

ชื่อเรื่อง กระบวนการเรียนรู้ภูมิปัญญาไทยในรูปแบบการเรียนรู้ตามอัธยาศัย
ในจังหวัดนนทบุรี : การทำสวนทุเรียน

Title **An Informal Style of Learning Process on Thai Indigenous
Wisdom in Nonthaburi Province: A Case Study of Durian
Orchard Work**

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บทคัดย่อ

ภูมิปัญญาไทยด้านการประกอบอาชีพการทำสวนทุเรียนของจังหวัดนนทบุรี เป็นภูมิปัญญาที่ควรได้รับการอนุรักษ์และสืบสานไปยังอนุชนรุ่นหลัง เพราะ " ทุเรียนสวนนนท์ " เป็นทุเรียนที่ได้รับการยอมรับในความโดดเด่นด้านรสชาติที่เป็นที่นิยมชมชอบของผู้มีโอกาสลิ้มลอง การพัฒนารูปแบบกระบวนการเรียนรู้ภูมิปัญญาดังกล่าวทั้งด้านการรับการเรียนรู้และการถ่ายทอดความรู้ในรูปแบบของการศึกษาตามอัธยาศัยเป็นสิ่งสำคัญยิ่งที่จะช่วยให้ภูมิปัญญานี้คงอยู่และมีผู้สืบสานต่อไปในอนาคต

คำสำคัญ : ภูมิปัญญาไทย ; การประกอบอาชีพทำสวนทุเรียน ; จังหวัดนนทบุรี ; กระบวนการเรียนรู้ภูมิปัญญาไทย

Abstract

The Thai indigenous wisdom on the occupation of durian orchard work in Nonthaburi Province is the wisdom that should be preserved and handed down to

Thai younger generations because "Nonthaburi durian" is generally accepted as having excellent tastes and being popular with durian lovers. Development of the above mentioned learning process in an informal learning style for both the receiving knowledge and imparting knowledge aspects is an important measure for assuring that this indigenous wisdom is maintained and carried on by younger generations in the future.

Key words : The Thai indigenous wisdom the occupation of durian orchard work Nonthaburi Province learning process of the Thai indigenous wisdom

The Indigenous Wisdom on Durian Orchard Occupation

"Nonthaburi durian" has been famous for a long time for its delicious taste. Besides its taste that has long been undeniable, "Nonthaburi durian" is also famous for its extremely expensive price. There was even a saying that "Nonthaburi durian", especially the Kaan Yao (long stem) variety, "was so expensive that the buyer cannot afford to eat it himself, while the eater does not have to buy it." This is simply because several persons have to pool their money in order to buy it and present it as a gift to their boss or respected elders since the price of one fruit ranges between 1,500 – 2,500 baht. This high price arises from the fact that Kaan Yao durian is the most delicious as well as the most difficult to find due to limited numbers that can be produced.

Phraya Phongsa Wisutthathibodi (Sun Sunthornwet) (cited in Hirun Hirunyapradit, Semsuk Salakpetch, Sukkawat Chanthapannik, 2541: 40-43) told the history of durian orchard work in Nonthaburi Province that it originated in Bang Krang Sub-district on Bangkok Noi Canal in B.E. 2397. During the original stage, orchard keepers propagated their durian trees from seeds. Later on, the propagation was by means of using layered cuttings from three good varieties: Ebart, Thongsuk, and Karaked, all of which cannot be found at present and even their names are already forgotten. Also, because durian orchards had been destroyed several times by flooding, orchard keepers had to turn to propagating by seeds again resulting in consecutively causing durian variety changes. Not only the problem of variety changes but also those of flooding, water pollution, and air pollution caused by encroachment of buildings, real estate development, and changes in social settings that cause hundreds of durian orchards which used to be widely spread out in Nonthaburi to be transformed into housing estates and business center areas with only few areas and orchards remaining during the last ten years. In B.E. 2542(1999), durian orchards still exist in some sub-districts of only four districts, namely, Mueang Nonthaburi, Bang Yai, Banf Kruay, and Pak Kret (Department of Fine Arts, B.E 2542(1999), : 232).

In the years 2003 – 2004, Pradinan Ouparamai and others conducted a research study entitled: An Informal Style of Learning Process on Thai Indigenous Wisdom in Occupations. In that study there was also a study on the occupation of durian orchard work. Many points regarding indigenous wisdom on durian orchard work of Nonthaburi orchard keepers were found. Main points to be presented in this paper are the following:

1. Indigenous wisdom on durian cultivation in clay soil of low land more suitable for rice farms than for fruit orchards;
2. Indigenous wisdom on the use of organic fertilizers rather than chemical fertilizers;
3. Indigenous wisdom on protection of durian trees and fruit from damages caused by animals or insects; and
4. Indigenous wisdom on conservation of durian orchards via agro-tourism.

The details of the four points of indigenous wisdom are briefly presented as follows:

1. Indigenous wisdom on durian cultivation in clay soil of low land more suitable for rice farms than for fruit orchards

From the interviews of the Nonthaburi Provincial Agriculture Officer by the researcher and others in the above-mentioned research study, it was found that the soil in Nonthaburi Province area was not really suitable for durian cultivation because it was clay soil in low land area which was more suitable for rice farming. However, due to indigenous wisdom of Nonthaburi durian orchard keepers, durian cultivation was made possible by digging up the soil and making orchard beds of one meter wide and 50 centimeters high. The soil was left to dry for 10 days, and then dug in the middle to make a furrow to be filled up with humus mud. After that, layered durian branches were planted in a row. A trough was dug around each planted durian tree to prevent out growth of weeds. Keep watering and caring. When its

roots shot up they were covered with mud to prevent exposure. The roots were carefully arranged to disperse in all directions in order to prevent the tree from leaning one way or another. A wooden pole was planted in the ground and firmly attached to the durian tree to protect it from strong winds. Banana trees and betel trees were planted around all four sides of the orchard to serve as windbreakers. Humus mud from the bottom of the ditch was splashed up to cover the tree base every year or every two years. In some orchards the planter dug a well, 1 – 1.5 meters deep and 1.5 by 1.5 meters wide, beside the durian tree. This well was to store water for the durian tree and serve as a compost pit to collect fallen leaves of *Erythrina fusca* and other plants and let them accumulate and rot and become organic fertilizer that could be absorbed by durian roots. The main reason that Nonthaburi durian growers also planted *Erythrina fusca* was to provide shades for young durian trees. Also, fallen leaves of *Erythrina fusca* that accumulated and rotted in the ditch or the pit helped to add humus to the muddy ditch soil. When the humus mud from the ditch was brought to cover the base of durian trees, it provided the trees with high nitrogen fertilizer derived from rotten leaves of *Erythrina fusca*. In fact, Nonthaburi durian growers did not know exactly that *Erythrina fusca* leaves contained high amount of nitrogen element, but they probably learned from experience gained from real practice that planting *Erythrina fusca* trees along side durian trees helped to increase durian yields. Also, after the durian trees grew up and started to yield fruit the orchard keepers utilized the wisdom accumulated from observations and teachings from ancestors on how to select the mature fruit and how to cut the fruit correctly for marketing quality. All of the above-mentioned become indigenous wisdom of Nonthaburi durian growers that has been accumulated and handed down from ancestors to the present generation of durian orchard keepers.

2. Indigenous wisdom on using organic fertilizers more than chemical fertilizers

In durian cultivation in Nonthaburi in the past, durian growers not only used humus mud containing accumulated rotten *Erythrina fusca* leaves recovered from bottom of the ditch as fertilizer, but also used animal manure such as bat manure, chicken manure, and cow manure as fertilizer for durian trees. Although at present some chemical fertilizers have been used by durian growers, the majority of durian growers still used organic fertilizers such as animal manure, bean residues, and compost containing rotten animals and plants as the main fertilizer.

3. Indigenous wisdom on prevention of durian trees and fruit from damages caused by animals and insects in the orchard

A main problem and obstacle for durian orchard keeping of Nonthaburi durian growers was the damage and destruction on durian trees and fruit caused by some insects, aphides, rats, and squirrels. The indigenous wisdom utilized by Nonthaburi durian growers for preventing and resolving the problem was the planting of many species of plants in durian orchard. This practice arose from the observation of insect lives in the orchard. When there were many species of plants in the orchards, there were a wide variety of insects that fed on those plants and predators that fed on those insects resulting controlling the number of harmful insects. As for the problems caused by rats and squirrels, durian growers resolved them by covering durian trees with plastic sheets or galvanized iron sheets, and wrapping durian fruit with iron net. These practices prevented rats and squirrels from climbing up the tree and destroying durian fruit.

4. Indigenous wisdom on conservation of durian orchards via agro-tourism

When the number of durian orchard decreased due to flooding problem that wrecked some durian orchards, some orchard keepers came up with an initiative of turning their durian orchard into an agro-tourism center. The first person to do so was Mrs. Sawai Tassaneeyawet, a durian grower in Bang Raknoi Sub-district, Mueang District, Nonthaburi Province. At present (A.D. 2003), she is 66 years old. She has learnt about durian growing from her father since she was 11 – 12 years old. When greater numbers of tourists came and visited Mrs. Sawai's agro-tourism center, businesses at neighboring orchards also improved which was the distribution of incomes into the local area. From Mrs. Sawai's achievement, the Office of Nonthaburi Provincial Agriculture, Tourism Authority of Thailand, and some resort owners in Chiang Mai Province made the information on her place available in the website. As a result, more Thai and foreign tourists came and visited her place. In touring this agro-tourism center, beside walking around and seeing the orchard, tourists also could buy simple lunches such as boxes of prepared rice at the reasonable prices which was quite satisfactory for them. Furthermore, in the near future the orchard keeper also has a plan to set up accommodations in the orchard to provide home stay service to tourists.

The Learning Process of Indigenous Wisdom on Durian Orchard Occupation

As for the learning process of indigenous wisdom on durian orchard occupation of Nonthaburi durian orchard keepers that has been inherited and carried on until the present time, from the study of the research team that divides the wisdom learning process into that of receiving knowledge and that of imparting knowledge, the model of the original learning process for the wisdom by Nonthaburi durian orchard keepers can be shown as presented in Figure 1 below:

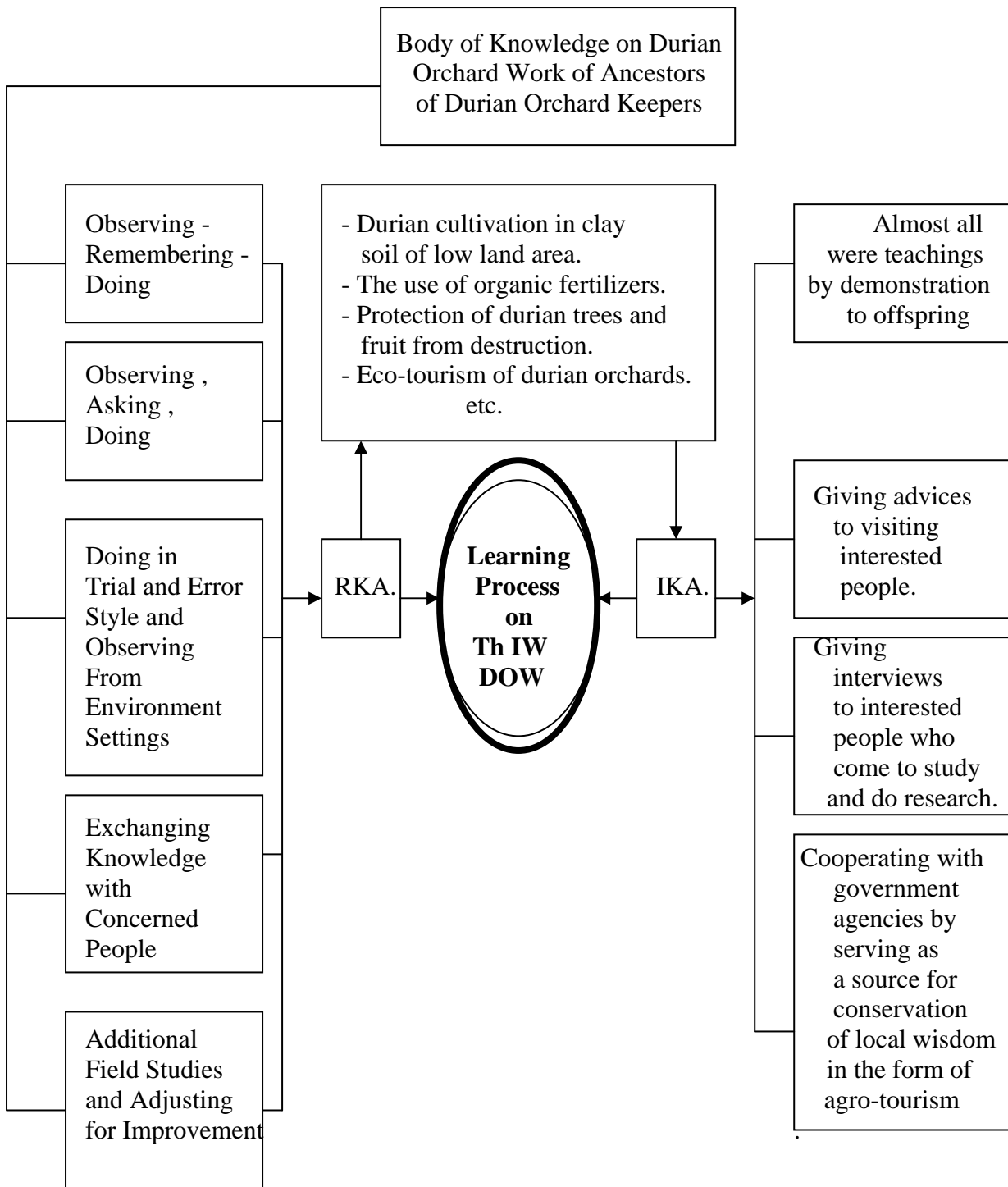


Figure 1: The Learning Process on Thai Local Wisdom of Durian Orchard Work by Durian Orchard Keepers in Nonthaburi Province

The Receiving Knowledge Aspect (RKA) of the Learning Process

From Figure 1, it can be seen that the receiving knowledge aspect of the original learning process on indigenous wisdom of durian orchard work by durian orchard keepers in Nonthaburi Province comprises five categories of learning:

1. Observing – Remembering – Doing. This category of receiving knowledge is the learning from the family or the ancestors. When they were still children the future durian orchard keepers followed their parents to the orchard and saw how their parents worked everyday until they could remember. When they grew up and were able to help out, they helped their parents by doing as their parents did, or doing according to what they had seen and remembered keenly.

2. Observing – Asking – Doing. This category of receiving knowledge was practiced by learners who learned from original practitioners of the occupation. When the learner wanted to take up this occupation he would start by observing how the original practitioner worked in their orchard. When in doubt he would ask and take into practice what he was told. When in doubt again he would ask again and practice again accordingly until he could master the occupational practice.

3. Doing in Trial and Error Style and Observing from Environment Settings. In this category of receiving knowledge the learner usually does not ask anybody, but will undertake the practice by himself based on his own knowledge or his idea of how it should be done. After that he will observe the results of his undertaking. If the results are satisfactory he will remember and continue to undertake the practice. If any practice does not have satisfactory results he will adjust it or adopt a new practice and then observe the results again. Another way is to stealthily observe the performance of others and then try to do it oneself. Sometimes one cannot remember all and cannot imitate all of what he has observed. Besides, he can also learn from observation of the weather conditions and the environment around the durian orchard, such as, the amount of water in the ditch at the time when the durian tree is in bloom or bears young fruit, which he think that it might have an effect on durian yields. The learning cycle can go on and on until he discovers the good practices that he can adopt and continue to practice until he can take up this occupation for earning his living and supporting his family.

4. Exchanging Knowledge with Concerned People. This category of receiving knowledge is accomplished through exchanging knowledge and experience among those in the same occupation. The obtained knowledge and experience can be adopted or adapted for improvement of the occupational practice.

5. Additional Field Studies and Adjusting for Improvement. This category of receiving knowledge occurs when government agencies offer helps because they realize the importance of this occupation. Under the policy of expanding their vision on their own occupation, Nonthaburi orchard keepers were taken on fieldtrips to see durian orchards in other provinces such as those in Chanthaburi province which had orchard practices different from those in Nonthaburi because there was no ditch digging in the orchard and durian trees there were of lower height than those in Nonthaburi. As a result, some orchard keepers in Nonthaburi adapted some practices they gained from the fieldtrips and tried them with their own orchard

However, all of the five knowledge receiving categories practiced by durian orchard keepers in Nonthaburi Province have been obtained and accumulated by experience without taking notes in written form. The obtained knowledge, either handed down from ancestors or accumulated through self experience or self discovery, is still in the mind of knowledge receivers only. If these people pass away, this knowledge will also perish with them.

The Imparting Knowledge Aspect (IKA) of the Learning Process

From Figure 1, it can be seen that the imparting knowledge aspect of the original learning process on indigenous wisdom of durian orchard work as practiced by durian orchard keepers or they ancestors in Nonthaburi Province comprises four categories of knowledge impartation. However, almost all of the practices of knowledge imparting were the teaching by demonstration to their offspring and let them practice in imitation. Teaching to others who are not offspring was rather rare and in the form of answering to questions posted by interested visiting persons, giving interviews to interested people who came to study and do research, or cooperating with government agencies by serving as a source for conservation of local wisdom on durian orchard work. All of these practices of knowledge impartation still have not been noted in written form. There has been also no learning media that can help interested persons to learn systematically by themselves.

A Proposed Model of Informal Style of Learning Process on Thai Indigenous Wisdom of Durian Orchard Work (ThIWDOW) in Nonthaburi Province

From the above analysis and synthesis of the learning process on Thai indigenous wisdom as practiced by Nonthaburi durian orchard keepers, it can be seen that there is a weak point in the process that prevents it from becoming a sustainable learning process because there is no systematic arrangement of the body of knowledge for learning or for imparting to others. Therefore, the research team proposes a model of informal style of learning process on Thai indigenous wisdom of durian orchard work in Nonthaburi Province that will enable both the receiving and imparting aspects of the learning process to become more systematic and sustainable in the form of an informal style education process, as shown in Figure 2 below:

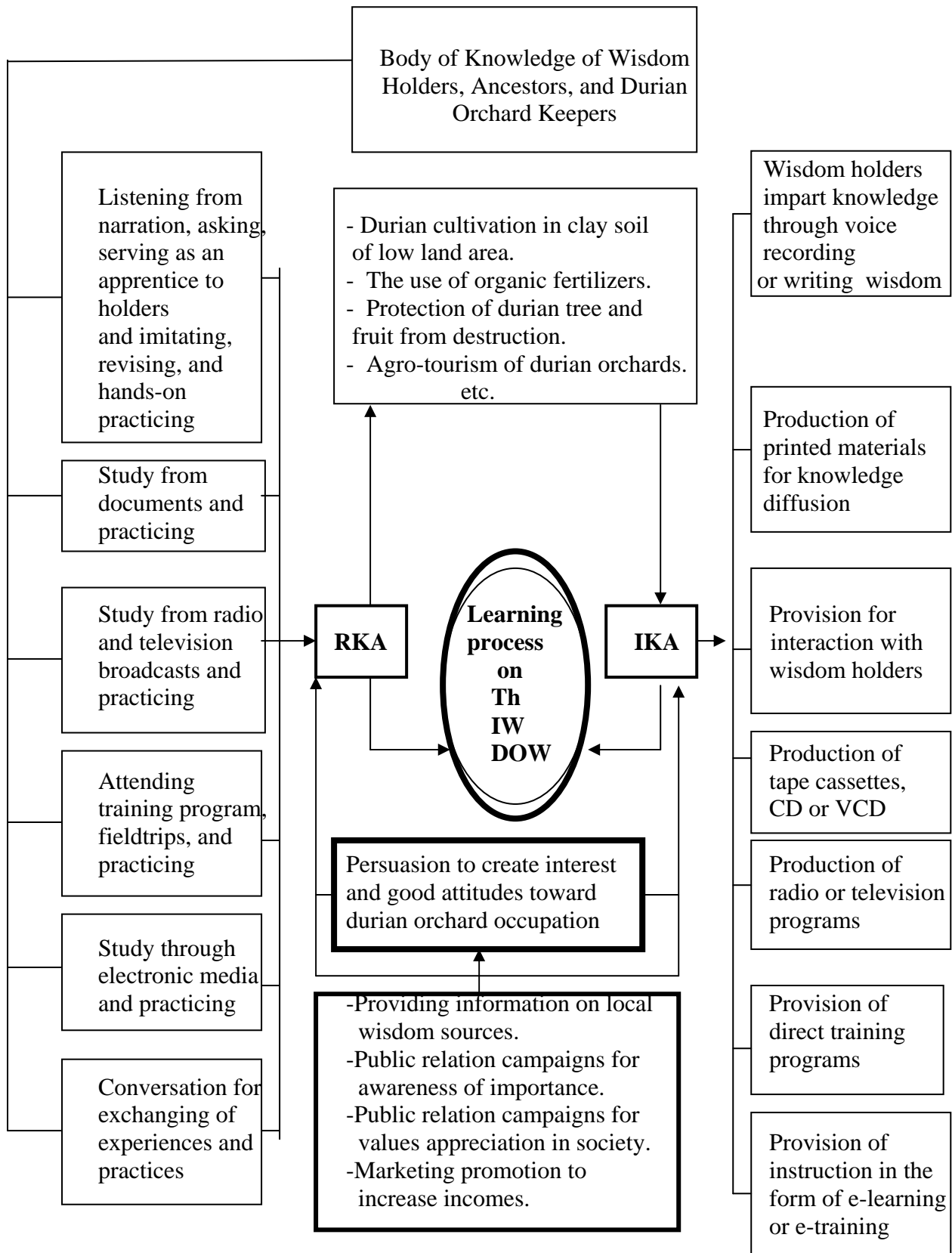


Figure 2: The Learning Process Model on Thai Local Wisdom of Durian Orchard Work for Durian Orchard Keepers in Nonthaburi Province in the Form of Informal Education to Create the Sustainable Learning Process

From Figure 2 in which the researcher presents a proposed model of informal style learning process on Thai indigenous wisdom of durian orchard work in Nonthaburi Province in order to create the sustainable learning process, it can be seen that in the learning process covering both the knowledge receiving and knowledge imparting aspects, there must be a well-mixed integration between the original learning process that requires interaction between wisdom holders and learners, and the utilization of the progress of information technology and innovation together with the actual practice to develop experience and expertise in the occupational career.

However, since nowadays is the era that almost all young men and women in Nonthaburi are turning to other occupations that require modern academic knowledge rather than that of durian orchard keeping requiring indigenous wisdom, the number of those interested in carrying on this indigenous wisdom has greatly decreased. In order to motivate more younger generation youths of Nonthaburi to return to learning about the indigenous wisdom of durian orchard occupation in the form of informal learning style which is not a part of the formal schooling system and in which anybody who wants to learn can do so regardless of age, time, place, and educational qualifications; the concerned parties including the state and private sectors must cooperate to provide supports to encourage youths and people of Nonthaburi Province to be interested in and have good attitudes toward the durian orchard career. As a starting point, the provincial authority must formulate the policy, based on the realization of the importance and necessity of this occupation, to encourage youths to have pride in the indigenous wisdom of ancestors who could produce durians that are unique and cannot be produced in any other province in Thailand or anywhere else in the world. Also, it should be pointed out that Nonthaburi durians are well accepted in the society due to its excellent taste which is its distinctive identity, and that those who take up the career of durian orchard keeping in Nonthaburi can command attractive incomes. Of course, when more and more people take up this career the promotion and supports should be made for marketing of the products. After that, there should be campaigns to set up durian learning centers that serve as sources of information diffusion in the forms of printed media, technological media, and other information media. There should be cooperation with the private sector to promote the sale of durians and durian products domestically and abroad to ensure fair price for durian orchard keepers.

If all concerned people cooperate and collaborate to establish an informal style learning process on indigenous Thai wisdom of durian orchard work in which interested people can learn by themselves any time they want, together with the setting up of indigenous wisdom sources that provide additional knowledge and advices for convenient access, and knowledge transmission through a wide variety of media, we can be sure that the local wisdom of durian orchard work in Nonthaburi Province ,Thailand, will be carried on sustainably and further developed to be even better in accordance with the situations and social progress in the future.

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Interested persons can study further in more details from the complete research report entitled:
A Research Study in Nonthaburi Province: An Informal Style Learning Process on Local Wisdom Concerning Occupations

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