RES MILITARIS
REVUE EUROPEENNE D ETUDES EUROPEAN JOURNAL OF MILITARY STUDIES
Social Science Journal

Development of a Buddhist Learning Ecosystem Model in Schools under Primary Education Service Area

By

Natnicha Jedoroh
Faculty of Education, Mahachulalongkornrajavidyalaya University, Thailand.
Email: ploy_t_p@hotmail.com

Phramaha Yannawat Thitavaddhano
Faculty of Education, Mahachulalongkornrajavidyalaya University, Thailand.
Email: yannawat.bud@mcu.ac.th

Lampong Klomkul
Faculty of Education, Mahachulalongkornrajavidyalaya University, Thailand.
Email: lampong.klom@mcu.ac.th

Phrakhruwirunsutakhun (Udomsak Uttamasakko)
Faculty of Education, Mahachulalongkornrajavidyalaya University, Thailand.
Email: prakhruwirun@gmail.com

Abstract

The purposed of this research were 1) to study the components of factors affecting a Buddhist learning ecosystem in schools under Primary Education Service Area, 2) to develop a Buddhist learning ecosystem model in schools under Primary Education Service Area, and 3) to propose Buddhist learning ecosystem model in schools under Primary Education Service Area. Multiphase mixed methods research was designed by using quantitative methods to extend qualitative results. It was divided into 3 phases; Phase 1 qualitative research, the key informant was qualified person in education administration and were selected by purposive sampling of 12 key informants. Data were collected by interview form and were analyzed by using analytic induction. Phase 2 was a qualitative research, focus group discussion by experts who were academics in the field of Buddhist education administration qualified person in education administration using purposive sampling of 9 experts, data were analyzed by content analysis. Phase 3 was quantitative research by using a questionnaire to validate the Buddhist learning ecosystem model in schools under Primary Education Service Area. The sample group was determined by using a sample size of 10 samples per 1 number of paths showing the relationship between the variables in the model of all 45 paths. Therefore, the appropriate sample size should be 450 samples. Data were analyzed by using descriptive statistics, Pearson's Correlation Coefficient and analyzed to validate the model with the empirical data, and analyze the direct and indirect effects. Results were shown as follows: 1. The composition of the factors affecting the Buddhist learning ecosystem model in schools under Primary Education Service Area consisted of 5 factors: 1) teachers, 2) learning, 3) parental participation, 4) virtues conducive to growth in wisdom, 5) Buddhist learning ecosystem. Therefore, there will be different learning styles, including different learning, complementary learning, learning by potential, and all-round learning. 2. The developed

model of Buddhist learning ecosystem in schools under Primary Educational Service Area has shown important factors and causal relationships, and the results that will lead to a Buddhist learning ecosystem consisting of: 1) teachers, 2) learning, 3) parental participation, 4) virtues conducive to growth in wisdom. Results of the investigation revealed that possible, be accurate and appropriate. 3. The Buddhist learning ecosystem model in schools under Primary Educational Service Area was proposed as a causal relationship model that fit with the empirical data (Chi-square = 91.93, df = 72, p = .057, GFI = .978, AGFI = .947, RMR = .014). Accounting for the variations in learning ecosystems was 91.60 percent, and it indicated that teachers, learning, parental participation and virtues conducive to growth in wisdom can promote an ecosystem of Buddhist learning by having virtues conducive to growth in wisdom as a mediator in the Buddhist learning ecosystem model in schools under Primary Education Service Area.

Keywords: Buddhist Learning Ecosystem, Model, Primary Educational Service Area

1. Introduction

All factors affect learning, the patterns that affect learning can be defined as "ecosystems", just as in science an ecosystem is a unit of space. An ecosystem consists of a society of organisms acting together with their environment as a system that shows the close relationship of organisms and environment by the hierarchy of different eating patterns, as well as the circulation of mineral substances and energy transfer until causing the composition of living things to be a system with different characteristics. Ecosystems are mechanisms to control the society of living things that arise from the relationship between living and non-living parts [1] combining ecosystems with learning has given rise to a new definition of terms that influence education and learning. The learning ecosystem means a learning system that has external factors surrounding it that has a positive effect on learning for students.

With the basic rights of Thai people of all genders and ages must be developed. Government promotion for effective learning to be an important cost in continuing to live both in terms of being the foundation of skills and competence in a career living happily with others in society. It also leads to the development of the nation to have wealth, stability and be able to compete with other countries in the future, Ministry of Education plenipotentiary in the field of administration and education management for Thailand in collaboration with the Secretariat of the Education Council has prepared a national education plan 2017-2036 to be a target frame and the direction of the country's educational management by focusing on providing education for everyone to have access to opportunities with equality and quality. The National Education Plan 2017-2036 focuses on the importance of participation and acceptance from all relevant sectors. This is in line with the 20-year national strategic plan that focuses on 6 strategies for development, namely security strategies, strategy for building competitiveness development strategy and empower people, strategies for creating opportunity, equality and social equality, strategy for building growth on the quality of life that is friendly to the environment and strategies for rebalancing and develop the public administration system.

From the linkage in part of the National Education Plan 2017-2036 and the 20-year

National Strategic Plan, we can foresee a strategy or good educational trend in the 21st century, namely education management to strengthen security, manpower production and development related to the country's development according to the potential and opportunities of the area raise the quality of education, develop learners to have life skills in the 21st century, foster quality learning opportunities, equality, and create a good sense of morality and ethics, and improve the efficiency of the educational management system according to good governance. [2] The main goal of Thailand's education development is to develop learners to be quality people through the learning process for the prosperity of individuals and society by transferring knowledge, training, cultural continuation, and creativity sustains academic progress. The creation of a body of knowledge arising from the organization of the environment, society, learning and supporting factors for a person to continually learn throughout life. [3]

From the National Education Plan 2017-2036, the aforementioned 20-year National Strategic Plan, and the 10th National Economic and Social Development Plan (2007-2011) that has mentioned the dangers of changing trends of the world that affects economic, political, cultural and human values. Environmental changes caused by the destruction of natural resources have resulted in catastrophic disasters in regions around the world, everything that happens affects children as well. Both in present and future life, the current of cultural change causes the loss of the good old culture, especially in terms of morality and ethics, the situation faced by children is extremely distressing, pattern development learning the Buddhist way by inserting or reinforcing Buddhist principles, it can have a positive effect on learners (children) can be chosen to apply as a guideline for learning in the Buddhist way, such as the 4 Noble Truths, the Threefold Training (Trisikkha), Satipaṭṭhāna 4, and Paññāvuḍḍhidhamma 4, etc. First of all, it is the basis for learning all subjects, both secular and spiritual conform to the model and scientific way of thinking that focuses on the learning process caused by learning, thinking, analyzing, distinguishing and doing. It is considered an important part that causes the issue of research studies "Development of Buddhist Learning Ecosystem Models in Schools under the Office of Primary Educational Service Area", focusing on finding answers through the research process and modeling to bring developmental answers that create a good learning ecosystem, effective for students in schools under the Office of Primary Educational Service Area to achieve a different learning system mutual learning potential-based learning and all-round learning as well as being part of the mechanism to drive Thailand 4.0 in the future.

2. Research Objectives

1. To study the components of factors affecting the Buddhist learning ecosystem in schools under Primary Educational Service Area.
2. To develop a Buddhist learning ecosystem model in schools under Primary Educational Service Area.
3. To present a Buddhist learning ecosystem model in schools under Primary Educational Service Area.

Conceptual Framework

Buddhist learning ecosystem model in schools under Primary Educational Service Area derived from the study of documents links between variables can be shown as follows:

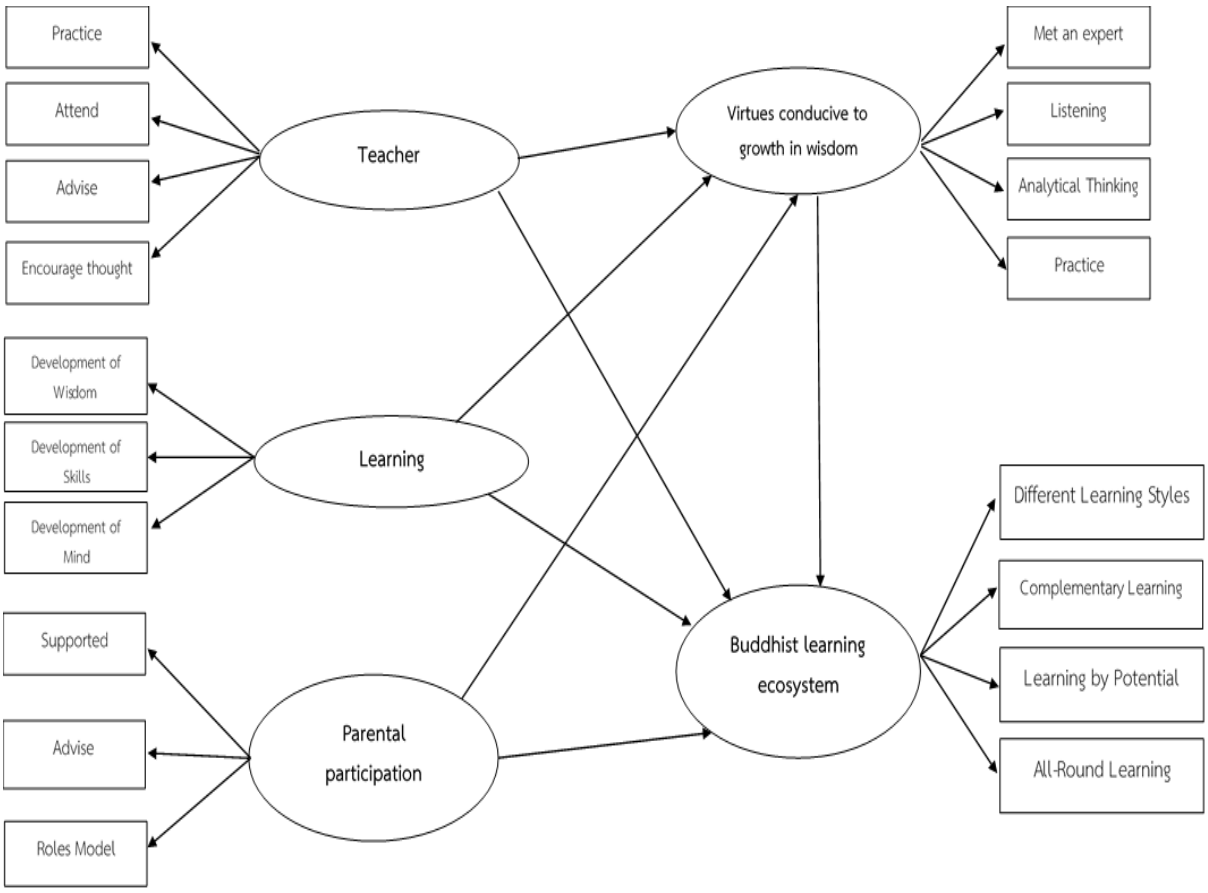

Figure 1 *Research Conceptual Framework*

3. Research Method

The method of conducting the research was divided into 3 phases:

Phase 1: In-depth interview to study the factors affecting the Buddhist learning ecosystem in schools under Primary Education Service Area. The target groups used in the study were experts in school administration from purposive sampling of 12 key informants. The tool used for data collection was the interview questions. The related issues include teachers, learning, parental involvement, Vuḍḍhidhamma and the Buddhist learning ecosystem.

Phase 2: Focus group discussion to develop a Buddhist learning ecosystem model in schools under the Office of Primary Educational Service Area. The researcher used the obtained data to develop a Buddhist learning ecosystem model in schools under the Office of Primary Educational Service Area. There are 5 components as follows: teachers, learning, parent participation, Vuḍḍhidhamma and the Buddhist learning ecosystem. The target group used in focus group discussions; the informants were academics in Buddhist education administration, expert in Educational Institution Administration by using purposive sampling, 10 persons were used. Tools used in group discussion consisted of questions or topics used in group discussion, divided into 2 parts as follows: Part 1 Components of the development of the learning ecosystem model knowledge of Buddhist ways in schools under Primary Educational Service Area, issues used in appropriateness examination and the feasibility of

developing a Buddhist learning ecosystem model in schools under Primary Educational Service Area.

Phase 3: Use of questionnaires to present a Buddhist learning ecosystem model in schools under Primary Educational Service Area using quantitative methods to study by using the data from the study in Phase 1 to create a model for the Buddhist learning ecosystem in schools under Primary Educational Service Area and checking the validity of the generated model. The population used in this research was obtained from educational institutes under Primary Educational Service Area. The key informants were teachers under Primary Educational Service Areas across the country, divided by the Office of Education, 18 regions, the number of schools is 26,274 schools and the population is 347,759 people. The researcher determined the size of the sample group using the formula of Hair et al. (1998) is to use the sample size of 10 people per 1 parameter to be estimated or the number of paths that show the relationship between variables in the conceptual model in the research. In this research, there were 45 parameters to be estimated. The size of the appropriate sample was 450 people. Two-stage random sampling was used by randomly sampling from the number of schools under Primary Educational Service Area Nationwide Step 1 selected a school under Primary Education Nationwide by stratified random sampling from the Office of Education, 18 regions in the area Office of Education Region 2, Step 2 Randomly select research areas. The Primary Educational Service Area Office, Pathum Thani province, randomly stratified into 4 levels: small, medium, large and extra-large to find a sample of 450 people and then develop the model.

4. Research Results

The results of the study of the components of factors affecting the Buddhist learning ecosystem in schools under the Office of Primary Educational Service Area. A research study on the factors affecting the Buddhist learning ecosystem in schools under the Office of Primary Educational Service Area. It consisted of 5 factors: teachers, learning, parental participation, Vuḍḍhidhamma, and the Buddhist learning ecosystem in which all aspects of this component are related to each other.

The results of developing a Buddhist learning ecosystem model in schools under the Office of Primary Educational Service Area. There are components that are important factors and have a causal relationship, consisting of 5 important components as follows: 1) Teachers have 4 important principles, consisting of (1) training, (2) supervising, (3) mentoring, and (4) motivating thought, second components: 2) Learning, there are 3 important principles, consisting of (1) skill development, (2) intelligence development, and (3) mental development, third components: 3) Parental participation, there are 3 important principles, consisting of (1) Support, (2) mentorship, and (3) model practice, fourth components: 4) Paññāvuḍḍhidhamma consists of 4 main principles, consisting of (1) acquaintance with knowledgeable people, (2) listening, (3) analytical thinking, and (4) Practice, fifth components: 5) The Buddhist Learning Ecosystem consists of 4 main principles, consisting of: (1) differentiated learning, (2) complementary learning, (3) potential learning, and (4) all-round learning.

Results of the presentation of the Buddhist learning ecosystem model in schools under

the Office of Primary Educational Service Area. As for the results of the analysis of the Buddhist learning ecosystem model in schools under the Office of Primary Educational Service Area, it was found that the model is consistent with empirical data considering from the statistics used to check the consistency between the model and the empirical data, for example, the Chi-square value is 91.93 degrees of freedom is 72, the probability (p) is .057, that is, the chi-square difference value. It was not significantly different from the center. It showed that it accepted the main hypothesis that the Buddhist learning ecosystem model in schools under the Office of Primary Educational Service Area developed in harmony with empirical data. This corresponds to the analytical results: GFI was .978, the adjusted GFI was .947, close to 1, and the root-mean-square index was .947 of the remainder (RMR) is equal to .014, approaching zero and the remainder in the form of standard scores between the highest variables (Largest Standardized Residuals) was 2.914, which supported that the research model was consistent with the empirical data.

When considering the predictive coefficient (R-SQUARE) of the latent internal variable structural equation, it was found that DHAM had a predictive coefficient of .843, indicating that the variable within the model was teacher (TEACH) learning (LEARN) and parental involvement (PARENT) could explain 84% of the variance in wisdom. Buddhist Learning Ecosystem (BECOS) had a predictive coefficient of .916, indicating that the variables within the model were teachers. Teacher (TEACH), learning (LEARN), parent involvement (PARENT), and DHAM (DHAM) could explain 92% of the variance in the Buddhist learning ecosystem.

When considering the direct and indirect influences between the variables in the model, it was found that the relationship between Buddhist Learning Ecosystem (BECOS) and teachers (TEACH) variables (correlation size = .415) was separated into direct influences. 192 and indirect influence .221, a total effect of .412. Direct and indirect influences on the Buddhist Learning Ecosystem (BECOS) were not statistically significant but the size of the total influence affecting the Buddhist Learning Ecosystem (BECOS) was statistically significant.

The relationship between Buddhist learning ecosystem variables (BECOS) and learning (LEARN) (correlation size = -.289) separated into a direct effect -.452 and an indirect effect .163 into a total effect -.289, direct and indirect influences on the Buddhist Learning Ecosystem (BECOS) were not statistically significant. But the size of the total influence affecting the Buddhist Learning Ecosystem (BECOS) was statistically significant and the relationship between Buddhist learning ecosystem variables (BECOS) and parental participation (PARENT) (correlation size = .758), separated into direct influence .212 and indirect effect .546 as total effect .758, direct and indirect influences on the Buddhist Learning Ecosystem (BECOS) were not statistically significant but the size of the total influence affecting the Buddhist Learning Ecosystem (BECOS) was statistically significant.

It is worth noting that the direct and total influence sizes of Paññāvuḍḍhidhamma (DHAM) had a statistically significant influence on teachers (TEACH) of .223. and the total influence on learning (LEARN), size .165, with statistical significance and

Paññāvuḍḍhidhamma (DHAM) had a statistically significant influence on parental participation (PARENT), size .552 as shown in table 1 and figure 2.

Table 1 *Statistical values of the correlation analysis between latent variables and the influence analysis of the Buddhist learning ecosystem model in schools under the Office of Primary Educational Service Area.*

Variables	DHAM			BECOS		
	TE	IE	DE	TE	IE	DE
TEACH	0.223	-	0.223	0.412*	0.221	0.192
	(.128)		(.128)	(.172)	(.125)	(.156)
LEARN	0.165	-	0.165	-0.289	0.163	-0.452
	(.134)		(.134)	(.200)	(.137)	(.172)
PARENT	0.552**	-	0.552**	0.758**	0.546**	0.212*
	(.075)		(.075)	(.100)	(.082)	(.098)
DHAM		-	-	0.988**	-	0.988**
				(0.087)		(.087)
Statistics	Chi-Square = 91.93, df= 72, p= .057, GFI= .978, AGFI= .947, RMR= .014					
Variable	DHAM1	DHAM2	DHAM3	DHAM4	BECOS1	BECOS2
Reliability	0.888	0.813	0.783	0.842	0.892	0.794
Variable	BECOS3	BECOS4	TEACH1	TEACH2	TEACH3	TEACH4
Reliability	0.834	0.670	0.724	0.768	0.663	0.791
Variable	LEARN1	LEARN2	LEARN3	PARENT1	PARENT2	PARENT3
Reliability	0.797	0.868	0.759	0.809	0.871	0.797

Squared Multiple Correlations for Structural Equations

	DHAM	BECOS
R SQUARE	0.843	0.916

Correlation matrix between latent variables

Latent variable	DHAM	BECOS	TEACH	LEARN	PARENT
DHAM	1.000				
BECOS	0.949	1.000			
TEACH	0.880	0.820	1.000		
LEARN	0.885	0.800	0.957	1.000	
PARENT	0.905	0.866	0.903	0.916	1.000

Remark: The number in the parentheses is the standard error, **p < .01
TE = Total Effect, IE = Indirect Effect, DE = Direct Effect

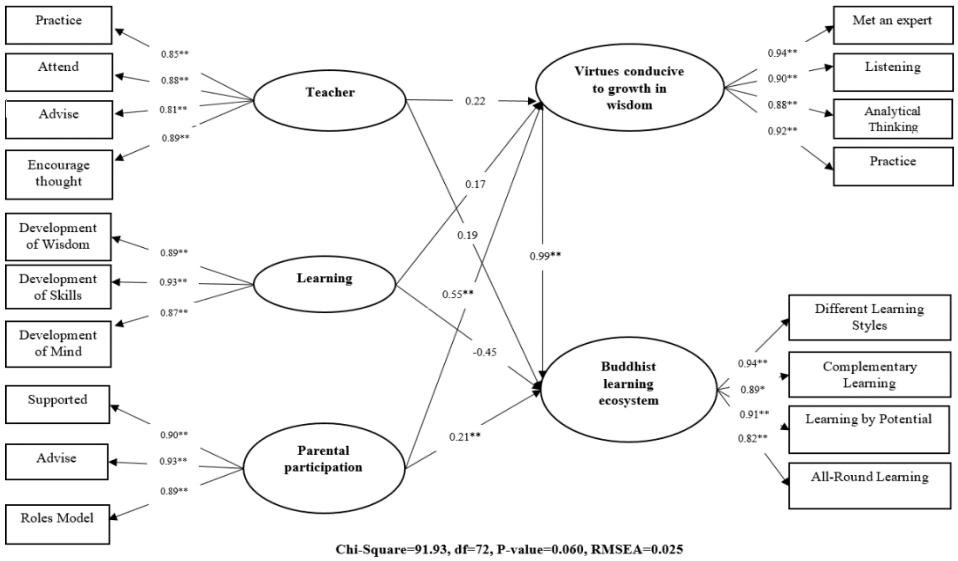

Figure 2 *A causal relationship model of Buddhist learning ecosystems in schools under Primary Educational Service Area.*

5. Discussions

Subject research "Development of a Buddhist Learning Ecosystem Model in Schools under the Office of Primary Educational Service Area" The researcher found the main issues to be discussed as follows: Factors affecting the Buddhist learning ecosystem in schools under the Office of Primary Educational Service Area, including teachers, learning, parental participation and intelligence have a connection in this Buddhist ecological model. This results in different learning styles known as Buddhist learning ecosystems, mutual learning potential-based learning and all-round learning. All of the factors contributing to these learning styles are consistent with the research by Farahiza Zaihan Azizan [4] described in blended learning in higher education institutions in Malaysia found that blended learning has a variety of teaching styles more than just face-to-face learning in the classroom. More effective learning which has a positive effect on learning.

From the development of a Buddhist learning ecosystem model in schools under the Office of Primary Educational Service Area. It was found that the model consisted of 5 key components, namely (1) teachers, (2) learning, (3) parental participation, (4) wisdom and (5) Buddhist learning ecosystem. Components 1-4 are consistent with the research of Kritsupatch Sannok et al. [5] mentioned in components and system architecture of digital learning ecosystem for teaching and learning, digital storytelling for teaching students. The study found that digital learning ecosystem components for teaching and learning management must consist of teaching, including teachers. Learning aspects include the use of equipment or media to enable learners to acquire skills in various fields is the part that helps support, take care of counseling, including friends, parents, etc., and in the 5th component, the Buddhist learning ecosystem. There is some agreement with the research of Mario Lozano-Lozano, et al. "A Blended Learning System to Improve Motivation, Mood, and Satisfaction of Undergraduate Students: A Randomized Controlled Trial." They are consistent in terms of blended learning which is a new learning management method results in motivating the desire to learn having a good emotional state and have satisfaction in learning than learning with traditional methods with statistically significant test results.

The result of presenting the Buddhist learning ecosystem model in schools under the Office of Primary Educational Service Area found that the model was consistent with the empirical data. When considering the direct and indirect influences between the variables in the model, it was found that the relationship between Buddhist Learning Ecosystem (BECOS) and DHAM (correlation size = .988) was separated into direct effects only .988 indicates that the direct influence is more valuable than the indirect influence. Therefore, the Buddhist learning ecosystem must have wisdom, knowledge, listening, analytical thinking, and practice is a passing variable. This will result in a complete Buddhist learning ecosystem.

The Buddhist learning ecosystem model in schools under the Office of Primary Educational Service Area was presented as a causal relationship model was consistent with the empirical data (Chi-square = 91.93, df = 72 , p = .057 , GFI = .978, AGFI = .947 , RMR = .014), explaining the variance of wisdom at 84.30% and the Buddhist learning ecosystem at 91.60 percent, consistent with some researches of Phra Thattharot Adhipañño (Silasilp) [7]

mentioned in "The Development of the Buddhist Sunday School Model according to the principle of maturity." The research results showed that the principle of wisdom is used as a process for teaching and learning, namely (1) Sappurisaṃseva (associating with knowledgeable people) by recruiting knowledgeable local wisdom teachers. (2) Saddhammasavana; Listening to the teacher's teachings clearly and attentively. (3) Yonisomanasikāra (critical thinking) reflecting on the teacher's words to be deep, complete, clear; in accordance with the objectives set. It is a practical test whether it can be completed correctly or not in which general, towards the Buddhist Sunday School curriculum according to Vuḍḍhidhamma satisfied high level with mean equal to 3.81.

Knowledge from Research

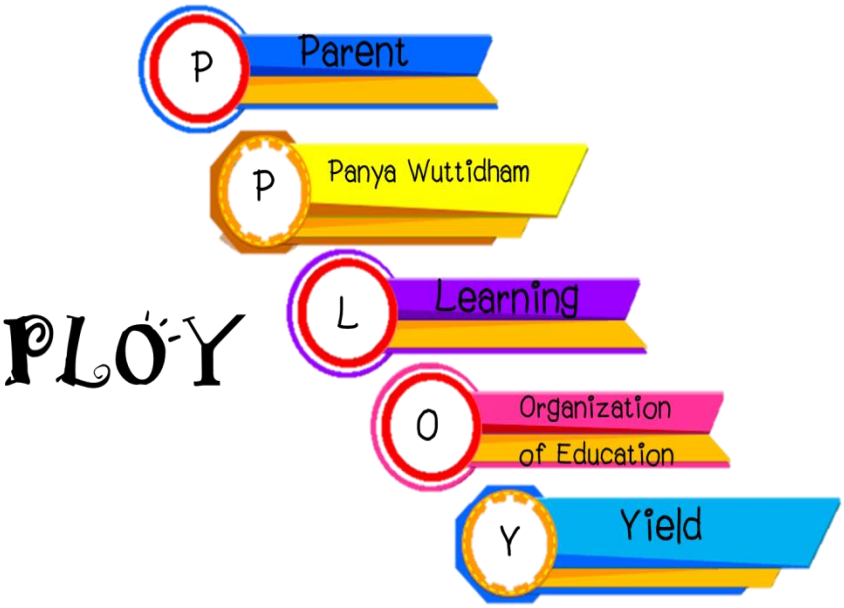

Figure 3 *Research knowledge TLPDB Crown model*
Source: *Natnicha Chedora, 2022*

6. Recommendations

Recommendation for Policy

Government sector, ministry of Education Primary Educational Service Area. The research results of the model development of Buddhist learning ecosystems in schools under the Office of Primary Educational Service Area should be applied to develop and apply in order to develop a learning management model which will correspond and similar to the Thailand education eco-system, which will benefit the teaching and learning model of Thailand.

Recommendation for Practice

Government sector, Ministry of Education Primary Educational Service Area Office. The research results of the model development of Buddhist learning ecosystems in schools under the Office of Primary Educational Service Area should be applied to benefit the development of teaching and learning models.

Recommendation for further research

1. A study on the development of a Buddhist learning ecosystem model in schools under the Office of Primary Educational Service Area should be conducted by using other principals involved. and develop more.
2. The Buddhist learning ecosystem model should be used in schools under the Office of Primary Educational Service Area to develop a teaching and learning manual in elementary education institutions.

References

Suratthani Rajabhat University, Living Ecosystems, [Online], Source: https://sites.google.com/site/sasimajankong2542/home/hnwy-thi3. Retrieved on: [16 June 2021]

Educational Strategy Group Office of Education Region 1 ," Educational Development Strategic Plan (2019 - 2022) Region 1", Research Report (Document No. 22/2017 Office of the Permanent Secretary, Pathum Thani 2017).

National Education Act, B.E. 2553, (Teachers Council Printing House, Ladprao, 2010).

Farahiza Zaihan Azizan, Blended Learning in Higher Education Institution in Malaysia, (Regional Conference on Knowledge Integration in ICT 2010, Page 454-466).

Kritsupatch Sannok, et al., Composition and System Architecture of Digital Learning Ecosystem for Teaching and Learning with Digital Storytelling for Teacher Profession Students, Sikha Journal of Education, Year 6, No. 2 (July-December 2019), pages 87 – 100.

Mario Lozano-Lozano et al., A Blended Learning System to Improve Motivation, Mood State, and Satisfaction in Undergraduate Students: Randomized Controlled Trial, (Journal of Medical Internet Research 2020, Vol. 22 iss. 5)

Phra Thattharot Adhipañño (Silasilp), "Development of Buddhist Sunday School Model according to the principles of knowledge", Political Science and the Doctor of Public Administration, (Rajabhat Maha Sarakham University, 2017)