกษา จุฬาลงกรณ์มหาวิทยาลัย อยู่ระหว่างการดำเนินงานวิจัยวิทยานิพนธ์เรื่อง "ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย" อยากขอความร่วมมือท่านในการให้ข้อมูลที่เป็นประโยชน์ เพื่อความเข้าใจเกี่ยวกับการเรียนรู้ทางวิชาชีพของครูในโรงเรียนว่ามีการเรียนรู้ทักษะใหม่ๆและพัฒนาความรู้จากการทำงานอย่างไรบ้าง โดยคำถามที่จะกล่าวถึงจะมีเนื้อหาเกี่ยวกับกระบวนการเรียนรู้ของครูในโรงเรียน รวมทั้งประสบการณ์ส่วนตัวของท่านจากการปฏิบัติงานในโรงเรียนนี้ จึงไม่มีคำตอบที่ถูกหรือผิด โดยข้อมูลที่ได้มาจากการสัมภาษณ์นี้จะถูกเก็บเป็นความลับ จะไม่มีการเล่าต่อหรือแชร์ไปยังผู้อื่น และจะไม่มีการระบุชื่อ ไม่ว่าจะเป็นชื่อของท่านหรือชื่อโรงเรียนในการเผยแพร่งานวิจัยใดๆทั้งสิ้น จึงขอให้ความไว้วางใจและกรุณาให้ความร่วมมือในการตอบคำถามตามความเป็นจริง

1. กรุณาเล่าถึงประสบการณ์ของท่านเกี่ยวกับกิจกรรมการเรียนรู้ทางวิชาชีพที่ผ่านมาใน 2 ปีนี้ เช่นการอบรม การสังเกตการณ์การเรียนการสอน การเยี่ยมชมโรงเรียนอื่นๆ การศึกษาดูงาน หรือการเรียนเพิ่มเติมเพื่อเพิ่มพูนความรู้ด้านการศึกษา ด้านทักษะการเรียนการสอนของท่าน หรือด้านอื่นๆที่เกี่ยวข้องกับอาชีพครู หรือหากท่านมีตัวอย่าง/ประสบการณ์อื่นๆที่เกี่ยวข้องก็ขอความกรุณาเล่าสู่กันฟังด้วย

2. จาก 1 ถึง 5 ท่านคิดว่าการเรียนรู้และการพัฒนาครูมีความสำคัญมากน้อยเพียงใดในสายตาคุณครูในโรงเรียนนี้ โดยให้ 1 หมายถึง สำคัญน้อยที่สุด และ 5 หมายถึง สำคัญมากที่สุด กรุณาชี้แจงและอธิบายความเห็นของท่าน

3. กรุณายกตัวอย่างเกี่ยวกับการเรียนรู้ของครูที่นำไปสู่การเปลี่ยนแปลงด้านการเรียนรู้ทางวิชาชีพและการสอนของครูในโรงเรียนนี้

4. ใน 1 ปีการศึกษา ใครเป็นผู้ตัดสินใจว่าครูในโรงเรียนของท่านควรหาวิธีการเรียนรู้เพื่อเพิ่มพูนทักษะได้อย่างไร ควรเข้ารับการอบรมใด เมื่อไหร่ กระทรวงศึกษาธิการ/ตัวท่านเอง/หรือคุณครูเป็นผู้ตัดสินใจ

5. ท่านจะอธิบายทัศนคติที่ครูในโรงเรียนนี้มีต่อการเรียนรู้สิ่งใหม่ๆได้อย่างไรบ้าง ตามความเห็นของท่านมีครูในโรงเรียนนี้กี่เปอร์เซ็นต์ที่เรียกได้ว่าเป็นครูที่มีความตื่นตัวในการเรียนรู้

6. ครูในโรงเรียนนี้โดยมากเรียนรู้ได้ด้วยตนเองหรือเป็นการเรียนรู้แบบใช้ความพยายามทั่วทั้งโรงเรียน กรุณายกตัวอย่างและอธิบายรายละเอียด

7. ท่านได้มีส่วนร่วมในการสร้างนวัตกรรมใหม่ๆเพื่อส่งเสริมการเรียนรู้ของครูในโรงเรียนนี้หรือไม่ กรุณาอธิบายรายละเอียดและเล่าถึงประสบการณ์การเรียนรู้ของครูนั้น

8. ท่านมีความคิดเห็นต่อตัวท่านเองอย่างไรบ้างในแง่ของความเป็นผู้นำ

    a. ท่านมีการปฏิบัติงานที่แสดงถึงการคำนึงถึงผู้เรียนเป็นหลักอย่างไรบ้าง

    b. ท่านมีการปฏิบัติงานที่แสดงถึงการคำนึงถึงครูเป็นหลักอย่างไรบ้าง

9. ใครมีส่วนในการเป็นผู้นำในการเรียนรู้ของครูภายในโรงเรียนนี้มากที่สุด (ผู้อำนวยการ รองผู้อำนวยการ หรือคุณครู) โปรดระบุและชี้แจงความคิดเห็นของท่าน และกรุณาเล่าถึงบทบาทของท่านในการสนับสนุนการพัฒนาบุคลากรในโรงเรียน

10. ใน 2 ปีที่ผ่านมานี้ ท่านได้รับการเรียนรู้อะไรใหม่ๆบ้างที่ได้นำมาแลกเปลี่ยนประสบการณ์ความรู้กับคุณครูท่านอื่น

11. ท่านคิดว่าท่านควรมีบทบาทอย่างไรบ้างในการส่งเสริมและสนับสนุนการเรียนรู้ทางวิชาชีพของครู

    a. กรุณาเล่าถึงประสบการณ์ที่ผ่านมาที่ท่านได้สนับสนุนการเรียนรู้ของครู

b. นอกเหนือจากงานด้านการบริหารแล้ว ท่านได้เข้าร่วมการอบรมหรือมีส่วนร่วมในกิจกรรมที่เกี่ยวกับการเรียนรู้
ทางวิชาชีพครูบ้างหรือไม่

c. กรุณายกตัวอย่างการอบรมหรือกิจกรรมการเรียนรู้นั้นๆ

12. ท่านมีความคิดเห็นหรือประสบการณ์ในประเด็นอื่นๆที่เกี่ยวข้องกับการเรียนรู้ทางวิชาชีพของครูในโรงเรียนนี้ หรือเกี่ยวกับ
บทบาทความเป็นผู้นำทางการเรียนรู้ของท่านอีกหรือไม่

APPENDIX D

List of Academic Committee

List of Academic Committee

1. Associate Professor Prapapat Niyom, Ph.D.	• Founder of Roong-aroon School • President of Arsomsilp Institute of the Arts
2. Chalermrat Nakvichien, Ph.D.	• Founder and Director of Net Design Institute • Supervisor and guest speaker at several universities in Thailand
3. Anutsara Suwanwong, Ph.D.	• Lecturer at Faculty of Education, Panyapiwat Institute of Management
4. Somkiet Intawong, Ph.D.	• Lecturer at Center of Academic Information
5. Ananthanin Nammuang, Ph.D.	• Researcher at National Institute of Development Administration (NIDA)

APPENDIX E

Results of Index of Item-Objective Congruence: IOC

Results of Index of Item – Objective Congruence: IOC

ตอนที่ 1 ข้อมูลส่วนบุคคลของผู้ตอบแบบสอบถาม

ข้อที่	ข้อรายการ	ผู้เชี่ยวชาญคนที่					IOC
		1	**2**	**3**	**4**	**5**	
1.	เพศ ☐ ชาย ☐ หญิง	+1	+1	+1	+1	+1	1.00
2.	อายุ ☐ น้อยกว่า 30 ปี ☐ 31-39 ปี ☐ 40-49 ปี ☐ 50 ปีขึ้นไป	+1	+1	+1	+1	+1	1.00
3.	ระดับการศึกษา ☐ ต่ำกว่าปริญญาตรี ☐ ปริญญาตรี ☐ ปริญญาโท ☐ ปริญญาเอก	+1	+1	+1	+1	+1	1.00
4.	ตำแหน่งปัจจุบัน ☐ ผู้อำนวยการ/ผู้บริหารโรงเรียน ☐ ครูผู้สอน	+1	+1	+1	+1	+1	1.00
5.	ประสบการณ์การทำงาน ☐ น้อยกว่า 2 ปี ☐ 2 - 5 ปี ☐ 5 – 10 ปี ☐ มากกว่า 10 ปี	+1	0	+1	+1	+1	0.80

ตอนที่ 2 ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศ ไทย

ตัวแปร	ข้อรายการ	ผู้เชี่ยวชาญคนที่					IOC
		1	2	3	4	5	
1. ภาวะผู้นำทางการเรียนรู้ (Learning-Centered Leadership)[i]	*ผู้อำนวยการโรงเรียนของท่าน...*						
1.1 สร้างวิสัยทัศน์ในการเรียนรู้	1. สร้างวิสัยทัศน์ในการเรียนรู้ของครูในโรงเรียน	+1	+1	+1	+1	+1	1.00
	2. สื่อสารวิสัยทัศน์ในการเรียนรู้กับครู	+1	+1	+1	+1	+1	1.00
	3. แสดงออกถึงความคาดหวังที่มีต่อครู	+1	+1	+1	+1	+1	1.00
	4. ให้ความช่วยเหลือที่เป็นประโยชน์ในการทำงานของครู สู่การบรรลุวิสัยทัศน์ในการเรียนรู้	+1	+1	+1	+1	+1	1.00
	5. สนับสนุนครูในการพัฒนาเป้าหมายทางวิชาชีพส่วนบุคคลที่ไปในทิศทางเดียวกับเป้าหมายของโรงเรียน	+1	+1	+1	+1	+1	1.00
	6. ช่วยให้ครูเกิดความเข้าใจถึงเหตุผลของการนำวิสัยทัศน์มาปฏิบัติ	+1	+1	+1	+1	+1	1.00
1.2 การสนับสนุนการเรียนรู้	1. ให้ทรัพยากรต่างๆ (เวลา เงิน และ โอกาสในการฝึกอบรม) เพื่อสนับสนุนการเรียนรู้ทางวิชาชีพของครู	+1	0	+1	+1	+1	0.80
	2. ให้โอกาส (ผ่านการสาธิตและการฝึกอบรม) เพื่อให้พนักงานได้เรียนรู้จากกันและกัน	+1	0	+1	+1	+1	0.80
	3. แสดงความนับถือแก่ครูที่ทำตามเป้าหมายในการเรียนรู้ทางวิชาชีพ	+1	+1	+1	+1	+1	1.00
	4. ให้รางวัลแด่ครูที่มีส่วนร่วมในการเรียนรู้ทางวิชาชีพอย่างต่อเนื่อง	+1	+1	+1	+1	+1	1.00

ตัวแปร	ข้อรายการ	ผู้เชี่ยวชาญคนที่					IOC
		1	2	3	4	5	
	5. จัดสรรทรัพยากร โดยให้ความสำคัญต่อการเรียนรู้ทางวิชาชีพของครูเป็นอันดับแรก	+1	+1	0	+1	+1	0.80
	6. กระตุ้นให้เกิดการเรียนรู้ทางวิชาชีพของครูอย่างต่อเนื่อง เพื่อการนำความคิดและกระบวนการทำงานแบบใหม่มาใช้	+1	+1	+1	+1	+1	1.00
	7. สนับสนุนให้โรงเรียนมีบรรยากาศในการทำงานที่พนักงานสนับสนุนซึ่งกันและกันและสามารถพูดคุยกันอย่างเปิดกว้าง	+1	0	+1	+1	+1	0.80
	8. ทำให้ครูรู้สึกถึงการชื่นชมในการมีส่วนร่วมในการเรียนรู้ทางวิชาชีพเพื่อพัฒนาโรงเรียน	+1	+1	+1	+1	-1	0.60
1.3 การจัดการแผนการเรียนรู้	1. มีส่วนร่วมและชี้นำครูในการเรียนรู้ทางวิชาชีพอย่างเป็นทางการและ ไม่เป็นทางการ	+1	+1	+1	+1	+1	1.00
	2. ออกแบบระบบการประเมินที่มีคุณภาพในการศึกษาผลกระทบของการเรียนรู้ทางวิชาชีพครู	+1	+1	+1	+1	+1	1.00
	3. ออกแบบรูปแบบการเรียนรู้ที่หลากหลายเพื่อกระตุ้นความสนใจของครู	+1	+1	+1	+1	+1	1.00
	4. ส่งเสริมด้านเนื้อหาการเรียนรู้ทางวิชาชีพเพื่อตอบสนองความต้องการของครู	+1	+1	+1	+1	+1	1.00
	5. เน้นย้ำวัตถุประสงค์ของการเรียนรู้ทางวิชาชีพเพื่อการพัฒนาการสอนของครู	+1	+1	+1	+1	+1	1.00
	6. มีการเยี่ยมชมห้องเรียนอย่างสม่ำเสมอเพื่อรับรองระบบการติดตามตรวจสอบด้านการเรียนรู้ทางวิชาชีพครูที่ดี	+1	+1	+1	+1	+1	1.00
1.4 การเป็นแบบอย่าง	1. แสดงถึงพลังและความกระตือรือล้นในการเรียนรู้	+1	+1	+1	+1	+1	1.00

ตัวแปร	ข้อรายการ	ผู้เชี่ยวชาญคนที่					IOC
		1	2	3	4	5	
	2. แสดงออกถึงความตั้งใจที่จะแบ่งปันความสำเร็จในการเรียนรู้กับคุณครูท่านอื่น	+1	+1	+1	+1	+1	1.00
	3. แสดงการปฏิบัติด้านการเรียนรู้ทางวิชาชีพที่โดดเด่น	+1	+1	+1	+1	+1	1.00
	4. มุ่งเน้นการสอนตามแนวคิดแบบใหม่ๆ	+1	+1	+1	+1	+1	1.00
	5. มีความคิดเห็นเกี่ยวกับการสอนและการเรียนรู้ที่เป็นเอกลักษณ์เฉพาะ	+1	+1	+1	+1	+1	1.00
2. **ความเชื่อมั่นของครู** (Teacher Trust)[ii]							
2.1 ความเชื่อมั่นเชิงตรรกะ	1. ฉันสามารถเชื่อได้ว่าเพื่อนร่วมงานของฉันสื่อสารกับฉันอย่างตรงไปตรงมา	+1	+1	+1	+1	+1	1.00
	2. ฉันสามารถวางใจได้ว่าเพื่อนร่วมงานของฉันมีความเต็มใจในการแบ่งปันสิ่งที่เป็นความรู้ที่เป็นประโยชน์แก่ฉัน	+1	+1	+1	+1	+1	1.00
	3. ครูในโรงเรียนนี้มีความสามารถในการทำงานของตนได้เป็นอย่างดี	+1	+1	+1	+1	+1	1.00
	4. จากประสบการณ์การทำงานกับเพื่อนร่วมงาน ทำให้ฉันไม่มีเหตุผลที่จะต้องสงสัยในความสามารถและการเตรียมพร้อมในการทำงานของเขาหรือเธอเลย	+1	+1	+1	+1	+1	1.00
	5. การสื่อสารกับเพื่อนร่วมงานจะช่วยพัฒนาการสอนของฉัน	+1	+1	+1	+1	+1	1.00
2.2 ความเชื่อมั่นเชิงสัมพันธภาพ	1. ฉันสามารถพูดคุยได้อย่างเปิดเผยกับเขาหรือเธอ เกี่ยวกับความลำบากในการทำงานและรู้ว่าเขาหรือเธอนั้นเต็มใจที่จะรับฟังฉัน	+1	+1	+1	0	+1	0.80
	2. เราทั้งคู่จะรู้สึกถึงการสูญเสียถ้าหากว่าคนใดคนหนึ่งต้องถูกย้ายไปและเราจะไม่สามารถทำงานร่วมกันอีก	+1	+1	+1	0	0	0.60

ตัวแปร	ข้อรายการ	ผู้เชี่ยวชาญคนที่					IOC
		1	2	3	4	5	
	3. เราทั้งคู่สามารถแบ่งปันความคิด ความรู้สึก และความหวังให้แก่กันและกันฟังได้อย่างเปิดเผย	+1	+1	+1	+1	+1	1.00
	4. ถ้าฉันได้พูดคุยถึงปัญหาของฉันกับบุคคลผู้นี้ ฉันรู้ว่าเขาหรือเธอจะตอบสนองอย่างสร้างสรรค์และห่วงใย	+1	+1	+1	0	+1	0.80
	5. ฉันสามารถเปิดเผยความสับสนในการสอนกับเพื่อนร่วมงานได้	+1	+1	+1	+1	+1	1.00
	6. ฉันสามารถพูดได้ว่าเราทั้งคู่ต่างมีความรู้สึกที่ดีต่อกันอย่างมากในสัมพันธ์การทำงานของพวกเรา	+1	+1	+1	+1	+1	1.00
2.3 ความเชื่อมั่นเชิงศรัทธา	1. ฉันเชื่อว่าเพื่อนร่วมงานของฉันมีความซื่อสัตย์สูง	+1	+1	+1	+1	+1	1.00
	2. ฉันเชื่อว่าเพื่อนร่วมงานของฉันมีความผูกพันในการทำงานสูง	+1	+1	+1	+1	+1	1.00
	3. โดยทั่วไป ฉันสามารถหาข้อตกลงร่วมกับเพื่อนร่วมงานเกี่ยวกับความคาดหวังที่มีต่อความสำเร็จของผู้เรียนได้	+1	+1	+1	+1	+1	1.00
	4. โดยทั่วไป ฉันเชื่อว่าเจ้านายของฉันมีแรงจูงใจและมีความตั้งใจที่ดี	+1	+1	+1	+1	+1	1.00
	5. ผู้อำนวยการ โรงเรียนนี้ปฏิบัติงานโดยคำนึงถึงผลประโยชน์ของนักเรียนเป็นที่ตั้ง	+1	+1	+1	+1	+1	1.00
	6. โดยทั่วไป ฉันสามารถรับรู้ถึงทัศนคติในการทำงานและแนวคิดด้านการสอนของเพื่อนร่วมงานได้	+1	+1	+1	+1	+1	1.00
<u>**3. พลังในการเรียนรู้ของครู**</u> (Teacher Agency)[iii]							
3.1 ประสิทธิภาพในการเรียนรู้	1. ถ้าฉันพยายามมากพอ ฉันก็จะสามารถพัฒนาการสอนให้ดีขึ้นได้	+1	+1	+1	+1	+1	1.00

ตัวแปร	ข้อรายการ	ผู้เชี่ยวชาญคนที่					IOC
		1	2	3	4	5	
	2. แม้ในช่วงเวลาที่ฉันอยู่ในภาวะอารมณ์ที่ไม่ปกติ ฉันก็ยังสามารถทำการเรียนรู้ทางวิชาชีพได้อย่างเต็มที่	+1	+1	+1	+1	+1	1.00
	3. ในช่วงเวลาที่วุ่นวาย ฉันก็ยังสามารถพัฒนาการเรียนรู้ในการทำงานได้	+1	+1	+1	+1	+1	1.00
	4. ฉันเชื่อว่าฉันสามารถค้นหาแนวทางที่สร้างสรรค์เมื่อต้องเผชิญกับความจำกัดของระบบ (เช่น การขาดแคลนเงินทุน และปัญหาด้านการบริหารอื่นๆ) ได้ โดยยังสามารถจะทำการเรียนรู้ทางวิชาชีพได้อย่างเต็มที่	+1	+1	+1	+1	+1	1.00
	5. ฉันรู้ว่าฉันมีความสามารถในการดำเนินโครงการที่เกี่ยวกับการเรียนรู้ทางวิชาชีพได้ แม้ในกรณีที่ถูกต่อต้านโดยเพื่อนร่วมงานที่ขาดความศรัทธา	+1	+1	+1	+1	+1	1.00
	6. ฉันเชื่อว่าฉันสามารถเรียนรู้ได้อย่างมีประสิทธิภาพผ่านการเรียนรู้เป็นทีมมากกว่าที่จะเรียนรู้ตามลำพัง	+1	+1	+1	+1	+1	1.00
3.2 ประสิทธิภาพในการสอน	1. ถ้านักเรียนในห้องของฉันก่อกวนและส่งเสียงดัง ฉันมีวิธีการที่จะเบี่ยงเบนความสนใจของเขา หรือเธออย่างรวดเร็ว	+1	+1	+1	+1	+1	1.00
	2. ฉันมั่นใจว่าฉันสามารถหาวิธีการสอนที่มีประสิทธิภาพมาพัฒนานักเรียนของฉัน	+1	+1	0	+1	+1	0.80
	3. ฉันเชื่อว่าฉันสามารถสอนวิชาใหม่ๆได้อย่างประสบความสำเร็จ	+1	+1	0	+1	+1	0.80
	4. เมื่อใดที่ฉันใช้ความพยายามอย่างเต็มที่ ฉันก็จะสามารถจะเข้าถึงผู้เรียนได้ แม้จะเป็นผู้เรียนที่เข้าถึงได้ยากที่สุด	+1	+1	+1	+1	+1	1.00

ตัวแปร	ข้อรายการ	ผู้เชี่ยวชาญคนที่					IOC
		1	2	3	4	5	
	5. ฉันรู้ว่าฉันสามารถรักษาความสัมพันธ์ที่ดีต่อผู้ปกครองได้ แม้ในสถานการณ์ตึงเครียด	+1	+1	0	+1	+1	0.80
	6. ถ้านักเรียนของฉันคนใดคนหนึ่งไม่สามารถทำการบ้านได้ ฉันสามารถที่จะประเมินได้ว่างานที่มอบหมายให้ผู้เรียนนั้นมีระดับความยากที่เหมาะสมหรือไม่	+1	+1	+1	+1	0	0.80
	7. การที่นักเรียนทำคะแนนได้ดีกว่าคะแนนปกติเป็นเพราะฉันสามารถหาวิธีการสอนที่มีประสิทธิภาพมากขึ้น	+1	+1	+1	-1	+1	0.60
3.3 การคิดบวก	1. ฉันมีมุมมองในแง่ดีเกี่ยวกับอนาคตของฉัน	+1	+1	+1	+1	+1	1.00
	2. แม้ในช่วงเวลาที่ไม่มั่นคง ฉันก็ยังคาดหวังสิ่งที่ดีที่สุด	+1	+1	+1	+1	+1	1.00
	3. โดยทั่วไป ฉันคาดหวังว่าสิ่งที่ดีมักจะเกิดขึ้นกับฉันมากกว่าสิ่งที่ไม่ดี	+1	+1	+1	0	+1	0.80
	4. โดยทั่วไป ฉันคงความสัมพันธ์เชิงบวกกับเพื่อนร่วมงาน	+1	+1	+1	+1	+1	1.00
	5. โดยทั่วไป ฉันสื่อสารกับเพื่อนร่วมงานได้เป็นอย่างดี	+1	+1	+1	+1	+1	1.00
3.4 ความผูกพันในการทำงานอย่างสร้างสรรค์	1. ฉันวางเป้าหมายในการเรียนรู้ที่ชัดเจนให้กับตนเอง	+1	+1	+1	+1	+1	1.00
	2. ฉันมีความมุ่งมั่นที่จะเผชิญกับความยากลำบาก เพื่อการเข้าถึงเป้าหมายการเรียนรู้	+1	+1	+1	+1	+1	1.00
	3. ฉันทำแผนการเรียนรู้อย่างละเอียดเพื่อที่จะบรรลุเป้าหมายในการเรียนรู้	+1	+1	+1	+1	+1	1.00
	4. ฉันใช้ประโยชน์จากทรัพยากรที่มีอย่างเต็มที่เพื่อพัฒนาการสอนของฉัน	+1	+1	+1	+1	+1	1.00

ตัวแปร	ข้อรายการ	ผู้เชี่ยวชาญคนที่					IOC
		1	2	3	4	5	
	5. ฉันทดลองแนวคิดใหม่ๆเวลาที่ฉันปฏิบัติงานที่เป็นกิจวัตร	+1	+1	+1	+1	+1	1.00
	6. ฉันพยายามอย่างเต็มที่ในการขยายผลการเรียนรู้ทางวิชาชีพของฉัน เพื่อให้เกิดกระบวนการเปลี่ยนแปลงในโรงเรียน	+1	+1	+1	+1	+1	1.00
4. ความผูกพันของครูในการเรียนรู้ทางวิชาชีพ (Teacher Engagement in Professional Learning)[iv]							
4.1 การร่วมมือกัน	1. ฉันร่วมมือกับเพื่อนร่วมงานในการวางแผนกิจกรรมทางการศึกษา	+1	+1	+1	+1	+1	1.00
	2. ฉันร่วมมือกับเพื่อนร่วมงานในการแก้ไขเรื่องที่เกี่ยวกับนักเรียน	+1	+1	+1	+1	+1	1.00
	3. ฉันร่วมมือกับเพื่อนร่วมงานในการแบ่งปันประสบการณ์ในการสอน	+1	+1	+1	+1	+1	1.00
	4. ฉันร่วมมือกับผู้ร่วมงานในการพิจารณาแนวทางในการพัฒนาหลักสูตรและการเรียนการสอน	+1	+1	+1	+1	+1	1.00
	5. ฉันเข้าร่วมการประชุมกับเพื่อนร่วมงานเพื่อตัดสินวิธีการประเมินผลความสำเร็จของผู้เรียนและหลักสูตร	+1	+1	+1	+1	+1	1.00
	6. ฉันเข้าร่วมการประชุมกับเพื่อนร่วมงานเพื่อพิจารณาเกี่ยวกับการเรียนรู้ของผู้เรียน	+1	+1	+1	+1	+1	1.00
4.2 การสะท้อน	1.ฉันปรับปรุงวิธีการสอนโดยมีรากฐานจากข้อเสนอแนะของเพื่อนร่วมงาน	+1	+1	+1	+1	+1	1.00

ตัวแปร	ข้อรายการ	ผู้เชี่ยวชาญคนที่					IOC
		1	2	3	4	5	
	2. ฉันเก็บรักษารายงานฉบับก่อนหน้าที่เกี่ยวกับการเรียนรู้และการสอนเพื่อจุดประสงค์ในการเรียนรู้	+1	+1	+1	+1	+1	1.00
	3. ฉันนำการเรียนการสอนของเพื่อนร่วมงานที่ได้จากการสังเกตการณ์ มาทบทวนและปรับปรุงการเรียนสอนของตนเอง	+1	+1	+1	+1	+1	1.00
	4. ฉันทำการบันทึกปัญหาและอุปสรรคด้านการเรียนการสอนของตนเองเพื่อจุดประสงค์ในการเรียนรู้	+1	+1	+1	+1	+1	1.00
	5. ฉันปรับปรุงแฟ้มการเรียนการสอนของฉันตามสถานการณ์ที่เปลี่ยนแปลงไปอยู่เสมอเพื่อพัฒนาการสอนของฉัน	+1	+1	+1	+1	+1	1.00
	6. ฉันทำการเก็บบันทึกประสบการณ์การเรียนรู้ทางวิชาชีพของฉันอยู่เสมอ	+1	+1	+1	+1	+1	1.00
	7. ฉันปรับปรุงวิธีการสอนของฉัน ให้มีความสอดคล้องต่อการสนองตอบของผู้เรียน	+1	+1	+1	+1	+1	1.00
	8. ฉันคิดทบทวนวิธีการสอนของตนเอง	+1	+1	+1	+1	+1	1.00
	9. ฉันทำการวิเคราะห์สาเหตุของความล้มเหลวหรือความสำเร็จในการสอนของฉัน	+1	+1	+1	+1	+1	1.00
	10. ฉันเก็บข้อมูลใหม่ๆเพื่อนำมาวิเคราะห์และตรวจสอบข้อเสนอแนะของนักเรียน	+1	+1	+1	+1	+1	1.00
4.3 การทดลอง	1. ฉันทดลองวิธีการสอนแนวใหม่	+1	+1	+1	+1	0	0.80
	2. ฉันทดลองใช้วิธีใหม่ๆในการสอน	+1	+1	0	+1	+1	0.80
	3. ฉันประยุกต์ใช้วิธีการใหม่ๆเพื่อแก้ปัญหาในการสอนของฉัน	+1	+1	+1	+1	+1	1.00

ตัวแปร	ข้อรายการ	ผู้เชี่ยวชาญคนที่					IOC
		1	2	3	4	5	
	4. ฉันมีการทดลองใช้สื่อการสอนใหม่ใน ห้องเรียนเพื่อกระตุ้นความสนใจของผู้เรียน	+1	+1	+1	+1	+1	1.00
	5. ฉันทำการทดลองใช้เทคโนโลยีการเรียน การสอนใหม่ๆในบทเรียนของฉัน	+1	+1	+1	+1	+1	1.00
4.4 การเอื้อมสู่ ฐานความรู้	1.ฉันรวบรวมข้อเสนอแนะในการเรียนรู้จาก ผู้เรียน	+1	+1	+1	+1	+1	1.00
	2. ฉันค้นหาข้อมูลจากระบบสารสนเทศเพื่อ หาวิธีที่จะช่วยพัฒนาการสอนของฉัน	+1	+1	+1	+1	+1	1.00
	3. ฉันสังเกตการณ์การสอนของครูท่านอื่น เพื่อการเรียนรู้ของฉัน	+1	+1	+1	+1	+1	1.00
	4. ฉันอ่านบทความเกี่ยวกับการศึกษาและการ เรียนการสอนเพื่อได้รับแนวความคิดใหม่	+1	+1	+1	+1	+1	1.00
	5. ฉันขอความช่วยเหลือจากผู้ร่วมงาน	+1	+1	+1	+1	+1	1.00
	6. ฉันรักษาความสัมพันธ์ในการเรียนรู้ทาง วิชาชีพกับโรงเรียนอื่นๆ	+1	+1	+1	+1	+1	1.00

APPENDIX F

Letters

ที่ ศธ 0512.6(2791.10)/59- 5508

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ถนนพญาไท กรุงเทพมหานคร 10330

สิงหาคม 2559

เรื่อง   ขอเชิญเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย

เรียน   รองศาสตราจารย์ ดร.ประภาภัทร นิยม

สิ่งที่ส่งมาด้วย   เครื่องมือที่ใช้ในการวิจัย

      ด้วย นางภัทน์นรี ปิยะมาน นิสิตหลักสูตรครุศาสตรดุษฎีบัณฑิต สาขาวิชาบริหารการศึกษา ภาควิชา นโยบาย การจัดการ และความเป็นผู้นำทางการศึกษา อยู่ระหว่างการดำเนินงานวิจัยวิทยานิพนธ์เรื่อง "ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย" โดยมี ผู้ช่วยศาสตราจารย์ ดร.ปองสิน วิเศษศิริ และ ศาสตราจารย์ ดร.PHILIP HALLINGER เป็นอาจารย์ที่ปรึกษา ใน การนี้จึงขอเชิญท่านเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัยทั้งนี้นิสิตผู้วิจัยจะได้ประสานงานในรายละเอียดต่อไป

      จึงเรียนมาเพื่อขอความอนุเคราะห์จากท่านโปรดเป็นผู้ทรงคุณวุฒิดังกล่าวเพื่อประโยชน์ทางวิชาการ ต่อไป และขอขอบคุณมาในโอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.เนาวนิตย์ สงคราม)
รักษาการแทนรองคณบดี
ปฏิบัติการแทนรักษาการแทนคณบดี

งานหลักสูตรและการจัดการเรียนการสอน ฝ่ายวิชาการ
โทร. 0-2218-2565 ต่อ 6732

ที่ ศธ 0512.6(2791.10)/59- 5509

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ถนนพญาไท กรุงเทพมหานคร 10330

สิงหาคม 2559

เรื่อง   ขอเชิญเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย

เรียน   ดร.เฉลิมรัฐ นาควิเชียร

สิ่งที่ส่งมาด้วย   เครื่องมือที่ใช้ในการวิจัย

        ด้วย นางภัทน์นรี ปิยะมาน นิสิตหลักสูตรครุศาสตรดุษฎีบัณฑิต สาขาวิชาบริหารการศึกษา ภาควิชา
นโยบาย การจัดการ และความเป็นผู้นำทางการศึกษา อยู่ระหว่างการดำเนินงานวิจัยวิทยานิพนธ์เรื่อง
"ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย" โดยมี
ผู้ช่วยศาสตราจารย์ ดร.ปองสิน วิเศษศิริ และ ศาสตราจารย์ ดร.PHILIP HALLINGER เป็นอาจารย์ที่ปรึกษา ใน
การนี้จึงขอเชิญท่านเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัยทั้งนี้นิสิตผู้วิจัยจะได้ประสานงานในรายละเอียดต่อไป

        จึงเรียนมาเพื่อขอความอนุเคราะห์จากท่านโปรดเป็นผู้ทรงคุณวุฒิดังกล่าวเพื่อประโยชน์ทางวิชาการ
ต่อไป และขอขอบคุณมาในโอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.เนาวนิตย์ สงคราม)
รักษาการแทนรองคณบดี
ปฏิบัติการแทนรักษาการแทนคณบดี

งานหลักสูตรและการจัดการเรียนการสอน ฝ่ายวิชาการ
โทร. 0-2218-2565 ต่อ 6732

ที่ ศธ 0512.6(2791.10)/59- 5506

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ถนนพญาไท กรุงเทพมหานคร 10330

สิงหาคม 2559

เรื่อง   ขอเชิญเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย

เรียน   อาจารย์ ดร.อนุสรา สุวรรณวงศ์

สิ่งที่ส่งมาด้วย   เครื่องมือที่ใช้ในการวิจัย

ด้วย นางภัทน์นรี ปิยะมาน นิสิตหลักสูตรครุศาสตรดุษฎีบัณฑิต สาขาวิชาบริหารการศึกษา ภาควิชา
นโยบาย การจัดการ และความเป็นผู้นำทางการศึกษา อยู่ระหว่างการดำเนินงานวิจัยวิทยานิพนธ์เรื่อง
"ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย" โดยมี
ผู้ช่วยศาสตราจารย์ ดร.ปองสิน วิเศษศิริ และ ศาสตราจารย์ ดร.PHILIP HALLINGER เป็นอาจารย์ที่ปรึกษา ใน
การนี้จึงขอเชิญท่านเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัยทั้งนี้นิสิตผู้วิจัยจะได้ประสานงานในรายละเอียดต่อไป

จึงเรียนมาเพื่อขอความอนุเคราะห์จากท่านโปรดเป็นผู้ทรงคุณวุฒิดังกล่าวเพื่อประโยชน์ทางวิชาการ
ต่อไป และขอขอบคุณมาในโอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.เนาวนิตย์ สงคราม)
รักษาการแทนรองคณบดี
ปฏิบัติการแทนรักษาการแทนคณบดี

งานหลักสูตรและการจัดการเรียนการสอน ฝ่ายวิชาการ
โทร. 0-2218-2565 ต่อ 6732

ที่ ศธ 0512.6(2791.10)/59- 5507

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ถนนพญาไท กรุงเทพมหานคร 10330

สิงหาคม 2559

เรื่อง   ขอเชิญเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย

เรียน   อาจารย์ ดร.สมเกียรติ อินทวงศ์

สิ่งที่ส่งมาด้วย   เครื่องมือที่ใช้ในการวิจัย

        ด้วย นางภัทน์นรี ปิยะมาน นิสิตหลักสูตรครุศาสตรดุษฎีบัณฑิต สาขาวิชาบริหารการศึกษา ภาควิชา
นโยบาย การจัดการ และความเป็นผู้นำทางการศึกษา อยู่ระหว่างการดำเนินงานวิจัยวิทยานิพนธ์เรื่อง
"ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย" โดยมี
ผู้ช่วยศาสตราจารย์ ดร.ปองสิน วิเศษศิริ และ ศาสตราจารย์ ดร.PHILIP HALLINGER เป็นอาจารย์ที่ปรึกษา ใน
การนี้จึงขอเชิญท่านเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัยทั้งนี้นิสิตผู้วิจัยจะได้ประสานงานในรายละเอียดต่อไป

        จึงเรียนมาเพื่อขอความอนุเคราะห์จากท่านโปรดเป็นผู้ทรงคุณวุฒิดังกล่าวเพื่อประโยชน์ทางวิชาการ
ต่อไป และขอขอบคุณมาในโอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.เนาวนิตย์ สงคราม)
รักษาการแทนรองคณบดี
ปฏิบัติการแทนรักษาการแทนคณบดี

งานหลักสูตรและการจัดการเรียนการสอน ฝ่ายวิชาการ
โทร. 0-2218-2565 ต่อ 6732

ที่ ศธ 0512.6(2791.10)/59- 5510

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ถนนพญาไท กรุงเทพมหานคร 10330

สิงหาคม 2559

เรื่อง ขอเชิญเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย

เรียน ดร.อนันต์ธานินทร์ นามเมือง

สิ่งที่ส่งมาด้วย เครื่องมือที่ใช้ในการวิจัย

       ด้วย นางภัทน์นรี ปิยะมาน นิสิตหลักสูตรครุศาสตรดุษฎีบัณฑิต สาขาวิชาบริหารการศึกษา ภาควิชา
นโยบาย การจัดการ และความเป็นผู้นำทางการศึกษา อยู่ระหว่างการดำเนินงานวิจัยวิทยานิพนธ์เรื่อง
"ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย" โดยมี
ผู้ช่วยศาสตราจารย์ ดร.ปองสิน วิเศษศิริ และ ศาสตราจารย์ ดร.PHILIP HALLINGER เป็นอาจารย์ที่ปรึกษา ใน
การนี้จึงขอเชิญท่านเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัยทั้งนี้นิสิตผู้วิจัยจะได้ประสานงานในรายละเอียดต่อไป

       จึงเรียนมาเพื่อขอความอนุเคราะห์จากท่านโปรดเป็นผู้ทรงคุณวุฒิดังกล่าวเพื่อประโยชน์ทางวิชาการ
ต่อไป และขอขอบคุณมาในโอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.เนาวนิตย์ สงคราม)
รักษาการแทนรองคณบดี
ปฏิบัติการแทนรักษาการแทนคณบดี

งานหลักสูตรและการจัดการเรียนการสอน ฝ่ายวิชาการ
โทร. 0-2218-2565 ต่อ 6732

ที่ ศธ 0512.6(2791.10)/59- 5511

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ถนนพญาไท กรุงเทพมหานคร 10330

สิงหาคม 2559

เรื่อง   ขอทดลองใช้เครื่องมือวิจัย

เรียน   ผู้อำนวยการโรงเรียน

สิ่งที่ส่งมาด้วย   เครื่องมือที่ใช้ในการวิจัย

ด้วย นางภัทน์นรี ปิยะมาน นิสิตหลักสูตรครุศาสตรดุษฎีบัณฑิต สาขาวิชาบริหารการศึกษา ภาควิชา
นโยบาย การจัดการ และความเป็นผู้นำทางการศึกษา อยู่ระหว่างการดำเนินงานวิจัยวิทยานิพนธ์เรื่อง
"ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย" โดยมี
ผู้ช่วยศาสตราจารย์ ดร.ปองสิน วิเศษศิริ และ ศาสตราจารย์ ดร.PHILIP HALLINGER เป็นอาจารย์ที่ปรึกษา ใน
การนี้นิสิตมีความจำเป็นต้องทดลองใช้เครื่องมือ คือแบบสัมภาษณ์และแบบการประชุมกลุ่มกับผู้อำนวยการและ
ครูในโรงเรียน ทั้งนี้นิสิตผู้วิจัยจะได้ประสานงานในรายละเอียดต่อไป

จึงเรียนมาเพื่อขอความอนุเคราะห์จากท่านโปรดอนุญาตให้นิสิตได้ทดลองใช้เครื่องมือดังกล่าว
เพื่อประโยชน์ทางวิชาการต่อไป และขอขอบคุณมาในโอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.เนาวนิตย์ สงคราม)
รักษาการแทนรองคณบดี
ปฏิบัติการแทนรักษาการแทนคณบดี

งานหลักสูตรและการจัดการเรียนการสอน ฝ่ายวิชาการ
โทร. 0-2218-2565-97 ต่อ 6732

ที่ ศธ 0512.6(2791.10)/59- 5512

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ถนนพญาไท กรุงเทพมหานคร 10330

สิงหาคม 2559

เรื่อง   ขอความร่วมมือในการเก็บข้อมูลวิจัย

เรียน   ผู้อำนวยการโรงเรียน

สิ่งที่ส่งมาด้วย   เครื่องมือที่ใช้ในการวิจัย

    ด้วย นางภัทน์นรี ปิยะมาน นิสิตหลักสูตรครุศาสตรดุษฎีบัณฑิต สาขาวิชาบริหารการศึกษา ภาควิชา
นโยบาย การจัดการ และความเป็นผู้นำทางการศึกษา   อยู่ระหว่างการดำเนินงานวิจัยวิทยานิพนธ์เรื่อง
"ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย" โดยมี
ผู้ช่วยศาสตราจารย์ ดร.ปองสิน วิเศษศิริ และ ศาสตราจารย์ ดร.PHILIP HALLINGER เป็นอาจารย์ที่ปรึกษา ใน
การนี้นิสิตมีความจำเป็นต้องเก็บข้อมูลด้วยแบบสอบถามกับผู้อำนวยการและครูในโรงเรียน ทั้งนี้นิสิตผู้วิจัยจะได้
ประสานงานในรายละเอียดต่อไป

    จึงเรียนมาเพื่อขอความอนุเคราะห์จากท่านโปรดอนุญาตให้นิสิตได้ทำการเก็บข้อมูลวิจัยดังกล่าว
เพื่อประโยชน์ทางวิชาการต่อไป และขอขอบคุณมาในโอกาสนี้

<div align="center">

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.เนาวนิตย์ สงคราม)
รักษาการแทนรองคณบดี
ปฏิบัติการแทนรักษาการแทนคณบดี

</div>

งานหลักสูตรและการจัดการเรียนการสอน ฝ่ายวิชาการ
โทร. 0-2218-2565-97 ต่อ 6732

ที่ ศธ 0512.6(2791.10)/59-6059

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ถนนพญาไท กรุงเทพมหานคร 10330

กันยายน 2559

เรื่อง   ขอเชิญเข้าร่วมประชุมกลุ่ม (Focus group)

เรียน   ผู้อำนวยการโรงเรียน

สิ่งที่ส่งมาด้วย   เครื่องมือที่ใช้ในการวิจัย

         ด้วย นางภัทน์นรี ปิยะมาน นิสิตหลักสูตรครุศาสตรดุษฎีบัณฑิต สาขาวิชาบริหารการศึกษา ภาควิชา
นโยบาย การจัดการ และความเป็นผู้นำทางการศึกษา   อยู่ระหว่างการดำเนินงานวิจัยวิทยานิพนธ์เรื่อง
"ผลกระทบของภาวะผู้นำทางการเรียนรู้ที่มีต่อความผูกพันของครูในการเรียนรู้ทางวิชาชีพในประเทศไทย"
โดยมี ผู้ช่วยศาสตราจารย์ ดร.ปองสิน วิเศษศิริ และศาสตราจารย์ ดร.PHILIP HALLINGER เป็นอาจารย์ที่ปรึกษา
ในการนี้จึงขอเชิญท่านเข้าร่วมประชุมกลุ่ม (Focus group) ในวันที่ 19 กันยายน 2559 เวลา 10.00 น. ณ ห้อง
ประชุมโรงเรียน   ทั้งนี้นิสิตผู้วิจัยจะได้ประสานงานในรายละเอียดต่อไป

         จึงเรียนมาเพื่อขอความอนุเคราะห์จากท่านโปรดเข้าร่วมประชุมกลุ่ม (Focus   group) ในวันและเวลา
ดังกล่าวเพื่อประโยชน์ทางวิชาการต่อไป ขอบคุณมาในโอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.เนาวนิตย์ สงคราม)
รักษาการแทนรองคณบดี
ปฏิบัติการแทนรักษาการแทนคณบดี

งานหลักสูตรและการจัดการเรียนการสอน ฝ่ายวิชาการ
โทร. 0-2218-2565 ต่อ 6732

VITA

Patnaree Piyaman was born in February 1985, Bangkok, Thailand. She receives her Bachelor's degree in audio engineering from School of Audio Engineering, Middlesex University in 2008. Later, she found interests in administration and continues her education in business administration at Assumption University, where she is granted with a Master's degree in 2012. At present, she is a doctoral student in educational administration at Chulalongkorn University.

With passion in learning and teaching, she began her career as an English teacher at Kobvittaya School, a primary school in Bangkok, Thailand, where her family owns. Being raised by a school owner, her desire in improving education grows. Her current position is an assistant school manager at Kobvittaya School, Bangkok, Thailand. She continues to strive to improve her professional learning and wishes to contribute to improving the overall education in Thailand. Her article is published in the Journal of Educational Administration, volume 55, issue 6, titled "Addressing the Achievement Gap: Exploring Principal Leadership and Teacher Professional Learning in Urban and Rural Primary Schools in Thailand"