

Transcending Karen's Cultural Barrier; for Promotions of Effective Backyard-Poultry System on Mountainous Area

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Efficiency of Backyard Poultry in Remote Rural Area Development

Low Productivity of backyard poultry is an ongoing problem for Karen tribes who live in mountainous area of Chiang Mai, Thailand. Chicken has always been a vital part of Karen's way of living. Based on our survey, we estimated that, annually, a family-unit of Karen tribe consumes at least 30 chickens a year. The supply of chicken in Omkoi is always insufficient because it is not accounted as main source of food. Chicken are needed in ritual ceremony. Based on animistic belief, chicken with cursing behaviours are to be sacrificed and then become food. It is apparent that consumption and production of chicken is unplanned and uncontrolled.

Backyard Poultry in Karen village is a free-roaming system. Flocks are free to roam around the village, hence, to grow naturally. Chicken rearing in Omkoi is affected mostly from climate of low temperature and high humidity. With average temperature in summer 25 °C and 15 °C in winter, small chicks are usually lost, specifically during rainy season. More often than not, chicken drink wastewater from household or bathroom, which leads to easily spreading of poultry diseases such as Newcastle Disease¹, fowl cholera, fowl coryza, and fowl pox. The villagers had no knowledge of diseases and disease controls, resulting in death to most of the chicken in plagued villages. Poor farm-management skills of the locals were also evident. Feeds were also scarce. Alternatives can be processed from plants and insects available in the area but the locals lacked such knowledge or skills.

The size of backyard poultry in Karen villages is generally on family scale that is to rear 1-3 hens with a rooster per household. Based on our judgment, it is regarded as small scale.² Our aim was to train the local to be able to rear a medium scale poultry farm of 8 - 10 hens with 2 roosters. This size is proved for a housewife to be able to handle on her own. Yield of medium scale backyard poultry

¹During the project, we found Newcastle disease only once in Khun Huay Pong Watershed Station, which may be caused by imported chicken.

² In this case, we can not compare the scale with industrial farming system which raise hundreds of chicken

is enough for the family need as well as to distribute to the need in her neighbourhood. We have yet studied the effective farming scale that could supply the demand of a whole village. For the success of the backyard farming, it is critical to take into account the ability and capacity of female members of the family who will take care of the flock. Karen culture is patriarchy however household activities including the poultry production system are feminized. In India, A.K.Chaturvedani, N. L., et. al (2014) indicates that women are responsible for all the activities of backyard poultry farming. Women enjoy relatively considerable liberty in taking decisions viz. care and management, feeding, breeding. "women can take up poultry as a subsidiary occupation without much affecting and household or daily routine."³ In this article, decision of wife is more critical to the success in chicken rearing.

Chicken is accounted a sacrificial animal but not as the source of food. Demand of chicken is in special occasion not necessity. From labour management viewpoint, free-roaming is most suitable production method to their lifestyle but not the most efficient. Live chickens have to be imported from outside markets. It is not economically self-sufficient and imported chicken may bring in diseases from outside. There were programs for promoting effective backyard poultry, which were carried out by authoritative body and NGOs. Although chicken rearing does not require high technological skills but training program did not seem to meet the training goal. Our experience pointed out that cultural barrier including ritual beliefs, viewpoints on production system, basic science, become learning Barrier.

The article is a result of a 3-Years training program for the local to become a change-agent in medium-scale poultry production. This study was carried out in the Watershed Management Station Khun Hauy Pong, Mae Tuen, Omkoi, Chiangmai Province from February 2012 - January 2015. It argues that an effective learning process alone cannot bring about the success of this case, but also facilitating factors that help us - program facilitators and local learners - transcend the barrier through connect to one another. The program is now sustainable. The idea of medium scale farm spread across villages. More and more people are learning to raise chicken systematically.

Cultural Barriers and Community Capacity Building

Differences in cultural context could become learning barrier in our program for training. We also found that most significant factor was likely to be a ritual belief in cursing behaviours of chicken i.e. laying on bare-ground, pecking on her own eggs, laying infertile eggs; that would lead to sacrifice of the chicken, otherwise it would bring mishaps to the owner. To transcend through this barrier, it is important to create a safe environment for the locals to engage in culturally relevant learning, thereby allowing learners to extract their own meaning from immersive experiences. Sykes, B. E. (2013:9). The key premise of the Ndowe model world (if indeed it is transcultural in Africa) consists in *transcending perception in order to understand the hidden structure, where the fundamental properties (structures) are found*. This idea of world differentiates between a visible reality and another reality not visible to the eyes of just anyone. We could say that it is apparently invisible. Fons, V. n. (2011: 19). To run a capacity building program for Individuals in rural community, we take into account two key concepts.

³ A.K.Chaturvedani, N. L., Mahesh Chander and Khalid Hussain (2014). "DECISION MAKING PATTERN FOLLOWED BY TRIBAL BACKYARD POULTRY REARERS IN BASTAR DISTRICT OF CHHATTISGARH." p.2.

Community-academic trust

The trust is based on common interest. Tracey, D., et.al. (2015) , Valarie Blue Bird Jernigan, T. J. a. D. S. (2015, Jernigan, V., et.al. (2015) and other put emphasis on alignment of the goal as a key factors to the success of cross-cultural learning. An effective community development program must focus on *"the need of the individual."*⁴ The goal of the program must align with the goal of the community. The goals do not have to be identical but to yield satisfactory results for each party. For example, Jernigan, V., and T. J. a. D. S. (2015: s430) were to write an article together with the tribal people. The writing activity served the aim of academic team in terms of publication and served the community goal that aim *"to honor the Native value of sharing knowledge, expressed as the "Indian way," and to document tribal history..."*. In pedagogic terms, it suggests that the motivations of learners are vital. For participatory approach to a capacity building program, its effectiveness depends largely on fulfilling objectives which reflect the real needs of the people, while ensuring their participation."⁵

*Co-learning for true partnership*⁶

A strength of our training program lies on inclusiveness. Primary concerns of the program is those who are in need not those who potential to succeed. Since the 1970s, Brislin, R. W. (1976). The idea that *"Models or symbolic and ritual activities need not be described and analysed by oppositions, but instead be conceptualised as organisations of union."* Inclusiveness endorses differences in ways of living, ideology and most importantly real situations of both participating parties. Fons, V. n. (2011 :21) emphasized that when working with peoples to understand people (ethnographic approach) should the persistence of the oppositions should not be allowed, *"if the reality is significantly different."* To the reality in our terms, the team holds willingness to teach. The candidate must show only quality that is true willingness to learn. Although this approach brings about uncontrollable factors and increase difficulty in training, it is a ground for true partnership. Program facilitators should be aware of learner ability such as level of functioning literacy, Basic Scientific knowledge, Numerical literacy and writing - record. Autonomy thus must be granted to the learners to assess their own progress.

Promoting Medium Scale Backyard Poultry at Khun Huay Pong Watershed Station

Academic staffs from Rajamangala University of Technology Lanna (RMUTL) and King Mongkut's University of Technology Thonburi (KMUTT) formed a university team to work on development of Karen villages in Omkoi. Core focus of the team is on human resource development. An initial objective of the university team was to study an effective teaching in order to apply it to promote backyard poultry in Karen's village. It was also to test an appropriate way to raise 'Thai indigenous chicken breed' on high mountainous area. The breed can acclimatize itself well in the mountain and local disease tolerant. Our goal (1 rooster: 9 hen) was three-time larger than the normal scale which was 1:3 chicken per house. It aimed to provide local market with local breed chicken to reduce the import of non-local breed of chicken and strengthen local economy.

⁴ Tracey, D., et.al. (2015)

⁵ Alexander John, R. G., Reshma Javed (2015). "Reflections on use of Participatory methods in the Capacity Building Program for Tribal Community Health Volunteers." INDIAN JOURNAL OF COMMUNITY HEALTH 27(2): 290-294.

⁶ Jernigan, V., et.al. (2015). "The Adaptation and Implementation of a Community-Based Participatory Research Curriculum to Build Tribal Research Capacity.", s424-s432.

In the beginning, the team met Mr. Soydee J., a young Karen who was working at Khun Hauy Pong Watershed Management Station who was enthusiastic in learning a proper chicken rearing. The team applied a tailor-made training, which integrated simplified farming techniques, scientific learning process and basic biology. Mr. Soydee Jonu was a university graduate in Agriculture and had basic skills in animal caring. After a few trainings, through hand-on experiences, Mr. Pichai Chaisaena, a lecturer and specialist in poultry, from RMUTL, was invited to assist the training program in which Soydee was trained to observe fertilized egg; to treat external parasites (outside of the chicken); and Vaccination. Every month, the teams visited the watershed station and demonstrated different methods for chicken rearing. During February – September 2012, he also recorded data of productive performance of hens for the team. While Soydee learnt from practice with the team during our monthly visits, every time, Norbu and her husband attended the trainings. The team assigned a learning facilitator to take charge in the activity. The facilitator repeated the practices and demonstrations for the learners and also provided psychological supports, immediate solutions to the problem at hand. Soydee joined this program for 7 months, then, had to be reallocated to another station. At this point, Norbu took care of the chicken in the same way as she learnt from the demonstrations. Soydee contacted the team on behalf of Norbu to transfer the chicken to Norbu cares. When Soydee moved to work at other village, he started a small farm at his house with 5 chicken produced in this project.

The team discussed with Norbu and officially asked her to participate in the program in which she gladly joined. Previously, we learnt that Norbu gained her experience from taking care of chicken for Soydee who often had to do fieldworks away from the station. Norbu could not read and write Thai. To study hen's performance in egg production, she used color yarns to mark in head of each chicks and marked symbol on every egg as her way of recording, which her husband would put the data in writing with Karen language. The team did not limit learning medium and encouraged them to use any means available to them. The team continued to work and train Norbu for 2 years when she accomplished chicken-rearing technique specific to high mountainous area. It was evident that the production rate of chicken was increased to the point that they could sell chicken to their neighbour. Mrs. Norbu managed to raise 8 – 10 hens with a little help from her husband. She is a 'local change agent' who brought changes to Karen way of backyard poultry in many Karen villages.

Discussions

Role model from within the culture:

Despite all learning strategies, co-learning will happen when trust between researchers and the local has been formed. The team visited the area regularly. Relationship between members of the team and change-agents evolved into friendships. The involvement of villagers in teams of trainers is effective and should be recommended in all husbandry interventions. (Conan, A., 2013 : 301) In our case, involvement appears in the forms of role model who came from within the Karen culture. Role model from within the culture is a key factor for cross-cultural learning. First learner was Soydee, a Karen who was a college graduate. We could claim that Soydee shared a culture of agriculture graduates with our team members. Soydee became role model for Norbu and her husband who later became role models for their neighbours. Since October 2556, Soydee produced 162 chickens for his own uses and gained 5,980 baht. In March 2559, Deewa Nabor, from Pi-Por village, heard of

medium scale farm and expressed his interest to the team. He started with a discussion with Norbu and learnt from her work. He produced 150 - 160 chicken average weight 0.5 – 0.8 Kg/bird. He saved around 10,000 baht per year.

Ownership and Outcome:

The team observed different degree of autonomous learners, which we assess with sense of ownership of the task. Full ownership is related to responsibility to the outcome. During rainy season, hatching rate was close to zero. The team gave advice to Soydee to make a heater for small chicks by placing burnt-charcoal into metal bucket. It was not effectual because the temperature was fluctuated too much (either too hot or too cold for small chicks). In high temperature, small chicks drank more water resulting in diarrhea. Fifty chicks were dead in this incident. Soydee followed directions strictly and did not take other action to solve problems. He observed and acted as a research assistant.

On other occasion, husk from rice was introduced for Norbu to use in chicken laying house as a moisture absorbing and bedding materials to keep the chick warm. However, on the mountain where chicken live in high humidity and low temperature, the husk bedding become wet and causes death to the chicks. Damp husk caused mites infestation in the hens that led to decreased activity, a drop in egg production, weight loss. However general is the husk bedding, it was new knowledge for Norbu who had no idea how to deal with chicken mites and damp husk.

Norbu was concerned but did not solve the problem. She informed the team as soon as they can. The team removed the husk bedding and treated all hens infested with mites. Norbu told the team that she never saw anyone in the village used husk for chick, instead ashes was used for bedding material. It was an indigenous way to take care of small chicks. She only revealed her thought this after having learnt that the team's method was ineffectual. The team accepted her idea and used ashes for bedding material, which worked out well and Norbu gained more confidence.

Exchanging of tacit and explicit knowledge shed light into validity of technique employed in Chicken rearing on the mountain. The team designed and built a laying house for 6 hens with 2 roosters, which were raised acclimatized with the weather. Design of chicken laying house underwent 3 phases which are thought experiment: local adaptation and local style. Experimental design of thlaying house was concerned mainly with humidity and temperature. Ventilation and sunlight was key factor influencing design of the roof with ridge ventilation and low eaves. There were small openings on the wall to allow full ventilation. The laying house had elevated floor and shelves for chicken. In the construction phase, local builders adapted the design to their manageable level that means to build in the way that they used to. Ventilation features were removed. Performance of the laying house was substandard to Karen chicken rearing. Chicken often fell ill and small chicks were found dead in the morning due to high humidity and freezing cold. Norbu went back to an indigenous solution. She brought bamboo basket into the laying house for a brooding hen and her chicks. Design in phase 3 was made by Norbu. Reflections on the previous phases showed that she accepted the design because it was the team's proposal of which objective was unclear to her. She thought a good laying house should be windproof to keep temperature warm. Small openings on

wattle-daub wall were efficient for laying house ventilation in this area. Brooding baskets were also provided for the chicken.

Karens did not build chicken laying house because of small-scale free-roaming system. Brooding baskets are placed on the ground under their elevated-house. Norbu saw no reason for building one. However, when chicken disease spread through the village, the team gave directions to contain all chicken within the laying house and observe closely. None of the chicken were affected by the disease. The incident gave her a rationale behind the laying house. They also leant that infections occur when chicken come into contact. Norbu employed a simple quarantine procedure by not allowing new chicken from the city market to get into her farm immediately.

Ownership and Accountability:

Owners are accounted for their animal. In Karen belief, an owner of a chicken will be affected by the curses inflicted by the animal behaviours. From contemporary perspective, high productivity of backyard poultry and Karen animistic belief is a contradictory issue. Owners of chicken will be affected by cursing behaviours of the animal. Larger number of chicken within the village area, would likely to show more of such behaviors. Soydee struggled to continued medium scale backyard poultry because his wife had not been in good health. As mentioned above, backyard poultry depended upon women of the house. Soydee’s wife did not want to take care of a medium scale farm. Close connection with large number of chicken, which tended to show cursing behaviors, may bring her bad luck. Once the curse happened, the owner must commission or perform ritual sacrifice or mishap would happen to them and might as well a whole neighborhood. The wife may encounter cultural pressure from her neighbor to sacrifice cursed chickens.

The most significant change happened on month 24th (Cf. Fig.1) when almost none of eggs were hatched. Instead of sacrificing the hen, the change agents carried out a candling test and found that most of the hen laid infertile eggs and concluded that the cause of this incidence must be the rooster. The couple gained an understanding in scientific knowledge about biology of chicken and overturned the old ritual belief in a cursing behavior of chicken, which is to lay infertile eggs.

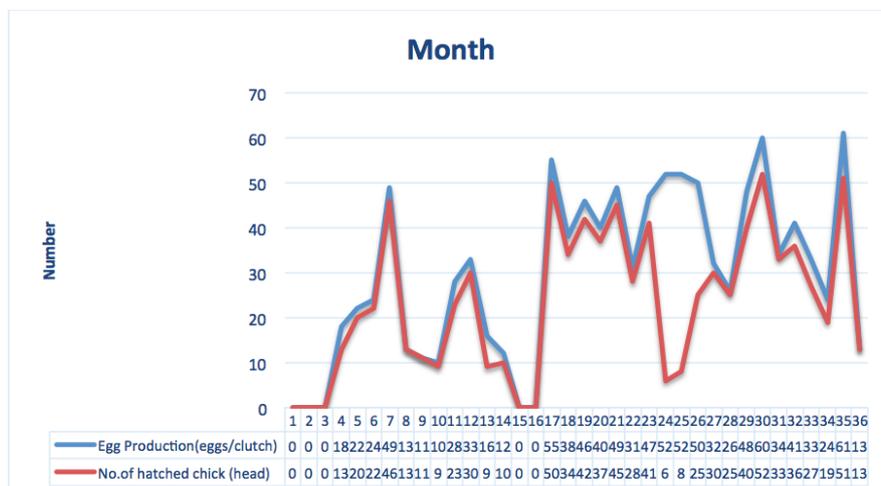


Figure 1 Chicken production skill of Norbu. Note on 24th Month hatching rate dropped. This period showed a shifting point of learning paradigm.

The learning curve has shifted when knowledge had impacts on practice. On the one hand, the team could claim that biology (chicken reproduction system) discouraged Norbu and her husband from sacrifice the cursed chicken. However, the ownership or accountability to the chicken is on the team. The chicken belonged to the team not Norbu, thereby; the curse would not be place upon then but to the team. Nonetheless, the team did not belief in the Karen spirit, thus, none would happen. Norbu has been Buddhist for almost 20 years since her son became a monk. She omitted ritual ceremony but partially under influence of Karen animistic belief. When encountering chicken with cursing behaviours, she would not perform ritual killing but would give the chicken freshly cooked rice. If the chicken dies, it means the chicken was cursed. If not, the chicken would live.

Perception of Value :

On the other hand, if they decided to sacrifice all the hens, they would lose a whole farm. The ways in which the change agents weighed rival reasons among ritual belief economic value. They gave the rooster a resting period and found that hatching ratio returned to normal percentage of 83.39. They produced 438 chicken; generated 29,000 Baht and became a leading chicken-raiser among her clan. "Decision not to kill the cursing chickens" was made on many occasions if other reasons show sufficient weight against the belief. and scientific thinking may sometimes break traditional pattern. If we see sacrificial ceremony was a mechanism that randomly govern pattern of protein intake, Norbu was allowed to use chicken, if they wanted to. Economically, we could say that the traditional mechanism was disregarded completely. In addition, Norbu expressed her compassion towards chicken, which she saw them as her 'pets.'

Location and Territory:

Experience or place-based learning, the context of place functioned help learners focused on real problem. In remote rural area, the place functioned to isolate learning facilitators and teachers (the team) from our *pre-existing support networks*. We found experiences conform to Daly M et. al, (2013: 9) in a way that this also allow us to develop a sense of attachment and belonging through our immersion in a relatively closely knit rural community. The remote setting also provided opportunities to understand the sociocultural determinants of household economy. From a student-centre education system, it is the teachers who entering the learners territory and must adapt. To do so, ones must be aware of the influences of "European belief in primitive magic led to a false distinction between primitive cultures and modern cultures" (understood as "religious" and "scientific", respectively)...the problem with single stories is that they are incomplete and that there are always multiple tellings of every story." Fons, V. n. (2011:15).

The team had to communicate directly with Norbu. This training approach has major advantages compared with disseminating knowledge through the media or posters/leaflets. Documents are more prone to misunderstanding or misconception among the locals or "*less trust- worthy if relayed by the outside world*" (Sultana et al., 2012). Theoretical and practical territory are integrated. This training was integrated into daily-life activity. Produce of the training was a reward in itself. Local learners not only had supply of chicken but also gained respects from neighbor when they offered the surplus to the local market. Therefore motivation and commitment to the task was consistent over the study period. *If commitment and motivation waned off, it could be a drawback for such a larger project on the long run.* " (Conan,2013: 295) The team found that the training that integrated

into work could sustain motivation and commitment better than specialized capacity building program.

Conclusions

Knowledge transfer across cultures from the mainstream that is university to the marginal that is the Karen, effective learning and teaching requires facilitating factors that are already in place and created. We believed that the set of facilitating factors assisted the cultural barrier transcend. Learning and training in remote rural areas need special efforts. Learners particularly adult, need relax and flexible framework to explore and adapt to new idea. Loose scaffolding approach may work but learning support must be given at the critical points. This article found that there are 4 factors.

Inclusiveness endorses not only opportunity to participate but the differences in ways of living, ideology and most importantly real situations of both participating parties. To the reality in our terms, the team holds willingness to teach. The candidate must show only quality that is true willingness to learn. The rest do not seem to matter. Role models from *within the culture* means all forms of shared cultures - mainstream or marginal. A chain of examples - role model from academic - Karen graduate - educated Karen - Husband and wife - finally to the wife who is protagonist in medium scale backyard poultry. However, the academic must connect with the protagonist. Once the academic reach their territory, authority in learning and practice must shift in order to generate exchanging of tacit and explicit knowledge, which in turn, shed light into validity of techniques employed in Chicken rearing on the mountain. New knowledge that respond to real experience and positive results confirm its validity. Emerging understanding can counter-balance even animistic belief - ritual killing of the cursed chicken.

Transcending cultural barrier should happen without aiming to cultural interruption such as changing views of chicken as a ritual animal. Interpretation of the belief in relation to modern assumption pattern may not right. We see that changes to ritual behavior of our change-agents was partial. However, it become example for many other. To raise chicken as a source of protein or provision of ritual animal is not the issue. Deep pattern of cultural-economic is not interrupted. The local change agents were benefit from participating in this project with a guaranteed provision of chicken and freedom to act behind their cultural barrier.

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