Knowledge Management in "Kaset Praneet"an Agriculture Model for Development Concept Acceptance for the Farmers in Thailand

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Abstract

A research on "Kaset Praneet" agriculture model (KP) was emphasized in the learning process of farmers and community development in integrated farming based on sufficient economy theory. The aim of this study were to study about the conditions of the farmers' acceptance to the concept of knowledge management in Kaset Praneet and to study the patterns of intensive farming activity in accordance with Sufficiency Economy of the local wisdom network in Buriram Province. It was qualitative research using 3 techniques of data gathering ; in-depth interview, the record of observation and focus group discussion. Moreover, the triangulation technique was employed for accuracy of the data. Target group of this study was 42 members of Local Wisdom Network in Buriram Province. The study was implemented between 2007-2010 A.D. The research found that the knowledge management on Kaset Praneet members gave priority to knowledge creation using group discussion among both internal and external members' network in order to raise their skills into the explicit knowledge that would be again reprocessed into the tacit knowledge; so that, it was useful to find solution for their wide range of professions problems under the limits of landscape, community and resources. The members eventually agreed with its key four principles; 1) faith and trust in local knowledgeable people, 2) counterparts of local wisdom network, 3) status of household economic, and 4) physical health condition of agriculturist. Still, the reasons that were not enable them to accept the principals were from the inner factors; 1) household economic status, 2) opportunity of life, and 3) production resources. The outer factors were the non continuation of local wisdom learning network 's activities and marketing channel. There were three types of Kaset Praneet model; 1) subsistence model – it is household-consumed production, 2) surplus model – besides the household production, it's also for selling; and 3) advance model – it's the diverse manufacturing formation depended on farmers skill and knowledge leading to income earning of the families.

Key Words : Knowledge management, Kaset Praneet, Acceptance, Model.

1. Introduction

Over 132 Million Rai (52,194,543 Acre approx.) or 41% of overall area in Thailand that is fallen heir to generation from time to time, Thailand is defined as agriculture country, particularly the North Eastern region has its area for agriculture 44% or 58 Million Rai approximately. The purposes of this land usage were for husbandry. (Dalodom, 2009; Agriculture Economic Office, 2009). But, it was contradictory that population's general income was lower than any region of the country. Although the previous development policy of the government had precipitated the country into the industrial area, it stands still.

The reasons probably originated from the landscape, population's context, and international and domestic economic status that were owning to circumstance beyond our control. So, the country has remains its name as the agriculture area. Through the development policy of government that has encouraged the minor agriculturists changing their thinking process from subsistence agriculture to single agriculture or main stream agriculture that was impressed; 1) High production for high yielding via maximum input, 2) the investment is stressed at machinery instead of man power, 3) production is focused on single process because it was particular skill and can be produced in such large area, 4) it was the agriculture process with strong obligation to business system, and 5) it was the production system that mainly met marketing requirement. As such, it caused a lot of following or aforementioned problems (Lianchamroon, 1992). Such development ways came powerfully, since it could lead to the modernity and the economic growth regarding to the globalization that relies on capitalistic philosophy with its aim – maximum profit. (Tosakul et al., 2005)

By the previous development it has an effect directly on agriculturists and environment, such as soil deterioration, soil erodibility, pesticide usage that cause the residue and damage the balance of nature as well as gives an effect on Thai wisdom. Acquired knowledge and skill by studying abroad or by inviting the overseas experts to come and pave the Thai agriculture base negligently lower Thai local wisdom due to the fact that the local wisdom was unacceptable to be scientific process and out of date; so, the agriculturists had no confidence and trust to proceed inherited brilliant wisdom. That's why they were always disadvantageous traders and the gap between the rich and the poor was widened (Lianchamroon, 1992). As aforementioned, the agriculturists had never been accomplished in own profession development and had no reliance to strengthen learning skill. It's beyond their expectation that the most important thing the proceed their profession is the intellectual capital or well-known as knowledge. Prutyaprut (2007). He said that "...because of insufficient knowledge, the agriculturists have often met the failure in own career and getting into debt until their cannot lead their by doing work in own community. Thus, the ones who can last long their profession must keep being energetic all the time. In addition, academic field needs to be combined with own skill in order to get the effective profession and earn income for oneself and family happily..."

From such condition there was a group of agriculturist who later was promoted to be local philosopher (local philosopher is a knowledgeable person whose intelligence has been applied wisely to resolve the problem, is the one who independently lead own life in community but at the same time share own generosity to the surrounding people until get accepted and raised to be the model in society.) who have experienced on Integrated Agriculture for times (Integrated Agriculture is defined as the activities that have been conducted at the same time for production for over 2 years, for example, growing rice and pisciculture or raising pigs and growing vegetables and etc.) agreed to from the network in 1995 that called "Local Wisdom Network". The members were comprised of Mr. Sudhinan Prutyaprut, Mr. Kamduang Pasi, Mr. Pai Soisaklang, and Mr. Yu Sundhorntai. Those were from Buriram Province and Surin Province respectively. They continuously came to talk, share and learn the experience of own profession until they got successful in their jobs. At the time the country confronted severe economic crisis but the group of local wisdom network. Later, the concept of local wisdom network was expanded throughout Isan region and in 2006 new ideal formation of agriculture has been structured to proceed own work which was named "Kaset Praneet" - it's innovative learning idea to do integrated agriculture by initiating from the croft and expanding area and number of activity in order to meet the requirement of oneself, family and community. It was land-worth using through such innovative idea. Knowledge, analytical skill, selfindependence were applied from minor to major matters which based on the sufficiency by saving money, saving soil, saving creatures, saving true friends, and saving wisdom, wisely. Through those principals you would be able to live comfortably, have true friends, be wealthy and healthy after consuming organic food and vegetables, enjoy time as a married the couple and share and learn experience with your friends generously. (Thamrongwaranggoon, 2004; Sundhorntai, 2006)

Through seven years that the activities regarding to Kaset Praneet concept have continually been implemented by members of Local Wisdom Network, Buriram Province that include monthly focus group discussion about type of jobs that led from sufficient life to self-reliance, linkage concept with external networks and organization, such as institutes, hospitals, Tambon Administration Offices, foundations, and government sectors; so that, the movement of knowledge management on job and network development and would be occurred. Through several years that Kaset Praneet concept has been implemented expanding network and knowledge management are still limited and it was just disseminated in particular groups.

As such, it was questioned by the researcher that ... " what makes Kaset Praneet concept of Local Wisdom Network in Buriram province not to be recognized extensively. Are there any supported conditions can cause the continual acceptance in Kaset Praneet or what are the reasons that interrupt its implementation? And what model of Kaset Praneet has been done by the members? The solutions of those questions will lead to agricultural-concerned profession development."

Review of the Related Literature

Knowledge is defined as what has been acquired by studying, learning, or experience include practical and particular skill (Thai Royal Institute Dictionary 2003) or it is said that knowledge concerns the expertise or skill that were acquired through experience and applied to the implementation effectively (Senge. 1990, Boonyakit and et al., 2005). Watanasiritam (2007) added that knowledge is a thing enable people understand and bring that knowledge to practice or apply for the usefulness. There are two of knowledge (Polanyi, 1996; Nonaka and Takeuchi, 1995); tacit knowledge – an experiential knowledge happened from working or be hidden inside people in the form of skill, expertise or the proficiency. Other one is explicit knowledge that is knowledge that can be disseminated to other people by the owner by explaining, verbalization, or written messages in order to send out or communicate into systematic language explicitly. It is theoretical knowledge which can be transform into several kinds of medias such as database, books, CDs, or VCDs and etc. Knowledge gives importance to processing method, it has never been gone out but it will be increased instead, in particular, agricultural knowledge as the main profession of community.

Knowledge Management guides the organization strategies to classify, structure, explain and disseminate deep data and experience which was comprised of tacit knowledge and explicit knowledge or one of them in the individual. It was proceeded through process or practice (Stankoky, 2005; Nonaka and Takeuchi, 1995) in order to be recognized as knowledge management as the interdisciplinary field which was integrated via learning system and interpersonal working. From the perspective of Prawese Wasi, knowledge management means to cope with appropriate research by setting the condition together, doing research, learning and sharring knowledge and managing it through be cooperative learning. Besides, after managing it should be forwarded it to whom to successful implementation and evaluate its result in order to be continual self-adjustment. And qualitative researcher, knowledge manager and learning units should have been structured continuously (Wasi, 2002). From guidelines of knowledge management of Boonyakit et al. (2004); Nonaka and Takeuchi (1995) found that there were 7 steps of a good knowledge management that agriculturists can be applied to own skill and develop the sustainability; 1) self-searching for the advantages of oneself and community, 2) searching and seeking for knowledge is the method to collect scattered knowledge from the sources, 3) systematizing knowledge is for accessible and applied easily, 4) processing and screening knowledge into simple formation for convenient usage, 5) knowledge access by collecting and disseminating, 6) share and learn knowledge, and 7) learning is to apply knowledge when solving problem which the last one is so important because if the individual applied it unskillfully, it would waste time and resource as staed Senge (1990) that "knowledge if the competence of doing anything effectively and the organization needs to encourage and set learning atmosphere; so that, the personnel would be able to think, do and trial and error wisely and continuously"

Kaset Praneet is learning process of doing integrated agriculture by initiating from the croft and expanding area and number of activity in order to meet the requirement of oneself, family and community. There were diverse formations of doing Kaset Praneet by members of local wisdom network like growing rice and pisciculture or raising pigs and growing vegetables and etc.. it's appropriate learning area regarding to its size and labor as well as the group of agriculturist doing organic farming in Yasothon Province who attempted to learn, set knowledge, and reply on themselves. There were several productions emphasized on self-reliance to earn household income (Hutanuwat and Hutanuwat, 2004). Some of local scholars and members agreed, trusted and accepted it, but it did not mean all of them. So the research of Tosakul and et al. (2005) identified what made the agriculturists not to accept Kaset Praneet idea came from small area of land, not enough water and insufficient man power, and less income but too much paying as well as it was over supplying production. Meanwhile, Rogers & Shoemaker (1971) stated that it was concerned mental process of individual agriculturist to accept agricultural technology starting from receiving technology news and accepting technology openly. There are five components enabling the agriculturists accept the technology; 1) awareness of technology news, 2) interest in additional information, 3) evaluation, 4) trial in the croft, and 5) adoption of technology. In addition, Boonman and Unphim (2006) said the effective components toward life adjustment of agriculturists to do the integrated agriculture mainly came from food security in household and community. Also focused on diversity of plantation, raising animals, using land worthily through the year, earning for family by working in several kinds of job and dispersing income all the year. To achieve agriculturist have to hold the concept of household production components and safety consuming that correspond to the study of Kaset Praneet knowledge management of Sufficiency community in Ubon Ratchathani University. The community was established by Asoka villagers who lead their life regarding to sufficiency economy. It also usefully serves as sufficiency of the community happened tacit knowledge through focus group discussion, trial and error until they get the confidence and there came the occurrence of five components of Kaset Praneet knowledge package that were 1) vegetables – fruits – rice farming, 2) vegetables – mushrooms - Fresh water Alga, 3) vegetables – herbs, 4) vegetables – fruits and 5) forest agriculture which mainly is about vegetable planting, since consuming any kinds of meat is prohibited in the community. In addition, the key factor to get the Kaset Praneet accepted is the executor must have strong faith and trust together with having the strong community leader that will be the sustainability in own career.

Research Methodology

The study was qualitative research consisting of 3 techniques of data gathering; in-depth interview about acceptance, rejection of the farmer to the concept of knowledge management in Kaset Praneet, and model of Kaset Praneet. Target people and area was four districts in Buriram province - Satuek, Candong, Lamplaimas and Bhuddhaisong the hometown of local scholars .Target group was 42 members of Local Wisdom Network in Buriram province were selected based on 4 criteria 1) diversity of activity, 2) competence and readiness of giving information, 3) statistic of people attending activity, 4) recommendations of members and local scholars, and 5) convenience and appropriateness of context. Three research tools were employed; 1) semi-structured interview, 2) observation record, and 3) focus group discussion. Moreover, the triangulation technique was employed to measure its accuracy. Then, all gathered data was synthesized for its acceptance and Kaset Praneet model, regarding to knowledge management on Kaset Praneet which was comprised of 1) Socialization: the initiative step of the individual to know idea and feeling of each other in community, 2) Externalization: expression of your knowledge and idea openly, 3) Combination: the combination of various knowledge before practicing, and 4) Internalization: the infusion of knowledge or experience into oneself (as Figure 1). It was presented descriptive statistic with content analysis technique and analytical induction. Then, focus group discussion was proceeded in order to validate and assure its correctness of information and its recommendations. The study was conducted between 2007 – 2010.



Figure 1 : Circle of Kraset Praneet knowledge management of Local Wisdom Network's members, Buriram province. Applied from Nonaka, I. and Takeuchi, H. (1995)

4. Results and Discussion

4.1 General information of target group: the main careers of them were in agriculture sector who approximately own 3.5 - 120 Rai of land. The members were Buddhists, aged around 51-60 years old, graduated at Primary level, and live with 1-8 members in household. Every family was able to rely on themselves on the staple; rice, because both sticky rice and non-sticky type were sufficiently grown on farm of all family. And because of the products they had by doing Kaset Praneet brought them income around 29,000 – 963,000THB/ household and definitely there was payment in the family which was about 22,100-520,500 THB/ household that spent on careers investment the most. Besides, it was found that the members had the savings both with general banks and local saving group or community financial institutes. Their savings was started from 2,000 – 320,000 THB/ household; meanwhile, most of them were in debt about 10,000 – 590,000 THB with Bank for Agriculture and Agricultural Cooperatives and car company which could be manageable.

4.2 Acceptance of Kaset Praneet concept: From guideline of Kaset Praneet knowledge management to be developed to get acceptance from members of Local Wisdom Network, it aimed to set the Kaset Praneet as alternative career in order to raise their quality of life. The study found that most of the members (76%) agreed with Kaset Praneet as it could be actualized and enabled agriculturists stand by their own, particularly four requisites. There were four effective factors made the members trust in Kaset Praneet;

4.2.1 Faith and trust in local scholars: It could be defined as community leaders – Kruba Sudhinan Pruyatprut, Father Pai Soisaklang, and Father Kamduang Pasi whose life led by ideal concept of Kaset Praneet were successful. They were the model of Kaset Praneet for agriculturists overall country. As such, members of Local Wisdom Network believed to achieve in own career if following the path that the leaders have done successfully.

4.2.2 Peer Ideology of Kaset Praneet activity: since 2002 Local Wisdom Network by the head of Sustainable Community Development Foundation in Khon Khen Province, Facilitator implemented Kaset Praneet and conducted its activity in every two month by rotating to the learning center of each local scholars.

All the members agreed that having working network is good and beneficial because they had peer friends to think and share idea that enable them acquired more knowledge and skill to wisely solve the problems as well as it was a good source of inspiration. That's why they decided to accept this concept.

4.2.3 Household economic status: 80% of overall agriculturists who accepted the concept of Kaset Praneet had no any household economic problems; they were free from financial obligation, children's tuition fee, monthly loan payment as well as man power.

4.2.4 Physical health condition of agriculturists: After studying most members or 80% were very concerned about their health condition. Doing Kaset Praneet was another interesting alternative, since Kaset Praneet was without any chemical and toxic that's why they agreed that after following such way they wouldn't catch any disease or the ones who lived with underlying disease would be stronger because they worked out by doing Kaset Praneet regularly.

4.3 Cause of unacceptance in Kaset Praneet: the minority (14%) disagreed in Kaset Praneet which probably came from 2 factors; 1) internal factors and 2) external factors as follows:

4.3.1 Inner factors were; 1) Household economic status: Initially, this groups of agriculturists devoted themselves for Kaset Praneet and later they confronted financial problems like paying for many things for family and the way of doing Kaset Praneet did not meet their needs or requirement. As such, they finally decided to neglect the concept., 2) Opportunity of life: some of the agriculturists themselves were interested in following Kaset Praneet but members in family such as husband, wife, father in law or mother in law against the concept with miscellaneous reasons, and 3) production resources: some agriculturists were in need of land, water, capital, man power, management and information. So that's the reasons leading to disagreement.

4.3.2 External factors included 1) discontinuity of activity: Primarily, many agriculturists were well contacted and coordinated for doing Kaset Praneet but time passed it stand still. Nothing moved, changed, or they rarely heard news from Local Wisdom network. They later decided not to follow the activity; and 2) marketing channel "...grows what you eat and eat what you grows..." and "...produce to eat, leftover to distribute and left from distribute is to sell...". These two quotation were the basic principles of Kaset Praneet. Some members expressed that it'd better if the products leftover after consuming were sold to the market because the income partly would be paid for necessary goods or the four requisites. But the factors shouldn't be skipped over was demand of the market. They certainly had many products of Kaset Praneet but they had no skill of how to manage with and the network was incapable to deal with the products; so the agriculturists earned no income and no more people would do Kaset Praneet.

4.4 Models of Kaset praneet: Knowledge Management of Kaset Praneet of Local Wisdom Network's members gave an effect to deepen peer's knowledge management. They also applied the theory into the practice. Thye tried hard several times, fell down and stood up again and again. When faced with problem they were assisted by their peers. For example knowledge on the use of water treatment, the recycling of used water, particularly in doubled-crop field, growing organic vegetable, growing Phak Wanpha (*Melientha suavis*), improving quality of soil, raising frogs, growing wild mushroom and etc. Through the rotation of twisted knowledge management agriculturists acquired particular skill, tacit knowledge, which could be applied into their life at whenever they want. The three models of Kaset Praneet was conducted by the members of Local Wisdom Network, according to the guidance of knowledge management; biological and physical environment; socio-economic context; the study of production structure such as size of land, land owing, man power, type of tools, type of activity, and the way of life regarding the Sufficiency Economy which meant the way of life of individuals or family with self-reliance, increase income and decrease payment, and be friendly with environment as well as be without carelessness and any kinds of gambling as follows;

4.4.1 Subsistence model: It was mainly focused on household consuming with diversity of plants and animals. The former one was emphasized on home-grown vegetable that absorbed little water and took small planting area such as garlic, green lettuce, paper mint, ginger, lemongrass, sweet basil, galangal, hairy basil and etc. Besides, the pilot agriculturists whose products were in the similar model had no confidence in own knowledge package, particularly on marketing. It's was an important problem because they primarily were used to quantitative growing; when the products sold to the market its price was very low. As such numbers of products was lower; just to be enough to eat or shared to relatives if it was leftover. But, if there was anyone interested in buying plot of land they decided to sell with unfixed price; depended on satisfaction of purchaser and seller.

In 2009 the members earned approximate income by conducting Kaset Praneet 1,000-6,000 Baht/ household. Through the model they always encountered insufficient water. Water was key factor of Kaset Praneet; therefore, it was a limitation to expanding the planting area.

4.4.2 Surplus model: It was together stressed on household consuming, share, and earning income for family. The model was based on prospective adjustment and learning method. Before practicing the members needed some knowledge first and tried again and again in order to measure if the acquired knowledge was sufficient to use; so that, the member were more confident to do Kaset Praneet. They would focused in diversity of production in order to meet general purpose of usage and requirement of individual and family as similar as the previous model. The model was rather concerned to marketing because after keeping for family and sharing to relatives the products would be distributed to community and neighboring villages in order to earn money for family. Limitations of the model were insufficient water and marketing condition. With less knowledge on marketing management there were worried of expanding more planting areas. By the study in 2009 the members could earn from selling Kaset Praneet products 6,001 - 12,000 Baht.

4.4.3 Advanced model: It was proceeded on knowledge. When there were experienced enough they would enlarge both farming area and quantity of product. The pilot agriculturists were ready of materials. They would focused in diversity of production in order to meet general purpose of usage and requirement of individual, family and community as well as risky disperse of price. They also attempted to expand learning network. The members were able to earn money from selling Kaset Praneet products up to 12,001 Baht, by the study in 2009.

Summary and discussions

By the study of Kaset Praneet principal acceptance of Local Wisdom Network members, Buriram province, the principal was once faced the failure but it later was developed to be successful career based on sustainability of life and Kaset Praneet principals. It was the learning process to improve oneself into integrated agriculture which started from doing farming in small area first, when acquired more skill and knowledge the farming area would be enlarged in order to meet requirement of oneself, family and community regarding to their capability and Sufficiency Economy. Kaset Praneet was obviously opposite to what other people had done in the past. They merely did because they heard it was good but they lacked of self-analytical skill. Therefore, the model initiated from professional career development due to struggle against the globalization via serious learning process; the 4 methodologies of Kaset Praneet as aforementioned. So, knowledge management is a tool or mechanism that help develop career and focus on agriculturist's awareness on knowledge because knowledge is an important factor to do any kinds of job, particularly in such information technology era. Be skillful, see through someone's trick, and have a thorough knowledge they would achieve in their profession. The members requires to expand this idea to all level of agriculturist. The fundamental factors that led to Kaset Praneet acceptance were from; 1) Faith and trust in local knowledgeable people, 2) Counterparts of Local Wisdom Network, 3) status of household economy, and 4) physical health conditions of participant, farmer. Regarding to researcher's thought, the factors conformed to the new innovation that faith and trust need to be occurred before getting accepted. It was as said by Rogers & Shoemakers (1971) that acceptance of agricultural technology was concerned to mental process; starting from receiving technology information to openly accepting it. Thus, what the activity conductors or academic affair officers have to do primarily in order to provoke and disseminate the idea was encouraging the leaders to believe in the idea and gradually expand into other effective factors. As reported by Boonman and Unphim (2006) family and community food security was an effective factor that turned perspective and life style of agriculturist to do integrated agriculture. Also, the idea stressed on diversity on planting and farming; it was like using the land worthily thorough out the year, earning income from several sources and dispersing it through a year. As such, the agriculturists have to importantly cling to household production factors and food safety.

The reasons that were not enable them to accept the principals were from the internal factor and external factor. Researcher thought it seemed similar to acceptance of new innovative agriculture, as some of agriculturists who participated the project needed lots of money for their children education and paying their debt. So, it was so necessary earn at least ten thousand Baht per month. If they decided to do Kaset Praneet, income would definitely not be enough and it took times to see the progress. That's why they had to change their job or work outside the community to earn additional money. Findings were similar to Hutanuwat and Hutanuwat's (2004) research that what caused the agriculturist cast off sustainable agriculture were; 1) separated family; be dispirit; be downhearted, 2) over owing; be unable to invest and deal with increasing payment, 3) less man power and physical strength, 4) improper farming area, and 5) uncover of agriculture protection law.

Such conditions obviously determined achievement of integrated agriculture or Kaset Praneet. Many people said that doing Kaset Praneet was ideal and good channel to develop profession but finally unacceptance problem did not differ from doing innovative farming or sustainable one, ecologically sustainable or in terms of long term success? So, researcher assumed that the structure of production line policy should have been proposed to be revised and followed.

There were 3 models of Kaset Praneet included Subsistence model; Surplus Model; and Advanced Model with distinctive styles depends on tacit knowledge of the individuals but what made the models looked similarly was in all models there would be perennial plant that could be used for life long. Besides, we could see that members of Local Wisdom Network were aware of strengthening their skill since they believed they have to practice several times to acquire good Kaset Praneet skill as said by Nonaka and Takeuchi (1995) Marquardt (2002) and Watanasiritam (2004) that what has strengthened, deepened, and comprehended man's mind is not any other special things but knowledge. So, when the real knowledge occurred it would definitely be finally accepted. These Kaset Praneet models is a good starting for all agriculturists to review and learn when they have done in order to meet the social context and up to date in the globalization. Regarding to the statement, it was ideal model to applied as guidance of setting and developing agricultural career or any other jobs in community. In addition, effective factors of getting new knowledge from Kaset Praneet is the members or the performers need more confidence and strong faith as well as strong community or working network to inspirationally and sustainably conduct Kaset praneet activity.

Recommendations

1. Recommendation on policy: knowledge is a dynamic system. Learners or knowledge receivers have to keep things and situation up to date in both tacit knowledge and explicit knowledge in order to be developed an own career. Besides, Kaset Praneet is a fundamental process of setting knowledge to sustainable career of all farmers. Relevant sectors or offices should treat it as guidance of profession development.

2. Recommendation for research: paradigm, behavior, perspective, and leadership were influential on Kraset Praneet acceptance. Therefore, the further study on Kaset Praneet should be conducted to balance and sustain agriculture career.

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