

# Thai School Learning Communities (SLC): An Exploratory Factor Analysis

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*This research paper analyzes the composition and level of core values of 17 Thai schools from 17 provinces using school learning communities (SLC). After a literature review, 38 core values were initially determined. A quantitative research methodology was also used to develop a 5-level questionnaire. The sample size was 304 individuals who were selected by stratified random sampling. An exploratory factor analysis (EFA) was performed, from which seven experts determined that the SLC core value variables could be grouped into four main categories containing 32 remaining core value variables after the importance assessment. Ranked in priority order, these were 1) Component 4 (Emphasize on teachers' acceptance of diversity) (mean = 4.57, SD = .49), Component 1: Encouraging learners to show their full potential (mean = 4.40, SD = .42), Component 3: Emphasis on trust through participatory work (mean = 4.39, SD = .44), and Component 2: Supporting self-directed learners in a team-based learning style (mean = 4.38, SD = .42).*

*Keywords: core values, school as a learning community, self-directed learning (SDL), Thailand*

## INTRODUCTION

21st-century education should be focused on environments in which every student has the ability for 'equal access' (Kunlasomboon et al., 2015), and this should be accomplished by schools organizing into a 'School Learning Community' (Mala, 2019). Teacher involvement in SLCs entails observing and sharing lessons while creating a listening pedagogy that embraces and develops learning diversity in both the learner and the teacher. This will then lead to high-quality education.

Conceptualized in Japan in the 1990s by the University of Tokyo Manabu Sato, Professor Sato envisioned an SLC in which the students, the teachers, and even the parents learned together through school reform participation (Sato, 2018). After establishing nearly 4,000 SLCs in Japan (Lim, 2015), the concept has expanded to other Asian countries and has become recognized as a powerful method for enacting school reforms. According to Murase (2018), the attraction of SLCs in Japan in its initial growing phases was due to SLCs allowing for teacher autonomy while seeking innovative vision. Moreover, the author states that the vitality of SLC is supported by three prominent theories, including Vygotsky's Theory of Collaborative Learning, Schön's Theory of Reflective Practitioner, and Dewey's Theory of Democracy.

According to the Lesson Study for Learning Community (LSLC) from Saito et al. (2014), SLC teachers are expected to go beyond their subject boundaries and engage with other teachers in other subjects. Within

the context of the SLC, each teacher is expected to share their experiences, knowledge, and pedagogical practices. Teachers within the SLCs then organize into groups according to their form levels instead of subject levels. The focus of SLC is not on lesson planning collaboration but on sharing and reflecting on observations of the research lessons (RL). Therefore, to be effective, each RL observation and reflection should be done bi-monthly within each form group, whose outcome is a deeper understanding of students and how they learn.

There is significant similarity between Japan's SLC and research from Thai scholars who have discussed using Professional Learning Communities (PLCs) as a mechanism for educational stakeholders to work together in online learning and teaching communities (Anchunda, 2021; Kanawapee et al., 2022). DuFour and Eaker (2009) have written that PLCs, like SLCs, are mechanisms to empower change within schools at all levels. The Kenan Foundation Asia (2019) and Kanawapee et al. (2022) have also noted that continuous professional learning (CPL) and PLCs improve teacher quality, help in increasing teacher morale, help in identification of problems, solution determination, student motivation, and increased teacher job satisfaction. Tanyarattanasrisakul (2017) also remarked that Thai PLCs are highly effective when teachers and the local community participate in a caring and sharing community of common visions and values. Finally, in Thailand, Thailand's National Strategy 2018-2037 (2017) has also noted the effectiveness of SLCs in local community development and the creation of flexible, competency-based education (CBE) (Wannapiroon & Pimdee, 2022).

In education communities in 2022, it is very difficult to discuss student learning without simultaneously talking about the COVID-19 pandemic's impact on traditional classroom learning. In these discussions, we frequently hear terms like the 'New Normal,' remote learning, online learning, distance learning television, digital learning, or learning management systems (LMS) (Klinbumrung, 2020; UNESCO, 2020). As tragic as COVID-19 has been to education worldwide, SLCs and PLCs are potent mechanisms to overcome the massive hurdles that moving to online education has created and the associated learning curve for all stakeholders. Moreover, moving education into an online world can also accelerate methods being found in the creation of more personalized learning (Chinchua et al., 2022; Ruenphongphun et al., 2022).

Most agree that society today is changing rapidly due to multiple factors, from COVID-19 to digital devices to information communications technology (ICT). This requires individuals to acquire 21st-century skills, including critical and creative thinking, computational and programming skills, and digital literacy and Internet behavior skills. All these must be integrated into professional and lifelong learning if a nation wishes to create a labor force of digitally savvy knowledge workers.

Therefore, the new generation of teachers must change their roles from teachers to coaches or learning supporters and act as a stimulant, inspiring, mentoring, and guiding students on how to learn. New ways of thinking must integrate and connect knowledge into students' daily life, with teachers acting as the leading force in motivating them forward to achieve the desired results.

This is consistent with numerous studies, including Jukes and Schaaf (2018), who believe that new digital environments are radically altering how students learn and what they learn. This is also true for their teachers, as new digitally enabled learning is challenging for many older teachers and their respective institutions (Binheem et al., 2021; Moto et al., 2018). Therefore, educators and their institutions must embrace these new digital technologies and learn to use them effectively. Educators also should change their roles to keep up with the world and embrace three aspects of change, including self-development to be aware of the changing world, developing the ability to manage to learn, and develop the learner's ability to assess learning (Schaaf & Jukes, 2019).

According to Duangpummes and Kaewurai (2017), in the vision for 'Thailand 4.0', learning management will entail active learning with workers transitioning from third-generation-related skills to 4th generation digitally enabled knowledge workers. Changwong et al. (2018) have added that under Thailand 4.0's vision, critical thinking skills will become a pillar of a new, knowledge-based, digitally enabled economy.

Thailand 4.0 is also about developing a sustainable nation, which allows learning management to be applied to real-world knowledge and situations. Creativity must be created and integrated into innovative new ideas and products. Education disparities must be lowered, especially between rural and urban learners.

Thus, there must be a focus on building the country's competitiveness and improving the education system to use resources efficiently.

Therefore, the authors wish to propose that, like the 4,000 Japanese institutions that have embraced the SLC concepts as outlined by Professor Sato/Saito, Thailand, too can create education excellence and increase flexibility in supporting educational management and fostering good governance. It is envisioned that Thai SLC will entail three pillars. These include:

- 1) Teachers, administrators, and school staff have the same vision and philosophy of SLC. Teachers must focus on everyone in the classroom, leaving no one behind.
- 2) Teachers must learn and consistently work on ways to improve their learning management. Open environments must be created, which today will most probably entail a social media group allowing teachers to participate in the learning management process and knowledge sharing.
- 3) Information is shared with parents and the community so that they know what the school is doing and participation between parents and community members.

These main points are the values that make schools use as a community success. At the heart of the school, the concept is a learning community that is not a teaching technique or a process in school administration but instead the creation of shared visions and the new shared values of everyone in the school. SLCs thus allows the creation of a new culture of learning which flips the school to where the teachers are students and learners so that everyone can learn from each other all the time (Sato, 2016).

### Research Objectives

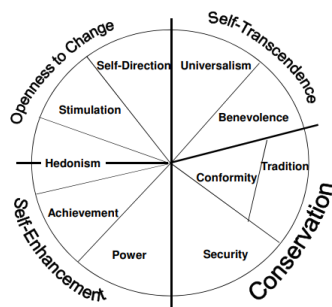
1. To analyze the core value components of a school as a learning community functioning under guidelines set forth by Thailand's Office of the Basic Education Commission (OBEC).
2. To identify and study the level of core values of a school as a learning community (SLC) under OBEC.

### TERMINOLOGY USE

#### Core Values

According to Schwartz (2012), ten fundamental values are common to most cultures worldwide (Figure 1). However, in July 2014, Thailand's Prime Minister Prayut identified '12 core values as the moral compass for Thais (Burford et al., 2019). Although the list is long and detailed (12 Thai Values, n/d), they included traditional Thai conservation, love of the state, religion, and the monarchy, being honest, being grateful, seeking knowledge, morality, discipline, thriftiness, nation before oneself, and good mental and physical health.

**FIGURE 1  
TEN MOTIVATIONAL TYPES OF VALUE**



Source: Schwartz (2012)

Thus, it can be summarized that core values are beliefs, goals, and attitudes that influence one's behavior and mind, with core values acting as guidelines and principles within an organization's development. Core values also establish a vision and guideline for personnel within an organization for setting directions and the actions of individuals to achieve results according to the goals set by the organization. In addition, core values act as an element of change, influencing how an organization moves in a positive direction and behavior.

### School Learning Communities (SLC)

An SLC establishes objectives that help manage student learning while creating a body of knowledge. SLCs allow students to practice hands-on experience and create new skills, emphasizing participation between students, teachers, parents, and the community. Parents and communities have access to student work which helps create an atmosphere of listening to each other, both between students and between teachers. This interaction helps build the SLC and create a professional learning community. In addition, school administrators play a role in systematic guidance, training, and supervision.

## METHODS

Quantitative research was used to conduct the research, followed by exploratory factor analysis (EFA).

### Population and Sample

The study's population was 304 teachers in 17 core schools operating in 17 Thai provinces operating as a *school learning community* (SLC) (Table 1) under Thailand's Office of the Basic Education Commission (OBEC) (Mala, 2019). Stratified and simple random sampling techniques were used to select the study's 304 participants.

**TABLE 1**  
**SAMPLE COLLECTION BY THAI PROVINCE**

Region	Province	Number	%
Northern	Tak	7	2.29
	Nan	12	3.96
	Phrae	15	4.92
	Lampang	12	3.96
<b>Total Northern Region</b>		<b>46</b>	<b>15.13</b>
Central	Phitsanulok	12	3.96
	Chachoengsao	19	6.25
	Ayutthaya	11	3.61
	Sing Buri	17	5.59
<b>Total Central Region</b>		<b>59</b>	<b>19.41</b>
Northeastern	Khon Kaen	39	12.83
	Udon Thani	30	9.87
	Nong Khai	32	10.51
	Roi Et	30	9.87
	Nakhon Ratchasima	20	6.57
<b>Total Northeastern Region</b>		<b>151</b>	<b>49.67</b>
Southern	Krabi	12	3.96
	Surat Thani	11	3.61
	Krabi	12	3.96
	Chumphon	13	4.26
<b>Total Southern Region</b>		<b>48</b>	<b>15.79</b>
<b>Total</b>		<b>304</b>	<b>100</b>

## Research Tool

A 38 item questionnaire was used to evaluate each participant's opinions concerning SLC core values. A five-level educator opinion scale was used, which was reviewed by a panel of seven education experts whose qualifications were no less than a doctorate. Each of the 38 items was then evaluated using the index of item-objective congruence (IOC) value (Turner & Carlson, 2003). The questionnaire's aim, item clarity, comprehensiveness, completeness, meaningfulness, and significance for each item were evaluated. The IOC values for the study were 0.87 to 1.00, with items below 0.67 removed according to the experts' suggestions (Pimdee, 2020).

The questionnaire's reliability was then evaluated using 30 individuals who did not participate in the subsequent survey. The assessment of the 30 individual's questionnaire try-out reliability used Cronbach's alpha ( $\alpha = .977$ ) (Sermsri et al., 2021).

Before the final survey, the researcher sent a letter from the Prince of Songkla University's (Pattani Campus) Development Education Research Center asking permission to collect survey data. Once each school granted permission, teachers were randomly selected and contacted with Line social media and given a questionnaire QR code to participate.

## Data Analysis

From the OBEC SLC core value components analysis, the correlation coefficients between the variables were examined using descriptive statistics (percentage, mean and standard deviation), the Kaiser-Meter-Olkin (KMO), and Bartlett's test of sphericity. Additionally, the analysis extracted the factors using Principle Component Analysis (PCA) to determine which variables were most important. It consisted of the components, Eigenvalues, percentage of variance, and cumulative percentage of variance.

The correlation between variables being more common as a constituent was more clearly defined by the Varimax rotation method (Acal et al., 2020) to find the SLC core value components by using the selection criteria for question variables with a factor loading of  $\geq .50$  and the number of variables in each component (Abdi, 2003). There must be at least three variables to be considered as one component.

## RESULTS

### Correlation Matrix Suitability Results

Table 2 shows that the KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) indicates that the observed variables' correlation matrix was not a unique matrix, which therefore shows that there are enough correlations between variables for variables analyzing the indicators (Changwong et al., 2018). Confirmation of this was determined by the KMO Measure of Sampling Adequacy = 0.949, which is considered excellent.

Also, Bartlett's test of sphericity was used to test the desirability of proceeding to factor extraction (Tobias & Carlson, 1969). It is a hypothesis test that the correlation matrix is an identity matrix. Determination was made that the Chi-Square = 5334.798 had a statistical significance (Sig.) = .000,  $p \leq .05$ , indicating that the correlation matrix obtained is not a unity matrix. This confirmed that the 38 SLC core value variables are correlated and are suitable for factor analysis.

**TABLE 2**  
**SUITABILITY RESULTS OF THE CORRELATION MATRIX BETWEEN VARIABLES**

variable	KMO		Bartlett's test	
	Suitable Value	Analysis Value	Suitable Value	Analysis Value
<b>38 SLC Core Value Variables</b>	Greater than .50 (Over .90 is excellent)	.949	$p \leq .05$	$p = .000$

### Factor Extraction and Rotation

The researcher extracted the factors using the Principle Component Analysis (PCA) to determine which variables were most important. It consists of the components, eigenvalues, percentage of variance, and cumulative percentage of variance (Table 3) (Abdi, 2003). Liu et al. (2003) have suggested that factors with eigenvalues  $\geq 1.00$  be retained.

Table 2 shows the Eigenvalues, which are the sum of the squares of the coefficients of each factor  $\geq 1.00$ . Table 2 also shows that six factors have a percentage of cumulative variance of 49.984%. The fifth and sixth factors are not grouped since fewer than three factors exist in an element.

Additionally, in Table 2 and Table 3, the descriptive definitions for each component are as follows:

- **Component 1** = Encouraging learners to show their full potential.
- **Component 2** = Supporting self-directed learners in a team-based learning style.
- **Component 3** = Emphasis on trust through participatory work.
- **Component 4** = Emphasize teachers' acceptance of diversity.

However, components five and six were not grouped as components since fewer than three variables were in each component. When considering each component, it was found that component 1 had an Eigenvalue of 13.584, the percentage of cumulative variance was 35.747, and the element weights were .517 - .707 (Table 4), which shows strong support for an SLC core value representing “*Encouraging learners to show their full potential.*”

Component 2 had an Eigenvalue of 2.582, the percentage of cumulative variance was 42.543, and the element weights were .507 - .644 (Table 4), which shows support for an SLC core value representing “*Supporting self-directed learners in a team-based learning style.*”

Component 3 had an Eigenvalue of 1.480, a percentage of cumulative variance, 46.437, and the component weights were .544 - .667, which shows support for an SLC core value representing “*Emphasize on trust through participatory work.*”

Component 4 had an Eigenvalue of 1.348, a percentage of cumulative variance, 49.984, and the element weights were .536 - .739, which shows support for an SLC core value representing “*Emphasis on teachers' acceptance of diversity.*”

**TABLE 3**  
**COMPONENT NUMBERS, EIGENVALUES, % OF VARIANCE, AND CUMULATIVE % OF VARIANCE**

Components	Eigen Values	Percentage of Variance	Percentage of cumulative variance
<b>1</b>	13.584	35.747	35.747
<b>2</b>	2.582	6.796	42.543
<b>3</b>	1.480	3.893	46.437
<b>4</b>	1.348	3.547	49.984

Table 4 shows the study's analysis from the Varimax rotation, usually the second step in factor analysis and a PCA (Abdi, 2003). Factor rotation and a Varimax rotation; transform the initial factors into new ones that are simpler to interpret. The results of the analysis of orthogonal rotation components by the Varimax method and the variables in each component must have a weight of  $\geq .50$  or more. The investigator chose the highest weight for each factor in the study's SLC core value analysis. Table 3 thus shows the remaining four components with 32 variables.

Table 3 also shows the number of core value variables left after being extracted after spindle rotation by using the criterion that factors with eigenvalues  $\geq 1.00$  should be retained and have a weight of  $\geq .50$ . From the screening process of the seven experts, there were core value variables that could be classified into groups. Of the remaining 32 core value variables, the first group was determined to include variables 24, 22, 20, 23, 25, 21, 19, 28, 17, 29, 27, 26, and 18,. The second group contained 36, 35, 33, 34, 32, 31,

and 37. The third group contained 2, 4, 7, 6, 5, 3, and 8. The final fourth group contained 12, 11, 13, 10, and 15. Therefore, these four components account for 49.984% of the cumulative percentage of variance.

**TABLE 4**  
**VARIABLES, THEIR DESCRIPTIONS, AND ELEMENT WEIGHTS  $\geq .50$**

Core Value Variables	Core Values Item Description	Components			
		1	2	3	4
24	Teachers organize activities that integrate skills in a variety of subjects.	.707			
22	The community cooperates with the teacher at every request.	.679			
20	Teachers take care of all students thoroughly.	.676			
23	Teachers manage integrated learning according to the school's vision and goals.	.666			
25	Teachers promote student vocational learning experiences.	.639			
21	Teachers arrange suitable learning environments and media.	.615			
19	Teachers are open to student opinions.	.614			
28	Teachers take into account individual differences.	.588			
17	Teachers respect student opinions.	.582			
29	Teachers positively reinforce students.	.562			
27	Teachers encourage students to accept classmate diversity.	.527			
26	Teachers organize student activities that meet their career goals.	.526			
18	Teachers take into account individual differences by assigning tasks according to student ability.	.517			
36	Students can search for information that interests them.		.644		
35	Students can design work and solve problems together.		.637		
33	Students work with others.		.611		
34	Students work as teams.		.600		
32	Students learn from their mistakes.		.550		
31	Students can demonstrate their potential appropriately.		.511		
37	Teacher supervision administrators give ongoing advice.		.507		
2	Teachers, deputy directors, and directors of the school are honest and moral and act as good community role models.			.667	
4	School teachers, deputy directors, and directors help in the school's community involvement.			.638	
7	School teachers, deputy directors, directors, and local communities get involved in solving problems in and outside the classroom.			.617	
6	School teachers, deputy directors, directors, and community members work together to monitor school activities per the school's vision.			.608	
5	School teachers, deputy directors, directors, and community members work together to help develop school goals.			.608	
3	School teachers, deputy directors, and directors work together to reach the school's objectives and goals.			.589	
8	Teachers organize learning exchange activities to solve student quality problems.			.544	
12	Teachers take care of students with understanding.				.739

Core Value Variables	Core Values Item Description	Components			
		1	2	3	4
11	Teachers respect each other.				.694
13	Teachers take care of students equally.				.645
10	Teachers are open to accepting opinions regardless of seniority.				.635
15	Teachers listen to different student opinions.				.536

Table 5 shows the SLC core value component results arranged in order of Table 3's Eigenvalues.

**TABLE 5**  
**COMPONENT WEIGHT VALUES SUMMARIZATION**

Order	SLC Core Value Components	Component Weights	
		Lowest Value	Highest Value
1	<b>Component 1</b> = Encouraging learners to show their full potential.	.517	.707
2	<b>Component 2</b> = Supporting self-directed learners in a team-based learning style.	.507	.644
3	<b>Component 3</b> = Emphasis on trust through participatory work.	.544	.667
4	<b>Component 4</b> = Emphasize teachers' acceptance of diversity.	.536	.739

Table 6 shows the means, standard deviations, and opinion rankings of the SLC components. Results revealed that overall, Component 4 (Emphasize teachers' acceptance of diversity) was judged by the respondents to be the most important core element in an SLC environment (mean = 4.57, SD = .49). This was followed by the other three components that were nearly equal in their ranking scores.

**TABLE 6**  
**MEAN AND SD OF SLC CORE VALUE COMPONENTS**

Core Value Elements of SLC Schools	mean	SD	Ranking
<b>Component 1:</b> Encouraging learners to show their full potential.	4.40	.42	High
<b>Component 2:</b> Supporting self-directed learners in a team-based learning style.	4.38	.46	High
<b>Component 3:</b> Emphasis on trust through participatory work.	4.39	.44	High
<b>Component 4:</b> Emphasize teachers' acceptance of diversity.	4.57	.49	Highest
<b>Summations</b>	4.43	.45	High

## DISCUSSION

The SLC core value components analysis results revealed four primary components of SLC effectiveness in schools running under the Thai Office of the Basic Education Commission (OBEC).

### **Component 1: Encouraging Learners to Show Their Full Potential**

The first identified SLC core value component was the ability to encourage learners to show their full potential. This involves applying skills to a career that considers individual differences and listening to students' opinions.



### **Component 2: Supporting Self-Directed Learners (SDL) in a Team-Based Learning Style**

Component 2 involved supporting SDL in a team-based learning style, which according to Camacho and Legare (2016), involves each learner determining their own goals and needs. Using this information, a flexible learning path is created, allowing each learner to choose their learning components based on their interests and needs. Moreover, SDL is connected to personalized learning which is being integrated with ‘competency-based education (CBE) in non-traditional higher education to serve the employer needs of graduates (DeMink-Carthew et al., 2017; Williams et al., 2015).

### **Component 3: Emphasis on Trust Through Participatory Work**

Concerning the use of an SLC, ‘participatory work’ is defined as contributing good deeds within the SLC and acting as a community role model, which builds trust and further participation in the implementation of the school’s vision, problem-solving, and goal development. This is consistent with Thailand’s Prime Minister Prayut’s ‘12 core values’ vision (12 Thai Values, n/d; Burford et al., 2019), in which he stated in the second core value that Thai citizens should be honest, sacrificial, patient, and have positive attitudes for the public’s common good.

In Finland, Tirri (2010) wrote that the values related to a teacher’s professional ethics include every human being having their worth and freedom in matters where they can express both positive and negative opinions. Sato (2016) in Japan felt that trust was related to the belief that classrooms and schools are learning spaces for everyone, without anyone being the sole owner. This allows the community to get involved in the classroom, from which teamwork and mutual trust are created.

### **Component 4: Emphasize Teachers’ Acceptance of Diversity**

The fourth component emphasizes the importance of teachers accepting diversity, which is interpreted in the Thai SLC context as teachers respecting differing opinions from their professional peers and listening to different opinions from their students.

### **SLC Core Values**

The study determined that the Thai SLC core values were at a high level when considering each component. It was also found that acceptance of diversity was essential at the highest level. When each item was considered, a determination was made that taking good care of students with teachers opening their hearts to accept their opinions regardless of seniority was also very important. The school’s core values as a learning community were higher than other elements, indicating that accepting diversity is an essential value for teachers because today’s working society consists of people with many different opinions, beliefs, and attitudes.

Justin and Suganya (2016) have also added that values can help develop one’s responsibility because responsibility is a value that is an essential attribute of a person that leads to the proper conduct of a work task that is beneficial to oneself and the public. Values help an individual relate to thoughts and feelings that, as a result, learners become aware of and realize their self-worth. Furthermore, as learners become more aware of their values, they will have the opportunity to correct their wrong values. In the Moosa et al. (2022) discussion about PLCs, the authors felt that PLCs should also be concerned with ‘result orientation’ as a new dimension in demonstrating a better operationalization of PLCs.

## **SUGGESTIONS FOR APPLYING THE RESEARCH RESULTS**

Schools should determine strategies for schools using concepts outlined in SLC literature and core values that focus on encouraging learners to show their full potential using self-directed learning in a team-based learning style. Emphasis should also be placed on trust through participatory work and emphasizing teachers’ acceptance of diversity.

Schools should also apply values emphasizing teachers accepting diversity as an SLC’s main development principle. Moreover, raising awareness, respecting professional fellowship, being open to

listening to different opinions of both teachers and students, and including more attention to students will create more critical values in each school.

SLCs should also encourage students to show their full potential, with teachers organizing learning activities that integrate skills that can be used for more professional careers. SLCs are also promising avenues in helping all stakeholders, including parents, to observe student behavior and identify and solve problems. SLCs are also effective at promoting learners according to their abilities, allowing teachers to get support and cooperation from their local communities.

## SUGGESTIONS FOR FUTURE RESEARCH

Follow-on research should explore the relationships between student SDL core values and a team-based learning style. Values such as trust through participatory work should also be explored in more detail, as well as further analysis of how educational institutions' core values work as guidelines for strengthening student values.

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