Establishing a Transformative Learning Framework for Promoting Organic Farming in Northern Vietnam: A Case Study on Organic Tea Production in Thai Nguyen Province

Tuan M. Ha
Thai Nguyen University of Agriculture and Forestry, Faculty of Agronomy, Thai Nguyen city, Vietnam
Email: haminhtuan {at} tuaf.edu.vn

ABSTRACT— Tea is one of the important cash crops for smallholder farmers in Thai Nguyen, a northern province of Vietnam. The increasing demands for food safety and environmental sustainability have led to development of organic tea farming in the area. However, due to a number of challenges such as inappropriate awareness and vision amongst tea growers, small-scale production, poor resources, limited market information and linkages, and costly third party certification of organic products, only a few farmers pursue organic production practice. This paper provides an in-depth context analysis using SWOT mapping tool and formulates a transformative learning framework with detailed process steps as a guide for developers and practitioners to facilitate successful transformation of their mindset and thus appropriate actions among conventional and/or non-organic farmers towards environmentally sound practices. Critical reflection, shared vision and enhanced communication among stakeholders are needed. Likewise, the paper also emphasizes holistic and participatory approaches in understanding the context, defining real issues, engagement of stakeholders and importance of true participation and multi-stakeholder collaboration for sustainable outcomes. Besides, raising awareness and facilitating readiness for change among nonorganic tea growers should not be separated from other interventions by the government and other stakeholders.

Keywords— Organic tea, Food safety, Transformational learning, Perception, Stakeholders, Collaboration, Production, Export

1. INTRODUCTION

The recent increasing awareness on food safety and demands on organic food and drinks of the global market have led to promotion of organic farming in all regions of the world (Willer, 2011; Yussefi, 2008). Organic agricultural lands reached 31 million hectares with 1.4 million producers worldwide by 2010. Of which, developing countries contributed 12 million hectares. Comparing to 2007, there were nearly three million hectares expanded globally (9% increase) (Willer & Kilcher, 2010). The world market revenue has witnessed an over three-fold increase from 18 billion US dollars since 2000. In Asia, 3.6 million hectares of organic agricultural lands with 731,351 growers were reported by 2011 (Willer, 2011).

Organic agriculture has been proven as an inevitable alternative for sustainability owing to its multiple economic, environment, social and cultural benefits, particularly for developing countries (Dittrich, 2012; Rigby & Bown, 2003; Zundel & Kilcher, 2007). Importantly, the direct and indirect roles of organic agriculture in realizing the Millennium Development Goals have been evident for the poor in the developing world via improving food security, hunger eradication, education, health, women empowerment, and environmental sustainability (Jimenez, 2006; Setboonsarng, 2006).

To penetrate in the international markets, especially to the developed countries in Europe, USA and Japan, agricultural produce must meet the organic standards as stipulated by each country. In Asia, developing countries such as Laos, Malaysia, Nepal, Thailand, the United Arab Emirates and Vietnam have lately voluntarily elaborated organic standards in order to boost their export turnover of agricultural produce (Willer & Kilcher, 2010).

Vietnam is known as one of the leading tea exporters in the world (Nguyen et al., 2007). The crop plays an important role in rural income and job generation in many regions of the country. Tea (Camellia sinensis L.) is grown in more than 39 out of 64 provinces, in which 61% of the total production area locates in 14 provinces in the North. Thai Nguyen province is famous for tea products among others owing to its reputation of quality and preferable environmental conditions (Tran, 2009b).
In response to the increasing market demands, the Vietnamese government has formulated standards for organic produce, including tea (Nguyen, 2010). Besides, under the support of some donor-funded projects and private companies, organic tea has recently been developed in Thai Nguyen though at a small scale (Scott et al., 2009). There are, however, several challenges (details below) for promoting large-scale organic tea farming in the area. In addition to the continuous assistances of the government and other international and private organizations, a change in farmers’ perspectives would be of equal importance (Scott et al., 2009).

This paper first presents an in-depth context analysis, a transformational learning approach and frameworks to discuss appropriate ways for improving tea producers’ perception and thus readiness for sustaining and disseminating organic farming for tea crop in Thai Nguyen.

2. CONTEXT ANALYSIS

Context analysis plays an important role in formulating appropriate context-specific interventions. Therefore, a holistic approach is required to understand the situation surrounding an issue of concerns from a systems-based perspective. This would help explore and understand an overall picture and/or a system containing the issue under consideration and its hierarchical structures. In which, related historical events, processes and their behaviors over time should be analyzed and relevant actors should be engaged for improved understanding of the issue, its setting (surrounding systems and structures), enhanced communication, shared vision, collaboration and therefore more informed solutions. The Food and Agriculture Organization of the United Nations (FAO) employed a similar approach called “socio-cultural research” to develop effective interventions in various rural development programs. The approach has been proven to provide an “in-depth insight into why people behave as they do” since it offers a global view and analyses the factors under a specific context that influence a household’s decisions (Villardreal, 2000). In addition, Taylor (2007, 2008) also highlights the importance of context analysis to make transformative learning happen, in which a combination of social actions and social structures influences individuals’ perception. These can be seen as grounds for application of a transformational learning framework in developing organic tea cultivation in Thai Nguyen.

Vietnam is an agriculture-based country with 75% of the population dependent on agriculture, forestry and fishery sector (Tran, 2009a). In 2010, the country had 21,622ha of organically managed production lands, which only accounted for 0.2% of the total agricultural land area (Dam et al., 2012; Nguyen, 2010). With its potential of large arable lands and agriculture-based economy, Vietnam will become one of the leading exporters of organic produce in the region. Nonetheless, domestic markets for organic produce remained small (Yussefi, 2008). At national level, organic standards have been formulated. However, specific policies and regulations on organic production and trade have not been well developed (Nguyen, 2010).

The rapid emerging transition from conventional production to a so called “safe” and/or clean production practice for range of agricultural products, including tea, have been reported as an intermediate level. This is differentiated with synthetic chemical-free organic products by stipulation of Maximum Residual Limits (MRLs) of nitrate, pesticides, heavy metals, and microorganisms for each specific produce (MARD, 2007; Scott et al., 2009). These “safe” products are available in supermarkets, open markets and shops compared to limited amount of organic produce sold in domestic markets (Scott et al., 2009). However, this would be an indication for a quick “conversion period” toward organic farming.

Tea is among the major export commodities of Vietnam. The country is ranked the seventh tea exporter in the world. The crop is grown in two third of the total 64 provinces and is exported to 107 countries, in which Thai Nguyen province is one of the main production regions (Tran et al., 2004; Tran, 2009b; Vinning & Chinh, 2008). There have been a steady growth of tea production and export volume in all regions of the country since 1990s (Tran et al., 2004; Vinning & Chinh, 2008). Yet the produce is mainly exported to traditional market with non-strict requirement of product quality such as China, Taiwan and Russia. Thus, there is a high need for the product to be more competitive in term of quality and brand names on global market (Tran, 2009b).

Additionally, the fragmented and/or small-scale production by individual smallholder growers is reported as another bottleneck for large-scale production to meet market demands with regards to the required evenness of product appearances, and quality, timely delivery and volume. Seventy percent of the total tea cultivation area is owned by nearly 400,000 individual smallholder producers with an average plot of less than 0.2ha, in which 80% was reported in Thai Nguyen. These smallholders face with various challenges such as no market linkage, poor aces to capital, new cultivars, training, production inputs, processing facilities and no bargaining power (Vinning & Chinh, 2008).

Thai Nguyen province has preferable conditions for tea production with more than 15,000ha of tea cultivated area (15.66% of agricultural land) and 30 processing units (Nguyen et al., 2007). Tea is one of the economically important crops, contributing to rural income and employment generation of the province (ACI, 2004; Dang, 2005). Recently, an organic tea cooperative has been set up under the support of Eco-link Co. Ltd. (Ecolink, 2006a; Tran, 2009b). The farmers within this group are provided training on cultivation, processing techniques. Furthermore, the company assists

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growers with pest scout and management, market information, and introduces bio-fertilizers (Ecolink, 2006b). More importantly, all the products are gathered by the company for export with much higher prices compared to non-organic tea (Ha, 2007).

Nevertheless, only a small group of farmers involved in the cooperatives due to strict requirements for the products to be certified as organic tea (AsiaDHRRA, 2008). In addition, costly certification and rather long transition period (2 years according to the EU standards; and 3 years according to the US standard), during this stage, yield and quality are usually lower and thereby low selling prices (Ecolink, 2006b; Ha, 2007). For these reasons, the growers might hesitate to pursue organic farming though the long-term benefits are obvious.

Admittedly, the issue is multi-dimensional and multistakeholder-related, the government plays an important role in promoting organic tea production for both domestic and export markets via its laws, policies, financial and technical support, particularly in Vietnam (Scott et al., 2009). The transition from conventional to organic production practice is also based on sustainable local initiatives in connection with enhanced cooperation between producers and other related stakeholders (Allen & Kovach, 2000; Raynolds, 2004; Scott et al., 2009). Moreover, Scott et al. (2009) highlight the importance of improving producers’ perception and sustain the “corporate-based” organic agriculture.

Therefore, the author argues that a shift of tea growers’ perception/awareness, long-term vision, critical reflection, readiness and improved communication and collaboration among key actors would be of equal importance that contributes to promoting organic tea production.

Based on literature search in accordance with our previous experience of practical work with local tea producers and relevant stakeholders in relations to tea production and sales (Ha, 2007; Nguyen et al., 2007), a summary of main Strengths, Weaknesses, Opportunities and Threats (SWOT) for organic tea production in Thai Nguyen is presented in Figure 1.

![Figure 1. SWOT analysis as a tool for understanding context and strategic planning.](image)

SWOT analysis has been widely used as a planning and decision making tool (Diamantopoulou & Voudouris, 2008). The elements of SWOT analysis comprise internal (strengths and weaknesses) and external (opportunities and threats) factors (Houben et al., 1999; Ommani, 2001). Understanding of these forces would assist utilizing strengths and opportunities, while at the same time addressing weaknesses and avoiding and/or minimizing potential threats to realize the formulated goal. Furthermore, weaknesses and threats could be altered into strengths and opportunities, respectively; while the latter (strengths and opportunities) should be combined and employed to achieve objectives (Diamantopoulou & Voudouris, 2008).

Therefore, a number of interventions were defined. These include enhanced effective support from government, enterprises and NGOs; introduction of participatory guarantee system (IFOAM, 2008; May, 2008; PGS-Vietnam, 2013) as an affordable certification system for poor smallholders; market actors linkages and organized production via forming producer groups or cooperatives; improved access to credit; and raising consumers’ awareness concerning food safety,... In the scope of this paper, the identified weaknesses are discussed with reference to other SWOT elements through a transformational learning framework to induce transformation of non-organic producers’ perception and thus adoption of organic tea production.
3. APPROACH, THEORETICAL FRAMEWORKS AND PROCESS STEPS

Transformational learning (TL) has been applied in various fields, including community education, to make successful change (Mezirow & Taylor, 2009). In this paper, the author applies TL approach and develops a theoretical framework with detailed steps to stimulate a perspective shift among non-organic tea producers. The framework is formulated by combining action learning cycle, information delivery and appreciative enquiry (AI) frameworks (Fig. 2).

![Figure 2](image-url) **Figure 2. Process steps in developing transformational learning for non-organic tea growers.** A combination of Kolb’s action learning cycle (red boxes), appreciative inquiry framework (white boxes) and Malouf’s information delivery framework (dark blue boxes). Numbers indicate order of steps (modified from Keefe & Pesut, 2004; Malouf, 2003; McGill & Beaty, 2001).

### 3.1. Workshop 1. Understanding real issues and local needs (steps 1.1 - 1.2, Figure 2)

First of all, to make a TL work effectively, understanding of “real issues” in the selected area is of crucial importance. In other words, it is suggested to “do the RIGHT thing before doing things RIGHT” (pers.comm. Rinehart, 2010). Thus, the very first step is to identify the reasons why the majority of tea farmers did not join the organic tea cooperative (OTC). This would be consistent with problem-based learning principles where Foley (2004) opines that problems should be confronted at the start of a learning process.

According to Mezirow (2000), TL means a transformation of a so called “frame of reference”, which includes meaning perspectives, habit of mind and viewpoint, into the ones that are more comprehensive, open and reflective to induce more factual and justifiable beliefs and opinions, leading to appropriate actions. In this study context, the farmers’ perspectives and thereby decisions to pursue inorganic farming might be considered as improper based on the above analyses from a systems viewpoint. It can be assumed that they lack of critical reflection and review of different perspectives. This would be defined as a form of “mindless learning” in which learners keep following their past forms of actions without re-evaluation of the experience (Mezirow, 2000).

For these reasons, critical reflection by the farmers is needed. AI framework and Kolb’s action learning cycle should be used to facilitate TL process since both tools connect between reflections and actions (Keefe & Pesut, 2004; Kolb & Kolb, 2005; Yorks & Kasl, 2002). Accordingly, the first workshop should be organized for this purpose.

The important step of discovery is to appreciate “the best of what it is” (Akdere, 2005; Pesut, 2001; Skinner & Kelley, 2006; van Vuuren & Crous, 2005) and “what has been” (CPC, 2010). By valuing participants’ knowledge and experiences regarding their production practices, their relationship among group members, positive attitudes towards the work process would be enhanced. Thereafter, questions related to organic production and adoption will be raised to uncover their knowledge and the reasons for not adopting organic farming.

**Table 1.** Strategic questioning for reflection of current production practice in workshop 1

<table>
<thead>
<tr>
<th>Strategic questions</th>
<th>Objective</th>
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<tbody>
<tr>
<td>1. What are the 3 most important things that you like about your production practice?</td>
<td>To appreciate their knowledge &amp; experience.</td>
</tr>
<tr>
<td>2. What are the possible benefits of organic tea production?</td>
<td>To define their knowledge.</td>
</tr>
<tr>
<td>3. Please indicate challenges if you follow organic tea production.</td>
<td>To discover the issues.</td>
</tr>
</tbody>
</table>

*Note: one facilitator needs to take notes of all details to use as inputs for next workshop activities.*
The second step (Step 1.2, Figure 2) is to let participants generalize what they have learned through the first session. McGill & Beaty (2001) state that new way of sense-making and understanding can be derived from reflection. Hence, through the group work and discussion, participants may learn new information from others. This would induce their new perspectives. And these in turn would lead to changes of their decisions. Generalization can be at an immediate level such as what participants have learnt from the previous session, or at a higher level where they may be asked to consider the need to modify their work (Fell, 2010). At this stage of the workshop, the former level would be applied since the information regarding benefits of organic farming from peer farmers might not be enough to change their views.

In preparing for the second workshop, it is very important to let the participants know the purpose and benefits of the second workshop such as information and scopes of support from different bodies. Moreover, Malouf (1994) and Fell (2005) assert that learning contents must be relevant to participants’ needs. Thus, questions regarding their expectations for this workshop will be asked.

3.2. Stakeholder analysis and engagement

Stakeholder analysis (SA) is a very important step which decides the success of a project. SA can be applied in policy making, management and project implementation (Brugha & Varvasovszky, 2000). Stakeholder in a project context can be defined as “any individual, group, or institution who has a vested interest in the natural resources of the project area and/or who potentially will be affected by project activities and have something to gain or lose if conditions change or stay the same” (Clarkson, 1995; Golder, 2005; Simmons & Lovegrove, 2005). According to Varvasovszky (2000), “SA is an approach, a tool or set of tools to formulate knowledge about actors (individuals and organizations) in order to understand their behaviour, intentions, interrelations and interests; and for evaluating the influence and resources they bring to bear on decision-making or implementation processes”. This can be a way to encourage the better involvement of all stakeholders in the whole project process (ODI, 2009). Thus, based on SA, strategies would be made to optimize the supports and alleviate the negative impacts which the stakeholders may bring about. Suitable approaches and levels of engagement should thereby be made to respective stakeholders.

In this study context, there are a number of potential stakeholders, namely Provincial Department of Agriculture & Rural Development (DARD), its functional sub-departments and extension network; Ecolink Company and other possible enterprises; and organic tea producers, who might be able to make the TL occur, thus engaging them in workshop activities are necessary. The reasons for this are as follow:

First, in recent years, the Vietnamese government has received a huge amount of funding for improvement of clean agricultural products by Japanese government (US$ 750,000) and Asian Development Bank (US$ 95 million) (ADB, 2010). Moreover, owing to the high export turnover from tea products and an increasing demand in terms of food safety, regulations on Vietnamese Good Agricultural Practice (VietGAP) was officially issued for tea by Ministry of Agriculture & Rural Development (MARD) in 2008. Proposals for establishing product quality accreditation agencies, demo-plots, training schemes have already formulated (Goletti & Nguyen, 2008). Therefore, funding and promotion for expanding organic tea production are expected in a short run. For these reasons, liaising with DARD is needed to know their planning and possible funding for organic tea production. Second, it is quite obvious that Ecolink company is, for its own sake, willing to encourage more farmers to join OTC (Ecolink, 2006a, 2006b). Finally, organic tea farmers should be involved to share their experience and provide evidence of their successful models and improved income, which may somehow severe as motivations for a shift in viewpoints of nonorganic tea farmers.

3.3. Workshop 2. Awareness raising and decision making processes (steps 2 - 4, Figure 2)

Knowledge is gained through personal experience, while experience is consolidated by four common modes of knowing, via experimental, presentational, propositional and practical (Yorks & Kasl, 2002). Besides, Malouf (2003) developed a framework of information delivery for developing a particular attitude and creating awareness. The second workshop is thereby organized for these purposes.

The relevant stakeholders should be invited to this workshop to present the benefits of organic tea production; market demands in terms of food safety and quality; strategic plans and supporting policies of central and local governments, possible support in organic tea production by DARD and contract farming by Ecolink Co. In addition, some representatives of local organic farmers should be invited to share their experience and multiple benefits that they gain from organic farming practice. Visual aids such as Powerpoint® or videos is recommended for a more effective learning (Malouf, 2003), particularly for the local farmers with rather limited literacy level. This information would help transform their current assumptions and/or outlooks towards organic production. Further, time for questions and answers should be allocated at the end of each presentation to ensure two-way communication (Malouf, 1994) and address the actual needs of participants as they usually expect the answers to their concerns (Fell, 2005).
To further support evidence presented by organic farmers, participants would be invited to visit some organic farms in Thai Nguyen and neighbouring provinces where they would have opportunities to look at the real practices and the positive economic and environmental effectiveness. Organic farmers would be suggested to share their past problems associated with traditional practice compared to current organic farming practice. The practical information is one of the ways that influence viewpoints (Yorks & Kasl, 2002), particularly information from peer producers would provoke better trust and confidence for nonorganic tea growers to adopt organic farming practice.

Moreover, regular reflections by participants is crucial in TL to validate their notions (Yorks & Kasl, 2002) and active involvement induces better learning in the ways that the information induces is easy to interpret and definitely embedded in their memories (Malouf, 2003). Thus, participants should be divided in small groups to discuss what they have learnt from the activities. In this step onwards, farmers will be asked to take responsibilities, coordinating group discussions since this can build up their capacities, confidence and self-directed learning (Yorks & Kasl, 2002). “True participation” can also bring about the sense of ownership (Stain & Imel, 2002).

However, the acquirement of information might not be enough to induce immediate change (Biggs 1999, cited in Andrews, 2005). Likewise, adults prefer learning via doing (Machin & Creed, 1999). These provide a ground for the next activity (Step 2.3, Figure 2) where farmers will be asked to think of their own desired futures in term of tea production. In this sense, self-directed learning is facilitated (Burns, 2002) where the goals are set by learners themselves (Malouf, 1994). There would be, however, two possible groups of farmers who will pursue (1) organic production and (2) nonorganic production. Thus, the facilitators should be well prepared for this situation to work with two groups separately.

For the first group, participants would be suggested to work in 2 sub-groups, using force field analysis (Dick, 1991; Graham, 2009) to identify driving forces (sub-group 1) and restraining forces (sub-group 2) and their respective impacts on achieving the desired future (Graham, 2009). This activity lies in the ‘Follow-up’, ‘Design’ or ‘Plan’ step of information delivery, appreciative inquiry and action learning frameworks, respectively (Step 3), where ‘true participation’ in decision making (Burns, 2002) would induce the feeling of ownership and responsibilities of their learning and actions. Given the nature of fragmented production by individual smallholders, better cooperation and organized production among members should be enhanced to address market demands with regards to product types, evenness, selling volume and delivery time. Lapar et al. (2006) shows that “collective action” by small farmer groups in Hai Duong province could gain improved bargaining power, better access to credit and information, and enhanced relationship and cooperation with relevant buyers and input providers. In addition, it helped reduce production and transaction costs, gaining more focused technical and institutional assistances with regards to technological advances and management skills. These therefore produce quality outputs, competitiveness, reputation and improved margins for the members. Moreover, an alternative participatory guarantee system (PGS) can be discussed for possible adoption since it is a cheaper option for smallholders (IFOAM, 2008; May, 2008; PGS-Vietnam, 2013).

There would be a possibility that some farmers are not ready to adopt organic farming possibly due to cumbersome procedures (AsiaDHRRA, 2008) or they may think that their revenue obtained from current practice is acceptable. This group will be working together with a facilitator for further inquiries. A strategic question for this group might be “What would it take for you to change to organic tea production?” This would help explore more insights and barriers that hinder these growers from pursuing organic farming. Another option might be to suggest them adopt “safe” tea production, an intermediate transition step between conventional practice and organic production practice (MARD, 2007; Scott et al., 2009). A successful safe tea model established by Thai Nguyen Farmer Union (TNFU) has been evident that participating members can obtain higher yields and income. In addition, they have regular meetings among group members to share their experience in terms of management techniques and market information (Heemskerk & Maden, 2010). Therefore, further similar cycles of reflections and actions with integration of information delivery and experience sharing by safe tea producers are needed to engage the traditional tea producers. Since in some cases, a number of reflection and action cycles in a longer time from several months to years are needed to bring about successful TL (Yorks & Kasl, 2002). Besides possible support by the government and other stakeholders regarding market actor linkages, awareness raising for both consumers and producers, technical and financial assistance, and control of agro-chemical trading and usage, the identified strength of strong social networks can be utilized to encourage nonorganic farmers in applying improved practices.

Within the scope of this study, a debrief and/or evaluation of workshop (Step 4, Figure 3) is necessary to assess participants’ understanding of the significance of this workshop (Malouf, 2003), and to evaluate the changes in their perception regarding organic production. For participants’ actual actions, long-term participatory monitoring and evaluation is required throughout the process to evaluate overall changes where KASA (Knowledge, Skill, Attitude and Aspiration) change evaluation (Bennett, 2010) might be employed, which is beyond the discussion contents of this paper.
3.4. Transformational learning framework from a systems – based perspective

The above SWOT analysis has provided an overall picture that reflects the current situation of drivers and barriers to organic tea production in Thai Nguyen. Smith (1997) presents a formula for successful change. This includes four prerequisites, namely, pressure for change, a clear shared vision, capacity for change and actionable first steps (Figure 3). Adapting to this study context, the author argues that transformational learning can be seen as one of the actionable first steps and/or leverage points to produce successful change in tea farming practice. It would help create pressure for change and clear shared vision among nonorganic producers via information delivery sessions. The approach and framework would also assist participants in planning and decision making. More importantly, the engagement of key stakeholders could stimulate the learning process and perception change. Potential financial and technical support from the government and private enterprises can aid capacity building, effective production and more secure market access for organic tea. Additionally, the activities would provide opportunities and venues for farmers and stakeholders to understand and learn from one another for better collaboration in tea production and sales. This study also highlights that single action by a particular stakeholder might not lead to sustainable outcomes, rather a holistic approach with in-depth understanding of the context and stakeholders involved is required for informed decision making and actions.

Figure 3. Transformational learning as a driver for change in production practice (Modified from Beckhard, 1987; Smith, 1997)

4. CONCLUSION

In short, the paper has highlighted an evident trend and potential market opportunities for tea growers in Thai Nguyen province. The current conventional production practices among the majority of tea farmers reflect growers’ perspectives and barriers to adopt organic farming. In-depth analysis of the context together with the transformational learning framework with detailed guiding steps and involvement of stakeholders are required to facilitate learning activities among farmers and related actors from reflection of current practice to participatory planning and actions. In addition to the interventions at community level, widespread awareness raising campaigns at national level in accordance with support by government, donor-funded development programs and private entrepreneurs to make organic farming mainstreamed are of equal importance.

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