UNIVERSITI PUTRA MALAYSIA

INDIVIDUAL FACTORS AS PREDICTORS OF EXTENSION AGENTS’ PERFORMANCE IN THE

LE NGOC THACH

FPP 2008 9
INDIVIDUAL FACTORS AS PREDICTORS OF EXTENSION AGENTS’ PERFORMANCE IN THE MEKONG DELTA, VIETNAM

By

LE NGOC THACH

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirement for the Degree of Doctor of Philosophy

April 2008
Abstract of thesis presented to the Senate of the Universiti Putra Malaysia in partial fulfillment of the requirement for the degree of Doctor of Philosophy

INDIVIDUAL FACTORS AS PREDICTORS OF EXTENSION AGENTS’ PERFORMANCE IN THE MEKONG DELTA, VIETNAM

By

LE NGOC THACH

April 2008

Chairperson: Professor Maimunah bt Ismail, PhD

Faculty: Educational Studies

Extension agents are important human resources in community development. They link agencies and community in the process of knowledge and technology transfer particularly to rural communities. In a developing country such as Vietnam, research on performance and factors that affect extension agents’ performance in extension service system are lacking. However, these researches are important, considering the fact that the country is fast moving into agro-based industries.

The purpose of this study is to explore the individual factors that influence extension agents' performance. The study is guided by the following research questions: (1) What is the level of performance in extension as perceived by the extension agents? (2) What is the level of predicting variables of extension agents? (3) Are there differences in extension skills and performance between the provincial and district extension agents? (4) What is the relationship between the individual factors and
extension agents' performance? (5) What factors most influence extension agents' performance?

The individual factors are motivation, skill as instructional designer and communicator, skill as facilitator, teaching skill, program planning skill, program implementation skill, program evaluation skill, social skill ability, external contact ability, and professional profile of the extension agents. These factors are the independent variables for this research. Work performance consists of variables such as quality of work, dependability, work schedule, work habit, work allocation, poise and composer, work organization, and customer satisfaction all of which are treated as the dependent variables.

A sample of 369 agriculture extension agents from seven provincial/city extension centers were selected randomly from a total population of 649 extension agents who came from the 13 provinces/city of the Mekong Delta. Data collection was conducted from December 2006 and to February 2007. Multiple Linear Regression and Independent-Samples t-test were used to analyze the data from a sample of 312 respondents.

The extension agents rated their performance at a high level. The study exposes four individual factors that significantly contributed to performance of extension agents, namely, social skills, program implementation skills, motivation, and program planning skills. The study also reveals four types of skills that are significantly different between the two groups of agriculture extension professionals. These skills
are skill as instructional designer and communicator, skill as facilitator, program planning skill, and external contact ability.

The knowledge generated from this study is useful for extension agencies in developing training program for their extension agents. It is suggested that future research should replicate this study to extension agents in the other areas such as forestry, environmental and natural resources as well as agro-tourism. The influence of technical skills on the job performance of extension agents is another possible research worth researching.
Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi sebahagian keperluan untuk ijazah Doktor Falsafah

FAKTOR INDIVIDU SEBAGAI PERAMAL PRESTASI AGEN PENGEMBANGAN DI DELTA MEKONG, VIETNAM

Oleh
LE NGOC THACH
April 2008

Pengerusi: Profesor Maimunah Ismail, PhD
Fakulti: Pengajian Pendidikan


Kajian ini bertujuan meneroka faktor individu yang mempengaruhi prestasi kerja pengembangan daripada persepsi agen pengembangan. Kajian ini berpandukan kepada persoalan kajian seperti berikut: (1) Apakah tahap prestasi pengembangan pada persepsi agen pengembangan? (2) Apakah tahap pemboleubah peramal dalam kalangan agen pengembangan? (3) Adakah perbezaan kemahiran pengembangan dan prestasi antara agen pengembangan wilayah dan daerah? (4) Apakah hubungan
antara faktor individu dan prestasi kerja pengembangan? (5) Apakah faktor yang paling mempengaruhi prestasi kerja pengembangan di kalangan agen pengembangan?

Faktor-faktor individu terdiri daripada motivasi, kemahiran kaedah pengembangan, kemahiran pembentukan program, kemahiran sosial, hubungan luaran, dan profil profesional dalam kalangan agen pengembangan. Faktor-faktor ini adalah pemboleh ubah tidak bersandar bagi kajian ini. Prestasi kerja merangkumi komponen seperti kualiti kerja, tahap kebergantungan, jadual kerja, tabiat kerja, pengagihan kerja, keseimbangan dan penggubahan, organisasi kerja, kepuasan pelanggan yang semuanya merupakan pemboleh ubah bersandar.


Agen pengembangan mengatakan bahawa prestasi mereka tinggi. Kajian ini telah menghasilkan empat faktor signifikan yang menyumbang kepada prestasi agen pengembangan, iaitu, kemahiran sosial, kemahiran mengimplimentasi program, motivasi, dan kemahiran merancang program. Kajian ini juga menghasilkan empat jenis kemahiran yang mempunyai perbezaan signifikan antara dua kumpulan profesional pengembangan. Kemahiran tersebut adalah kemahiran sebagai
perekabentuk pengajaran dan pengamal komunikasi, fasilitator, perancang program, dan kemahiran menjalankan hubungan luar.

Pengetahuan yang dapat dijana dari kajian ini berguna kepada agensi pengembangan dalam usaha membangunkan program latihan untuk agen pengembangan. Adalah dicadangkan supaya kajian ini direplikasikan dalam bidang lain seperti perhutanan, persekitaran dan sumber semulajadi serta agro-pelancongan. Kajian lain yang dicadangkan ialah tentang pengaruh kemahiran teknikal terhadap prestasi kerja agen pengembangan.
ACKNOWLEDGEMENTS

Grateful appreciation is extended to the supervisor of my advisory committee, Professor Dr. Maimunah bt Ismail for the guidance, advise, support, and encouragement. The assistance, suggestion and contribution of the other committee members, Associate Professor Dr. Jegak Uli and Dr. Khairuddin Idris, during this study were greatly appreciated.

I would also like to thank Professor Dr. Haji Azimi Haji Hamzah, Associate Professor Dr. Bahaman Abu Samah (the internal examiners), and Professor Dr. Peter Songan (the external examiner) for their valuable comments. My same appreciation goes to Associate Professor Dr. Rusinah Joned, the chairman of examination committee.

I wish to take this opportunity to record and express my sincere gratitude to all members and staff of the Department of Professional Development and Continuing Education, Faculty of Educational Studies, Universiti Putra Malaysia (UPM) for their tremendous encouragement and warm relationship during my study.

I also wish to acknowledge the Vietnamese Government (Ministry of Education and Training, Project 322) for granting me the study leave and sponsoring at the UPM. I am thankful to the Vietnamese Embassy in Kuala Lumpur for assistance, encouragement, and warm relationships throughout my doctoral program.

I would like to express my gratitude to the measurements/instruments and the panel of languages experts for their proof-readings, valuable comments and suggestions (see Table
C1, Appendix C). My sincere thanks and gratitude to the staff of the College of Agriculture and Applied Biology, and the Mekong Delta Development Research Institute (MDI) at Can Tho University, and particular Dr. Tran Thank Be (the Director of MDI) for their support, encouragement and understanding my study over a long period of time. I would like to acknowledge and thank all extension agents and staff from the provinces of Mekong Delta for their support and help during the survey of this study.

My sincere thanks to all my friends and class-fellows, whose names cannot be listed here, particular thanks to Dr. Nguyen Tien Thanh, Dr. Dinh, Dr. Le Phuoc Dang, Ali, and Shantha who have motivated and shared experiences to make trouble-free life during my study at UPM.

Special appreciations are given to my parents, my siblings for enhancing my self-esteem. I give my heartfelt thanks to my dear loving wife, Ho Thi Thu Ho for her unconditional love, patience and support; and to dearest two loving sons: Le Ho Minh Tri and Le Ho Minh Khoa for their continuous sources of inspiration, endurance and waiting for their father success.
I certify that an Examination Committee has met on 3 April 2008 to conduct the final examination of Le Ngoc Thach on his Doctor of Philosophy thesis entitled "Individual Factors as Predictors of Extension Agents’ Performance in Mekong Delta, Vietnam" in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

**Rusinah Joned, PhD**  
Associate Professor  
Faculty of Educational Studies  
Universiti Putra Malaysia  
(Chairman)

**Haji Azimi Haji Hamzah, PhD**  
Professor  
Faculty of Educational Studies  
Universiti Putra Malaysia  
(Internal Examiner)

**Bahaman Abu Samah, PhD**  
Associate Professor  
Faculty of Educational Studies  
Universiti Putra Malaysia  
(Internal Examiner)

**Peter Songan, PhD**  
Professor  
Universiti Malaysia Sarawak  
94300 Kota Samarahan, Sarawak, Malaysia.  
(External Examiner)

________________________________________

HASANAH MOHD. GHAZALI, PhD  
Professor/Deputy Dean  
School of Graduate Studies  
Universiti Putra Malaysia

Date: ____________ 2008
This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

**Maimunah bt Ismail, PhD**  
Professor  
Faculty of Educational Studies  
Universiti Putra Malaysia  
(Chairman)

**Jegak Uli, PhD**  
Associate Professor  
Faculty of Educational Studies  
Universiti Putra Malaysia  
(Member)

**Khairuddin Idris, PhD**  
Lecturer  
Faculty of Educational Studies  
Universiti Putra Malaysia  
(Member)

---

**AINI IDERIS, PhD**  
Professor and Dean  
School of Graduate Studies  
Universiti Putra Malaysia  

Date: 10 July 2008
DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.

LE NGOC THACH

Date:
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEDICATION</td>
<td>i</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td>ABSTRAK</td>
<td>v</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>viii</td>
</tr>
<tr>
<td>APPROVAL</td>
<td>x</td>
</tr>
<tr>
<td>DECLARATION</td>
<td>xii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xvi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xvii</td>
</tr>
<tr>
<td>LIST OF ABBREVIATIONS</td>
<td>xviii</td>
</tr>
</tbody>
</table>

## I INTRODUCTION

- Back ground and context of the study
  - Linkage and role of extension agents
    - The linkage between extension organization and clients’ system
    - Role extension agents in extension system
    - Performance of agricultural extension agents
    - The individual factors as predictors of performance
- Research problems and research questions
- Research objectives
- Research hypotheses
- Significance of the study
- Assumptions
- Scope of the Study
- Limitations of the study
- Operational definitions of terms

## II LITERATURE REVIEW

- Extension agents in the extension system
  - Definitions of agriculture extension
  - Transferring of technology: A mayor skills of extension agents
  - Role of extension agents in the extension system
- Extension agents’ performance
  - Models and theories of performance
III RESEARCH METHODOLOGY

Design of the study
Research framework
Population and sample size
Measurement and instrumentation
Validity and reliability of the research instrumentation
Data collection
Data analysis
Chapter summary

IV FINDINGS AND DISCUSSION

Profile of the respondents
Level of extension agents’ performance
Level of motivation
Level of extension skills
Levels of social skill and external contact abilities
Differences in motivation, extension skills, social skill and external contact abilities and performance between provincial and district extension agents
Relationship between the independent variables and EAP
Predictors of extension agents’ performance
Chapter summary

V SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Overview of the study
Conclusions
Implementations for theories and practice
Recommendations
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Status of agricultural extension agents network in the Mekong Delta, Vietnam, December 2006</td>
<td>79</td>
</tr>
<tr>
<td>2</td>
<td>Sections, scales and number of items for independence variables in the questionnaire</td>
<td>86</td>
</tr>
<tr>
<td>3</td>
<td>Number of items for components of dependent variable (performance) of the questionnaire</td>
<td>90</td>
</tr>
<tr>
<td>4</td>
<td>Reliability results of instrument for pilot test (n = 24) and actual study (n = 312)</td>
<td>96</td>
</tr>
<tr>
<td>5</td>
<td>Sample and response list in Mekong Delta, Vietnam, January 2007</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>Test for collinearity of extension agents’ performance</td>
<td>104</td>
</tr>
<tr>
<td>7</td>
<td>Summary table of data analysis</td>
<td>114</td>
</tr>
<tr>
<td>8</td>
<td>Selected demographic and employment profile of the respondents</td>
<td>118</td>
</tr>
<tr>
<td>9</td>
<td>Gender, academic qualification of extension agents in the provincial and district levels</td>
<td>120</td>
</tr>
<tr>
<td>10</td>
<td>Frequency distribution of respondents by chance of obtaining extension skill</td>
<td>121</td>
</tr>
<tr>
<td>11</td>
<td>Level of EAP and its components of performance variables (n = 312)</td>
<td>123</td>
</tr>
<tr>
<td>12</td>
<td>Levels of motivation, extension skills, social skill ability and external contact ability (n=312)</td>
<td>136</td>
</tr>
<tr>
<td>13</td>
<td>Independent sample $T$-Test analyses results of individual factors for provincial and district extension agents</td>
<td>143</td>
</tr>
<tr>
<td>14</td>
<td>Independent sample $t$-test analyses results of performance for provincial and district extension agents</td>
<td>145</td>
</tr>
<tr>
<td>15</td>
<td>Pearson’s correlation coefficients of the independent variables and EAP (n = 312)</td>
<td>148</td>
</tr>
<tr>
<td>16</td>
<td>Unstandardized and standardized coefficients of the MLR model</td>
<td>150</td>
</tr>
<tr>
<td>17</td>
<td>Summary of the research findings</td>
<td>155</td>
</tr>
</tbody>
</table>
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extension model – TOT and HRD</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Information flow in agricultural extension</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Service-satisfaction model for extension</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>The one-way SMCR model</td>
<td>32</td>
</tr>
<tr>
<td>5</td>
<td>Roles of Change Agent</td>
<td>36</td>
</tr>
<tr>
<td>6</td>
<td>Performance system domains</td>
<td>41</td>
</tr>
<tr>
<td>7</td>
<td>The environment of human performance</td>
<td>44</td>
</tr>
<tr>
<td>8</td>
<td>Process of diffusion in relation to different extension methods</td>
<td>60</td>
</tr>
<tr>
<td>9</td>
<td>The triangle process of program development</td>
<td>66</td>
</tr>
<tr>
<td>10</td>
<td>Research framework</td>
<td>76</td>
</tr>
<tr>
<td>11</td>
<td>Extension agents' performance</td>
<td>77</td>
</tr>
<tr>
<td>12</td>
<td>Map of Mekong Delta, Vietnam as the location of the study</td>
<td>99</td>
</tr>
<tr>
<td>13</td>
<td>Mean EAP score and its respective components</td>
<td>124</td>
</tr>
<tr>
<td>14</td>
<td>Mean rating of components of individual variables</td>
<td>137</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>CPS</td>
<td>Critical Performance Subsystem</td>
<td></td>
</tr>
<tr>
<td>CTTA</td>
<td>Communication for Technology Transfer</td>
<td></td>
</tr>
<tr>
<td>DV</td>
<td>Dependent Variable</td>
<td></td>
</tr>
<tr>
<td>EAP</td>
<td>Extension Agents’ Performance</td>
<td></td>
</tr>
<tr>
<td>EDA</td>
<td>Exploratory Data Analysis</td>
<td></td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
<td></td>
</tr>
<tr>
<td>GOs</td>
<td>Governmental Organizations</td>
<td></td>
</tr>
<tr>
<td>HRD</td>
<td>Human Resource Development</td>
<td></td>
</tr>
<tr>
<td>ICT</td>
<td>Information Communication Technology</td>
<td></td>
</tr>
<tr>
<td>IVs</td>
<td>Independent Variables</td>
<td></td>
</tr>
<tr>
<td>KPA</td>
<td>Identification of Key Performance Areas</td>
<td></td>
</tr>
<tr>
<td>NGOs</td>
<td>Non-Governmental Organizations</td>
<td></td>
</tr>
<tr>
<td>OD</td>
<td>Organization Development</td>
<td></td>
</tr>
<tr>
<td>SMCR</td>
<td>Source/Sender, Message, Channel, And Receiver</td>
<td></td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Science</td>
<td></td>
</tr>
<tr>
<td>T and D</td>
<td>Training and Development</td>
<td></td>
</tr>
<tr>
<td>TOT</td>
<td>Transfer of Technology</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

Background and Context of the Study

The population in Vietnam is currently estimated at 85.1 millions with a density of 257 people per km$^2$ and is growing by 1.17 percent annually. More than 70 percent of population lives in the rural areas and on agriculture. Agriculture is the main sector in the economy of Vietnam as it employs 60 percent of the labour force, contributing 23 to 24% to GDP. In spite of a significant growth in the gross national product (GNP) of 7.8 percent per year in recent years and with a per capita income of around $750 in 2006, Vietnam remains one of the poor countries in the world.

The Mekong Delta of Vietnam covers 3.9 million hectares, where rice is the main crop, followed by fish and fruit. The main agriculture product accounts for more than 50 percent of the national product though it covers only 12 percent of the total area of the whole country. In 2007, the population was about 17 millions with a density of 435 people per km$^2$, of which 80 percent live in the rural area. Nowadays some parts of the delta are on industrial development but on the whole, especially in the more rural areas, people still depend on agriculture for subsistence.

In Vietnam, the agricultural extension plays an important role in the rural development of the nation and so does it in other countries as governments and
international agencies are putting structural, finance and managerial reforms in place to improve it. Extension has normally promoted blanket recommendations for most agricultural technology. However, the extension system of the country is newly developed and is far from being able to meet such requirements. Transfers of blueprints do not help in managing environmental and social complexity, but farmer-to-farmer advice and learning by doing can be successful in enhancing their capacity of adoptive management (FAO and World Bank, 2000).

In many lowland communities, especially in the Mekong Delta, the poor tends to have limited social capital and may experience difficulties in having their voices heard, accessing official credit and getting invited to participate in extension activities. The focus of extension services in the developing countries is the transfer of technology (Van den Ban and Hawkins, 1988; Roling, 1988; Rahim, Azahari and Azizan, 2004). It has been observed that researches are conducted in research institutes while the transfer of new technology is in the hand of the extension agency. And then, the farmers’ role is to implement the recommendations made by the extension agents and to receive the technology. Very limited emphasis was placed on the human resource development (HRD) (Rahim et al., 2004).

In recent years, one of the most important developments in the field of organization has been the increasing importance given to human resources. Extension organizations in the developing countries have faced with the major problems of professional incompetence and lack of motivation among their employees (FAO, 1997).
The previous reports show that extension is an urgent need for the agricultural and rural development in Vietnam (MARD, 2004; Be, 2005). According to the MARD (2004), three components are essential for Vietnam agriculture extension sector to function effectively for the country: (1) transferring technology for farmers; (2) training professional skills for farmers; and (3) supplying information on technology, management and market for farmers. This system has been organized from the central to localities. In Vietnam, Farmer Field School is one of the extension approaches enhancing farmers’ agro-ecological knowledge, critical skills and collective actions to support sustainable agricultural development. The activities of the Farmer Field School are done by extension workers (Van de Fliert, Dung, Henriksen and Dalsgaard, 2007).

Agriculture is one of the key sectors in the economy of many developing countries. Agricultural extension has a long history and plays an important role in agricultural and rural development in many developing countries, of which Vietnam is one. The concept has originated from the fields of adult education, development communication, rural development and community development. According to Karbasioun, Mulder and Biemans (2007) the old conception of extension is the knowledge transfer; while current perspectives emphasize the multiple stakeholder processes of cooperative knowledge construction and participatory approaches in integrated rural development.

Presently, Vietnam has improved her agricultural extension system by introducing innovations in rural development. The national agricultural extension centers have been established to help the growth of extension system. Following the step, in 1998,
every province and city had its own centers, making a total of 800 staff. In average, each province had 12-15 staff of which 70% were graduates from technical sciences, including crop sciences, plant protection, animal sciences, fisheries, agriculture economics and so forth. 80% of the districts of the country had agricultural extension stations with about 2000 staff. In average, each district had 3-5 staff by the end of 2002. At village level, there were extension workers, farmer clubs, and farmer groups. In 2002, there were 5179 extension workers working in 55% of villages and 8,000 contact-persons doing extension work at hamlet level in the whole country (10% hamlets). In the same year, the number of extension clubs came up to 3,676. (De, 2005; Be, 2004; MARD, 2004).

In the Mekong Delta, 85% agricultural districts (93/109) or 84.5% of total 110 districts and towns have agriculture extension stations. However, the ratio of extension workers for farming households is only 1 for every 1,500-2,000 (approximately, 6,000 extension workers per 10 millions farming households) (De, 2005). There is a great need for human resources development initiatives in order to improve the extension work, and maintain the extension system in the region.

Extension agents in the Mekong Delta have diversified responsibilities. At provincial level, extension agents are responsible to design and monitor many agricultural extension projects to speed up agricultural developments. Most of the projects are initiated by agriculture departments; some of them collaborated with the research institutes, universities, agricultural supply companies, and other government organizations or non-government organizations. At district and village level, extension agents belong to district stations. They often implement common tasks and
projects handed down by the provincial extension centers or/and collaborate with other district agencies or other organizations.

Not only is the number of extension workers insufficient, but their qualification is more often than not of poor quality as well. Most of the extension agents graduated from agricultural technical sciences schools where they likely learnt crop sciences, plant protection, animal husbandry and fisheries which were not specialized much in extension work on social aspect, in particular. This is because extension, as a subject, has been introduced only recently into some of the agriculture-related universities in Vietnam. Van den Ban and Hawkins (1988, pg.15) emphasize the competencies needed for the extension agents to change farmers as follows:

Although agricultural extension agents have been trained in how to change farms and in plant varieties, fertilizers, animal nutrition, it is their task to teach farmers who, in turn, may change their own farms. Those agents who have not been trained in the process of changing farmers – training the adults and communication - must be taught what but not how to tell farmers so that they would become more able farm managers. These changes are the important goal of extension education.

**Linkage and Role of Extension Agents**

**The Linkage between Extension Organization and Clients’ System**

The interdependency model of extension encompassing the transfer of technology (TOT) and human resource development (HRD) has been identified as a key factor in
ensuring effectiveness of extension services (Rahim et al., 2004; Roling, 1988). The TOT collaborates with research institutes and represents the research agenda whereas the HRD focuses on the development of client potentials and capabilities that represent the extension agenda (Rahim et al., 2004).

According to Rahim et al. (2004) HRD focuses on the educational activities to nurture a self-motivated individual farmer who can act voluntarily and rationally based on his/her own judgment and decision, and who has a sense of self and social responsibilities. As presented, the extension staff/agricultural extension workers in Malaysia and probably in other Asian regions are in varied social science aspects to carry out their work under new policy reform for rural development. Those who are still weak should be strengthened and facilitated in order to play the important responsibilities in agriculture extension and rural development in this region. To ensure effectiveness of extension, the TOT and HRD should be embraced together in the implementation of extension services (see Figure 1).

Figure 1: Extension Model – TOT and HRD
Source: Rahim et al. (2004)