



## **Model Development of Community Participation to Promote Life and Modern Agriculture Career Skills in Schools**

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### **Abstract**

This research and development study was to explore the present and desirable conditions and needs of community participation, and develop a model of community participation. The two-phase study comprised the following. 1) Exploring present and desirable conditions from the sample of 388 schools with 1,940 respondents. The target group consisted of 4 best practice organizations and experts. Data collection tools were a questionnaire, a multi-case study form, and an interview form. 2) Developing the model with experts and model confirmation by connoisseurship using an evaluation form and a checklist form. The data were analyzed with descriptive statistics, PNI<sub>modified</sub> technique, and content analysis. The findings are the following. The present condition for community participation is at a medium level of practice. The desirable condition is at a very high level. Community participation is required in all items. The model comprises 1) analysis of school condition with shared policy and vision with community; 2) community process including brainstorming, planning, taking action, monitoring, mutual benefits, and network building; 3) evaluation for life and modern agriculture career skills including building relations with others, problem solving, communication, creativity on innovation and technological application, and sufficiency; and 4) feedback on suitability and possibility at very high and high model approval.

**Keywords:** Community Participation, Life and Career Skills, Modern Agriculture

### **Introduction**

From the present condition and changing context the country has been facing, Thailand's Twelfth National Economic and Social Development Plan (2017-2021) defines the vision with upgrading education and learning quality equally and equitably. The plan has 4 outlines. 1) Reforming educational management with accountability. 2) Reforming educational financing for better quality and effectiveness by direct budgeting to learners and promoting collaboration from the private sector. 3) Developing teacher quality system-wise starting from teacher education, teacher searching, and teacher selection for good and smart teacher including education evaluation and qualification based on learner outcome. And 4) Reforming learning based on human capacity building system-wise from primary level to long-life learning and learning media, curriculum



improvement and educating human resources suitable for the change and needs of market, including research and technology use for learning media. The reform above is in line with the vision -- Thailand is a wealthy, sustainable and developed country with development according to Sufficiency Economy Principle. This vision suits the national motto -- Security, Wealth, Sustainability (Office of the National Economic and Social Development Board, 2015, National Strategy Committee, 2015).

Thailand 4.0 national policy drives to transform all systems of 4 main factors. 1) Transforming traditional farming to modern agriculture emphasizing on management and smart farming to achieve wealth for farmers and becoming entrepreneurs. 2) Transforming from traditional SMEs being supported continuously to smart enterprises and startups with high potential. 3) Transforming from traditional services with low value creation to high value services. And 4) Transforming from low skilled workers to high skilled workers with knowledge and expertise. The Thailand 4.0 policy factors mentioned above is the economic reform with innovation and technology while the agricultural sector is still the core but changing traditional agriculture to modern agriculture creating smart farmers and entrepreneurs (Secretariat of the House of Representatives, 2016, p. 2).

The reform concept above requires quality education especially in schools which have a major role in educating citizens to desirable characteristics. The people should be smart, good, and happy with suitable livelihood. They should be able to learn and develop all skills continuously for life. Therefore, developing modern agriculture career skills in school is the main concept all schools must integrate into the curriculum to follow the national policy goals. The emphasis should be on planting and animal raising which is the main occupation for Thai farmers. This emphasis would lead to grass root community economy and social enterprise. The promotion of SMEs to be able to compete in the world market is the answer to the problems and challenges in all dimensions. The upgrading of capacity, skills is to fulfil people potential to further face the outside changes (Public Relations Department, 2016).

The present condition for basic education schools in the Northeast is beset with quality problems. Most parents in this countryside earn little income by rice farming so they can hardly support their children's education. Moreover, many schools lack budget and personnel (Office of Basic Education Commission, 2015, p.23). The government has been solving the problems but does not succeed either merging smaller schools to larger ones or implementing magnet schools. The problem solving by management is to bring about the least cost but the highest efficiency. The management by community participation for educational management for developing students is the future trend. The participative management has many meanings and concepts. The multi-dimension participation techniques all have common similarities. They promote development, share mutual benefits equally, give confidence for decision-making for policy formation, and implement social and economic plans.

However, to see the whole picture of participation, one must look at the context by defining meaning and understanding to enable the process of encouraging all levels of organization members



or stakeholders to share work and management duty, decision-making, implementing and evaluating (Baksh, 1995; Hoy and Miskel, 2001; Rameshand Rao, 1990). This is in line with Trachoo (2015) stating quality community development comes from school improvement. The community needs lifelong learning strategy and can access learning technology for community network building together with continuous lifelong learning innovation.

Schools should implement the Sufficiency Economy Philosophy (SEP) model into teaching tool as the overall concept and implementation guideline including SEP process drive step by step for widespread use. The process would create resiliency for Thai society to face outside changes. Suitable risk management can help balance and sustain development. This is in line with the policy of Office of Basic Education Commission (OBEC) to stress creation and development of innovation with STEM for learning improvement as the major mechanism for promotion and development of innovation as a whole (Avery and Bergsteiner, 2011; Office of Public-Private Collaboration Project, 2016).

From the above background together with the government policy to promote research and development of technology and innovation on personnel and infrastructure investment, management, entrepreneurship role in technology and innovation, and utilization of research for business and public with property rights protection for school, the researchers were interested to study model development of community participation to promote life and modern agriculture career skills in schools under Office of the Basic Education Commission in the Northeast. This study would answer research problems in basic education school to achieve learning and sufficiency society according to social environment, and effective education quality development of the country as a whole.

### **Research Question**

1. What levels are the present, desirable condition, and needs of community participation to promote life and modern agriculture career skills in schools under Office of the Basic Education Commission in the Northeast?
2. What is the model of community participation to promote life and modern agriculture career skills in schools under Office of the Basic Education Commission in the Northeast?

### **Research Objective**

1. To explore the present, desirable condition, and needs of community participation to promote life and modern agriculture career skills in schools under Office of the Basic Education Commission in the Northeast.
2. To develop the model of community participation to promote life and modern agriculture career skills in schools under Office of the Basic Education Commission in the Northeast.



## **Limit of Study**

### **1. Research population and sample**

**Phase 1.** The population and sample comprised 25,044 schools under Office of the Basic Education Commission in the Northeast. The sample size of 388 schools was derived with Yamane equation with .05 error coefficient. The target group included 4 best practice organizations. The 9 experts for in-depth interview were obtained from purposive sampling and snowball sampling.

**Phase 2.** The target group comprised 9 model evaluation experts and 24 connoisseurship participants for model confirmation.

### **2. Research variable**

The research variable is the community participation to promote life and modern agriculture career skills. It comprises the following.

2.1 Community participation. It has 6 variables -- 1) brainstorming participation, 2) planning participation, 3) taking action participation, 4) monitoring participation, 5) mutual benefits participation, and 6) network building participation.

2.2 Promotion of life and modern agriculture career skills. It has 5 variables -- 1) building relations with others, 2) problem solving, 3) communication, 4) creativity on innovation and technological application, and 5) sufficiency.

## **Research Method**

**Phase 1.** Study of present, desirable condition, and needs of the community participation to promote life and modern agriculture career skills.

1. Document study and synthesis of factors.

2. Survey of present, desirable condition and needs of the community participation to promote life and modern agriculture career skills. The sample comprised 388 schools under Office of the Basic Education Commission in the Northeast. Each school provided 5 respondents -- 1) school administrator, 2) teachers, 3) school board members, 4) community leaders, and 5) student parents. The total number of 1,940 people were derived from multi-stage sampling and simple random sampling. The data collecting tool is rating scale questionnaire with 0.98 reliability. The data analysis employed descriptive statistics and Modified Priority Needs Index (PNI<sub>modified</sub>) technique.

3. Multi- case study. Participants of 4 best practice organizations on community participation and promotion of life and modern agriculture career skills gave data between December 7, 2016 to January 15, 2017. They are 1) Suranaree University of Technology, Mueang District, Nakhon Ratchasima; 2) Mahasarakham College of Agriculture and Technology, KhwaoSubdistrict, Mueng District, Maha Sarakham; 3) Ban Jot Na Tan School, Na Than Subdistrict, Kham Mueang District, Kalasin; and 4) Sathyasaith School, Huai Hin Subdistrict, Chai Badan District, Lop Buri. The data were collected from documents, observation, and interview. The analysis employed content analysis.



4. In-depth interview. Nine expert participants derived from snowball sampling gave in-depth interview between January 20, 2017 to March 15, 2017. They were 1) 2 high-ranking experts responsible for modern agriculture, 2) 3 school administrators who manage Sufficiency Economy Principle learning centers, 3) 2 education supervisors responsible for learning management according to SEP, and 4) 2 agricultural promotion academics. The collecting tool was semi-structured interview form and the data were analyzed with content analysis.

5. Draft model of community participation to promote life and modern agriculture career skills in schools under Office of the Basic Education Commission in the Northeast.

**Phase 2.** Developing model of community participation to promote life and modern agriculture career skills.

1. Evaluation of the model of community participation to promote life and modern agriculture career skills in schools under Office of the Basic Education Commission in the Northeast. Nine experts met to evaluate the model. They were 1) 2 educational service area administrators, 2) 3 school administrators who manage SEP learning center, 3) 2 education supervisors responsible for learning management according to SEP, and 4) 2 modern agriculture academics. The data collecting tool was 5-level rating scale evaluation form. The collected data were adjusted to suggestions with frequency, percentage, mean, and standard deviation statistics.

2. Model confirmation with connoisseurship. On April 28, 2017 at Gold Mountain Wangnamkeaw Resort, Wang Nam Khiao District, Nakhon Ratchasima, 24 experts met for connoisseurship. They were 1) 11 university experts, 2) 5 high-ranking administrators responsible for modern agriculture, 3) 5 school administrators who manage SEP learning centers, and 4) 3 education supervisors responsible for SEP learning management. The data collecting tool was check list form. The data were analyzed with percentage statistics.

## **Research Results**

The research finds the following.

1. The present condition of community participation to promote life and modern agriculture career skills as a whole is of medium level practice ( $\bar{X} = 2.69$ ,  $SD = 0.31$ ) with the desirable condition at very high level ( $\bar{X} = 4.83$ ,  $SD = 0.32$ ). The needs of community participation to promote life and modern agriculture career skills is required in all items ( $PNI_{modified} = 0.65 - 0.90$ ).

2. The model of community participation to promote life and modern agriculture career skills comprises 1) analysis of school condition with shared policy and vision with community; 2) community process including 6 dimensions -- brainstorming participation, planning participation, taking action participation, monitoring participation, mutual benefits participation, and network building; 3) evaluation for life and modern agriculture career skills including building relations with others, problem solving, communication, creativity on innovation and technological application, and sufficiency; and 4) feedback on suitability and possibility at very high level ( $\bar{X} = 4.50$ ,  $SD = 0.51$ ) as a whole, the model confirmation gets 95 per cent approval.

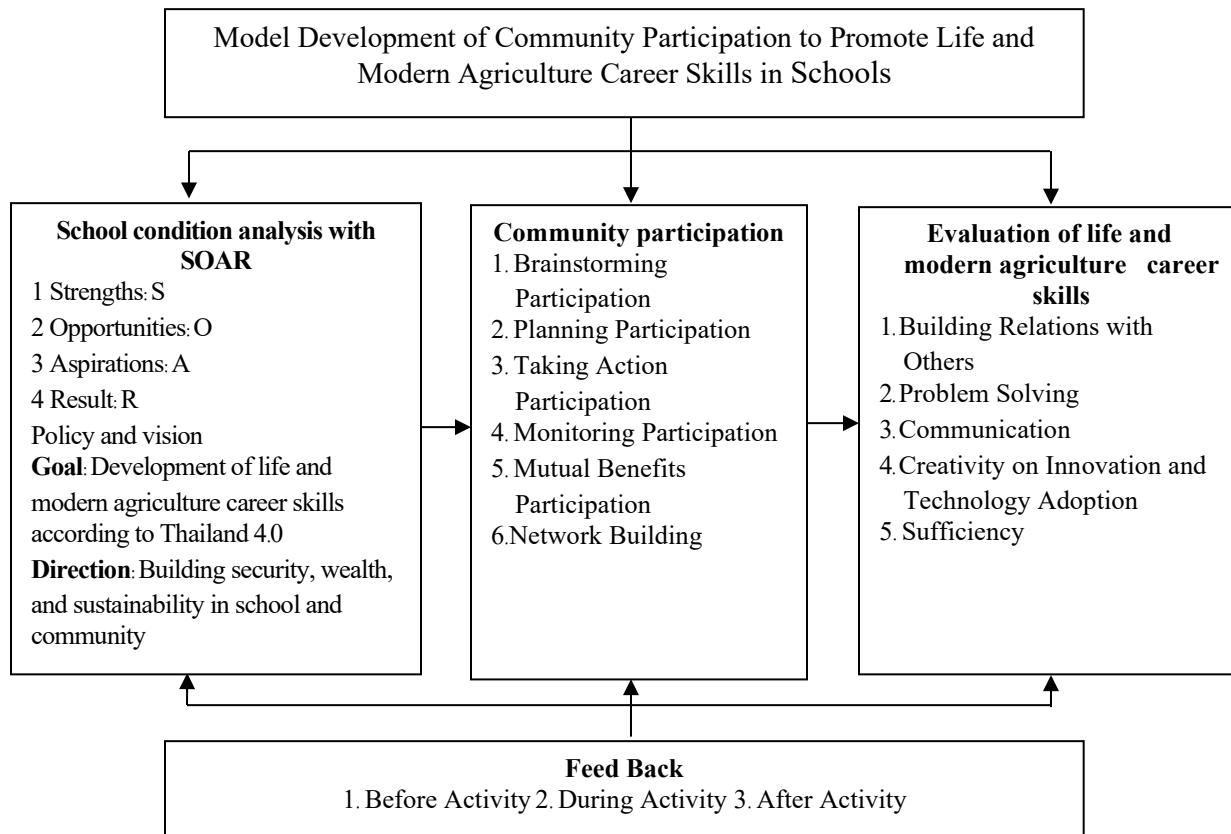


Figure 1 The model of community participation to promote life and modern agriculture career skills in schools

## Discussion

The research finds that the model of community participation to promote life and modern agriculture career skills has 4 main factors – 1) school condition analysis with policy and vision, 2) community participation process, 3) evaluation of life and modern agriculture career skills, and 4) feedback. The discussion is the following.

1. School condition analysis with policy and vision. This is the prerequisite before other factors. The analysis includes goal and direction of Thailand 4.0 in order to be in line with possible changing national development direction. The researchers propose SOAR analysis with outstanding trait on school-based management emphasizing bottom- to- top approach. All organization members fully participate in the analysis, planning, and taking action. This technique helps engage full participation to achieve goal better than the SWOT method which is a top-to-bottom approach. The technique also promotes positive organization culture, focusing strengths and past achievements, aspiration for success, inspiring to shared goal. It also can define performance in each step and connect vision, mission and goals to concrete planning that fits with the present competitive condition Stavros and Hinrichs (2009); Stavros, (2013) Stavros and Cole,



(2013), Cox, 2014). Therefore, school leader who focusses on positive energy, and positive organizational change can suitable employ SOAR analysis for strategic planning.

2. Community participation process. Community participation includes shared decision-making and shared action. This process encourages sense of ownership with positive results to engage all in various development projects. Community members know best what they need, what problems they are facing, and how to solve the problems. The open access to involve community in developing activities helps respond to real needs of the community. In line with Guthrie (1995) finding that the success of school-based management comes from school leader's facilitative leadership that increases participation from community and effective communication among stakeholders giving them satisfaction. In the opposite, the lack of community participation brings less help and lackluster involvement to school (Pauline, 2003).

3. Evaluation of life and modern agriculture career skills. The evaluation of project in all dimensions can indicate the performance success and progress of all activities, either the whole system or organization results. The evaluation seeks the relations among system success, organization performance, and comparing with the best organizations. This benchmarking finds the best way to take action, or best practice for others to adapt and achieve success of their own. However, this evaluation must cover desirable goals that focus on creation of innovation for life and modern agriculture career skills. Partnership for 21st Century Skills (2014), Sarigalaya and Vongkusolkit (2016), and Tienruek (2014) all emphasize on creative thinking skills on innovation that are in line with Thailand 4.0 education skills.

4 Feedback. Feedback is one of the main factors that indicate success or failure of activity. The feedback can apply before action, during action, and after action. This concept is in line with Kangpheng (2017) and Cambridge International Examinations (2017) that mention the Reflective Cycle focusing on feedback with activities according to Reflection Cycle including design, doing, review, and evaluation. The cycle involves before action review (BAR), during action review (DAR), and after action review (AAR).

## **Suggestion**

From the research results, there are suggestions for application and further study as the following.

### **1. Suggestions for application**

1.1 The Office of Basic Education Commission (OBEC) should use the model of community participation to promote life and modern agriculture career skills for other schools giving lower and higher level Mathayom Suksa (secondary level) for life and career skills development with participation. The testing of the model in this research finds that stakeholders or participants have very high satisfaction. STEM education in the teaching system can be integrated with agricultural subject into what is called STEAM Science/ Technology/ Engineering/ Agriculture/ Mathematics). The government should give continues support for research and development budget.



1.2 The Northeast educational service areas should use the model of community participation to promote life and modern agriculture career skills to apply to extension schools with monitoring for concrete innovation development.

1.3 The OBEC school administrators in the Northeast or other regions should use the model of community participation to promote life and modern agriculture career skills to apply with adjustments to suit the context of the schools.

## **2. Suggestion for further study**

2.1 There should be research according to the developed model with complete research and development process. The extension of model use in this research was limited to workshop and evaluation on stakeholders' satisfaction. The new research should spend one school year and measure success on life and career skills of those trained, and efficiency and effectiveness of the whole process.

2.2 There should be in-depth research with emphasis on efficiency and effectiveness of community participation to promote life and career skills in school with higher Mathayom Suksa (secondary) level. This model has been developed according to the context of suitability, possibility and satisfaction of school for pre-primary, primary and lower secondary levels.

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