

## **CHAPTER FIVE**

### **Introduction**

Chapter five begins by presenting case studies of participatory educational needs assessment which were found in the literature. It includes studies from Thailand, Northern Canada, Tanzania, Latin America, Indonesia and Sri Lanka. Finally, the chapter focuses on special features which are identified from the case studies.

### **Case studies which use the participatory method for educational needs assessment**

#### **(1) *Thailand Study on learning needs assessment***

In Thailand, a case study was carried out to ascertain the appropriateness of the participatory approach in the rural Lanna-Thai region, to develop and empirically test a participatory based needs assessment model for possible use in non formal education program planning in the region (Panyanuwat, 1985).

A study of the methodology consisted of six major sequential steps as follows:

- (1) Development of the procedural approach
- (2) Empirical testing of the validity of the approach characteristics
- (3) Professional judgement of the efficiency of the approach
- (4) Analysis of the products
- (5) Modification of the procedural approach

(6) Testing of the modified participatory approach.

The specification of the sampling areas was based on four levels of local administration system of Thailand namely, the provincial, district, sub district and village levels. The Changnai province was representative of the provincial level and district level. Hod and Mae-Rim districts were selected on the basis of their different socio demographic characteristics. Each district had a network of non formal education activities for poor rural people. Three sample groups were selected from each village selected for the case study. The sample included rural people (potential learners), village community members and change agents. The ratio of these groups of people for the sample was 6:2:1 (Potential learners: village community members: change agents) which encourages individual freedom and autonomy for potential learners over the decision-making process and also limits the influence that might be exerted by change agents and the village community members. Most of the potential learners are poor and uneducated and belong to neglected groups of the village. The village headman is responsible for education and community development in his area. He was selected by the Local Government Agent from a selected committee. To provide a better understanding of the participatory approach, people from the local government and change agents were selected to the committee.

During the research, a survey was conducted with these samples in order to find educational characteristics, socio-economic characteristics, socio-cultural characteristics and educational needs of the villagers (potential learners). When the researcher was conducting the survey he allowed them to discuss their living problems and educational needs very openly and freely. Meeting discussions were held in the late evenings when people had free time to discuss these matters. Usually these discussions were held in the village temple. Learners discussed their experiences and came up with their own ideas about their educational needs. Leadership of the samples was always given to the potential learners. The discussions were handled by the potential learners. The selected people were highly responsible in finding out their educational needs which were mostly co-related with their day-to-day living problems.

Educational needs articulated by the people themselves were closely related to their economic, social and cultural environment. Validity of the results of the participatory needs assessment research was tested by the following methods:

- \* Field research in villages.
- \* Judgement by professional experts.
- \* Match/mismatch analysis of the products of the field research and the analysed curriculum data.
- \* Testing again the modified approach with field research.

According to Panyanuwat (1985), the peoples' voluntary participation (physical and mental) for the above educational needs assessment was very high as learners were free to decide their own educational needs. There were no absentees or dropouts of learners in any sample. This level of attendance exceeded the minimum acceptable attendance in every session of the meetings. The consistently high attendance showed people's interest to participate in the decision-making process.

Participants made very effective verbal contributions in the needs assessment work which were highly relevant and meaningful to the decision-making. The principal researcher was very careful to receive good communication from each participant.

Satisfaction was defined as the extent to which each individual potential learner indicated satisfaction with the level of his or her involvement in the needs assessment process. This needs assessment process showed everyone that all of the participants in the district or village level were highly satisfied with the level of their involvement in their educational decisions.

Panyanuwat (1985) used three criteria (attendance, communication and satisfaction) to obtain measures of client participation. All these criteria gave results that were well above the minimum acceptable standard set for each criterion. Results for all groups indicated that the potential learners were highly satisfied with their contribution to every session of the process. Each

potential learner was actually involved and was satisfied with the level of his or her freedom in relation to other potential learners to comment and present ideas in the needs assessment process. All the participants were guided to the correct path to use their local available resources as a source of information to help find out their educational needs. Local weather information, local information about soil and agriculture, animal diseases in particular areas and information on history and culture of the area were utilised by the potential learners in the decision-making process.

Finally, learners selected priority areas of educational needs such as back yard home gardening with soybeans, peanuts, vegetables, mushrooms, Chinese beans, corn, local mango, lime, coconut, and local trees cultivated for timber. They had problems in breeding pigs and marketing of ducks, Japanese quills and local fish. They demanded to learn about the organisation of local co-operatives, their functions, rules and regulations. The next priority was for agricultural business and marketing systems. They were also interested in learning about arts and handicrafts which can use available local resources. Farmers needed to learn about methods to repair their agricultural equipment locally. Panyanuwat empirically showed in this research the difference between outcomes from the expert judgement of educational needs assessment and participatory educational needs assessment. He found only 22% of the total needs were common to the two approaches. When people's ideas were contributed to the design of the educational programs, they were very interested in participating in educational programs as it was derived from their own decisions.

Panyanuwat modified this needs assessment procedure several times and provided awareness of this method among the responsible officers continuously throughout the research. He had good responses from the experts too.

According to Panyanuwat (1985), participatory methods for educational needs assessment in rural areas of Thailand, helped to find the educational needs of the people which were related to their day-to-day life. Using non-formal rural education organisations in Thailand, they provided very effective adult education programs for rural people which helped to overcome their day-to-day problems using this participatory method for educational needs assessment. As this research was mainly done by the

people themselves, it can be identified as a participatory research approach.

## (2) *Community Development Project in Northern Canada*

Draper described (in Hall. B. Gillette. A, Tandon. R., 1982) a successful participatory research project in Canada which was conducted with Canadian Tribal Communities. This Project envisaged four components.

- \* In service training programs for school teachers, administrators, community education committees and social administrators.
- \* A mobile resource centre for tribal education.
- \* A community needs assessment study as a base for the identification of community priorities in education and for the development of educational programs to meet these priorities.
- \* Systematic programs of social animation within the selected four communities to give the tribal people an effective voice in determining their educational system by developing community schools.

The principal investigator for this study was a university Professor who had previously worked with tribal communities and who was trusted by them. In this study the crucial element was people's involvement in designing, conducting, analysing and reporting. The benefits of this study were in two fields. One was learning how to conduct the study - learning about how to define a problem and needs and possible solutions to them, how to plan a study , how to collect information , how to develop concerted plans of action and learning to work together. The second benefit was the actual result of the project in terms of improving education for the tribal people.

In this example of participatory research, data collection methods evolved in conformity with local expectation and conditions. Methods used to collect data included local records, personal experiences, workshops, interviews and participation in actions. Records of the tribal council were used as local records. Local peoples' and field workers' experiences, knowledge and observation gave valuable data for the study. Community workshops were

held in each of the selected communities on a fairly regular basis with the following functions: (1) Identification of problem issues and assessment of needs, and (2) consideration of alternative solutions. Interviews were used in a very formal manner. Conversation with elderly people about their ideas of education took place in the native language and were tape recorded and later translated into English. The data collection method was scheduled to involve people's participation in action.

Through this study, people of the communities came to see that educational issues are linked to the community's problems. Finally, tribal communities identified concerns about: (1) People who taught tribal studies did not have knowledge about the environment or the relevancy of the course, (2) the content was not decided by tribal parents and adults, (3) School courses which are not designed to meet their future employment needs, (4) the Development agencies were not working together, (5) the need for upgrading educational programs related with their occupations, and (6) the teachers must be aware of the background and history of those he/she serves.

They reported their own problems and needs to overcome the community problems. The final report of this study gives evidence that the tribal people are able and willing to take responsibility for needs assessment work to improve their lives. Meeting their needs and implementing their recommendations requires the relinquishing of power by those that now have it. To have this happen, a responsible relationship which is developed on the basis of equality is required. Such are the aspirations expressed by the tribal people.

The project report concludes with a long list of obvious tribal problems and their educational needs to overcome these. A unique feature of this study is the realisation that only tribal people can deal with their problems. The resolution in the final project report was aimed at what tribal people must do, and not only about education, but education as viewed as an integral part of total community development. The experience of this study showed that the tribal people are capable of conceptualising and conducting this kind of study and of utilising resources from outside when they thought it was appropriate.

### *(3) Community educational needs assessment in Tanzania*

The first PR project in the third world was undertaken in Tanzania by Marja Liisa in the early 1970s. Tanzania is one of the few countries in Africa that has opted for a socialist development policy that emphasises the involvement of people at the grass root level. The policy was spelled out in the "Arusha Declaration" and in President Nyerere's reform document known as "Education for self reliance" (Morrison, 1976; Swantz, 1975). The Arusha Declaration was a statement of intent which laid down a policy of "revolution by evolution". Its objective was to transform Tanzania into a socialist, "Self-reliant" society through the growth and involvement of all its people. Swantz's pilot survey involved 46 villages in three rural districts. Apart from villagers, the research also involved administrators, teachers and politicians. The purpose of this research was to:

- \* Help villagers evaluate their level of education and skills.
- \* Assist villagers to evaluate the extent of utilisation of skills.
- \* Let villagers discover reasons for non utilisation of their knowledge given by the education programs.
- \* Help villagers to assess their training needs in view of their development plans.
- \* Assist villagers to find reasons why natural resources were not utilised.

This study was conducted by following fifteen steps which began with meetings with district officers and concluded with meetings with district development committees which include local people, both of which discussed the results of the survey. A survey was conducted by using a questionnaire comprising 25 questions which were to be answered by some literate members of all households of 46 villages. The questionnaire was planned in their language so that more than 70 % of the people did not need outside assistance to complete the questionnaire. Principal coordinators of the villagers supervised the process, collected the forms, and worked out the statistical information on summary sheets. Overall, Swantz claims that the entire research process was carried out by the rural people themselves.

People's educational needs in different fields were identified by this participatory research and respective agents for village development designed educational programs with the people. According to Swantz (1975) the most positive outcomes of this participatory research study were:

- (a) Leaders learned procedures for communicating with other villagers.
- (b) Leaders and participants learned how to solicit ideas from people.
- (c) Village coordinators gained skills in handling data collection methods.
- (d) Villagers saw the benefits of self analysis.
- (e) Participants gained competence in answering questions and the contribution of ideas.
- (f) Villagers were empowered and worked as a unit.

**(4) *Women's learning needs assessment in Latin America***

Colverson (1995) explained that Honduras is one of the poorest countries in Latin America, second only to Haiti. The land is mountainous and the soil is relatively infertile. Approximately 60-70% of the population derive their living from agriculture. Over half of these farmers cultivate plots smaller than five acres, located on marginal rocky hill sides. Many farmers (primarily males) migrate on a regular basis in search of seasonal work. Women in rural areas often maintain the family farm.

Although the number of women involved in production agriculture is increasing, they have traditionally performed many types of agricultural work. Moser, 1991 (quoted in Colverson, 1995) identifies three categories of work that Honduran women engage in on a daily basis: reproductive, productive and community work. Reproductive work encompasses not only biological reproduction, but the instilling of cultural values to male and female children. Productive work involves activities that generate products for sale, exchange or home consumption. Many rural women select occupations which allow them to accommodate their other responsibilities such as production and sale of food or local textiles. Income generated from

these activities is often at the lower end of the economic spectrum. They rear small animals in the backyard for meat, cows for milk, cultivate plants and harvest crops for consumption and sale. Elsewhere they participate in agricultural tasks associated with basic grains such as weeding and harvesting (Colverson, 1995). Throughout the country women and girls raise and care for small livestock including chicken, ducks, pigs, rabbits and goats. These animals are rarely eaten by the family but used for "insurance" to sell when money is needed.

As males migrate in increasing numbers, women are more frequently becoming head of the household in Honduras. Zhngia (Colverson, 1995) estimated that between 25% – 30% of all the households have women as their primary financial support. This poses a tremendous problem, as agricultural extensionists are generally male, and work usually only with males. Colverson (1995) notes that extension agents concentrate on commercial production rather than food crops (usually grown by women) and assume that information given to the male in the family is shared with other members of the household, but it is not.

Women participate in agricultural activities daily yet have limited access to credit, agricultural inputs and agricultural education. However a participatory research project was planned to assess women's needs, especially with regard to agricultural education. Colverson (1995) was the principal researcher who selected the villagers , and the initial visit was scheduled with an extensionist. Subsequent visits were made by the researcher alone. Interviews were organised with individual women as well as women farmer groups, allowing them to discuss their problems and guiding them to find out their needs. The principal researcher used open ended questionnaires when interviewing the women's groups to increase the study's validity and examine the issues of access from different angles.

This participatory research not only identified women's educational fields but also women's perceptions of needs and barriers related to their agricultural education. These issues included:

- (a) Selection and training of community leaders who are going to educate women farmers.

- (b) Male, female mixed training sessions and single gender community training sessions.
- (c) Cultural perceptions of women's work by extensionists.
- (d) Organisational goals and women's goals.
- (e) Obstacles to working with women.
- (f) Literacy problems.

Organisational perceptions were that (1) agriculture is not a large part of women's work, (2) Girls and boys receive agricultural training in some schools, (3) Women who work in the field are actually "helping" their husbands, (4) Women have given more priority for management of their family than farms.

Women demanded education on weed control, proper harvesting techniques, processing grains and vegetables, processing and preserving fruits, management of fruit trees, better care of their goats, rabbits, chickens, pigs, cows and especially soil conservation procedures. Women demanded literacy training too which helps them to attend technical training sessions and to understand reading materials. Women prefer meeting in single gender groups (with only female participants) initially, with gradual integration into mixed groups. Organisations should construct programs that allow this evolution to occur, encouraging women's more active participation in all aspects of program planning and implementation. Organisations must offer training according to the women's needs, in a central location, at times convenient for women.

The above participatory research encouraged women's more active participation in all aspects of program planning and implementation work.

##### *(5) Indonesian study on learning needs assessment*

Colletta (1976) carried out the first PR project in Indonesia and the purpose of this study was:

- (1) Establishing priorities for community learning needs and identifying community learning resources.
- (2) Translating learning needs into a functional educational content.
- (3) Locating and employing indigenous organisational strategies.

The expected outcomes of the research were:

- \* Villagers would be capable of doing research on their own, and be able to control their own destiny.
- \* Villagers would be able to make a list of community learning needs
- \* Villages would identify village leaders to form local technical resource teams.

Participants in this research included trained persons from the region who possessed technical skills, all the village headmen of five villages in Birinkanaya in the province of south Sulewesi and at least ten villagers from each of the five villages. Colletta (1976) reports that the role of technical staff was simply facilitative rather than a detective one. They provided inputs for group dialogue and attempted to keep the process going by summarising and clarifying where appropriate.

Colletta (1976) reported that villagers were able to assess community learning needs and were able to make an extensive resource list as well as a list of potential village leaders. Research organisers also learned that participatory research could accomplish important goals, and they became aware of the influence they exerted on the group process as outsiders. In addition, it became evident that participatory research had brought together people who would probably never have jointly discussed such ideas.

#### *(6) Sri Lankan experiences of participatory research*

This will be explained by the author from her experiences gained by observation of the following project.

The Government Agent (GA) for the Hambantota District in Sri Lanka realised that empowering rural women of this area may be a good solution for their many living problems. The GA selected capable poor women and gave them special training on leadership development in one of the training centres situated in the Embilipitiya area of Sri Lanka. The GA also guided the trained women to collect all the other rural women in an organisation which was completely formed on their own. Each trained woman collected five neighbour women and had a very informal discussion under the shade of a tree. Groups of five women were called a small group. They discussed their poverty, their educational level, their negligence by others, day-to-day house problems and ways to overcome these problems. These small groups conducted their informal discussions once a week.

They decided to collect one Sri Lankan rupee from each woman every week, in order to develop their own funds for development projects which were kept with a responsible member in the group. The money which belongs to the small groups will go to one place in the village every month. At the beginning ten villages joined this organisation. If any one of the groups were in need of money as a loan, they did not go to a money lender who usually demanded high interest, because they could borrow money from their own bank with reasonable interest. When they realised the value of their own bank, the small group increased the weekly deposit. However at the end of the month all the deposits of all the small groups in the villages were deposited in a bank on behalf of the whole project by the responsible woman. According to their request, the GA guided them to plan and organise training programs with educational providers who handled financial matters. After one year, the women were able to provide loans for their own agricultural projects. For example, if a woman wanted to start a chicken farm or a cattle farm she could get a loan from their own money to buy the animals. After some time, they thought of starting their own bank in order to keep the interest among themselves. They registered their bank as a "Janashakthi Bank" which functioned like a normal bank in Sri Lanka. They employed their own members for small branches situated in each village.

They ascertained their educational needs to manage their bank and organised training programs with the appropriate organisations for their members.

After a few years their assets were very high and at present they are even providing large loans for non-members and other organisations with reasonable interest. But still the village branches of these banks are situated in a small room of selected members' houses with cadjan roofs just as they began. All the employers of the whole project including those who work in the banks were selected from among the members by themselves. In 1993 they constructed a building for the head office of the organisation which was called "Viharamahadevi foundation" in Hambantotta district of Sri Lanka. Although they are now powerful enough to handle even government officers they still conduct small group meetings under the trees and are still known as a poor women's organisation.

The women discuss their experiences, problems and deficiencies and find out their needs. These needs are always related to their day-to-day problems. Their needs are categorised into two groups:

- (1) Educational needs
- (2) Other needs

Small groups report their needs to the women leaders. They employ educational officers for different subjects and plan educational programs with them. This organisation has the power to handle extension officers in order to get the support to overcome their problems. The author observed that the educational needs of the rural women were regularly decided in the small group discussion. The women's group in the organisation who are responsible for organising programs, usually select women with similar needs and organise necessary training for them after planning training courses with particular training centres. This women's organisation is one of the most successful rural development organisations in Asia which originated from community members. According to the author's observation, a regular needs assessment process is a very important part of the whole project. The women themselves are responsible for collecting data for needs assessment from their own members after having very healthy

informal discussions.

There is no outsider involved in the decision-making process. Even after 15 years of the initiation of this project, the Government Agent (GA) who initially guided this project is serving in the same area and provides necessary help and guidance for the women's organisation in order for them to make their own decisions. As this project is completely functioning with rural women, it is very hard to find written articles about this project.

## **Special features observed in case studies**

### **(1) Learner control over the decision-making process of the educational needs assessment**

Panyanuwat (1985) explains four types of decision-making methods described in literature reviews.

- (a) Decisions are made by the potential learners themselves, in which case they have a high degree of direct control over the decision-making process.
- (b) Decisions are made by a group of elected representatives of the potential learners who therefore have a degree of indirect control over the decision-making process
- (c) Needs assessment decision-making by self appointed representative groups. These groups may not represent the adult members of the community as a whole. Their members may represent pressure groups rather than common-interest groups in the community. (Although such pressure groups commonly claim to represent the majority of members in the community). Thus, potential learners have little involvement in or control over the decision-making process.
- (d) Decisions are made by appointed professional experts who are generally in a particular area of study and are appointed by a relevant organisation. They are commonly appointed as members of a steering committee to conduct a needs assessment to assist with program

## **development**

Needs assessment decision-making in the case studies was given high priority in order for adult learners to be involved in the decision-making process. In other words, there was learner control over the decision-making process. Needs assessments which used the participatory research approach, are basically done by the learners themselves. They define their needs. They collect and analyse the necessary data. They decide what they want to learn.

### **(2) Learners as the program initiators**

A special characteristic identified in the case studies is that learners can initiate their needs assessment or learners can be assisted by a guide or facilitator with the requirements of needs assessment. When the learner initiates, or in other words, when the learners are represented and involved in initiating the needs assessment process, the whole program planning procedure will be successful in achieving decided objectives (Brundage and Mackeracher, 1980).

### **(3) Use of local resources**

All case studies showed a high degree of using local resources as an information source for the needs assessment process. Sources of local information include elderly and experienced people of a particular area, history of particular areas, local research and other documents collected in the local offices, etc. Local people were used as the manpower resources to handle the above studies. Use of local resources for needs assessment work helps to make better decisions.

### **(4) Experts' involvement as only resource persons**

Needs assessment work done in the case studies is not done by the experts. Their function is simply to provide guidance, advice and relevant information to help people to come to their own decisions. Experts did not take a role that directs the process toward a particular decision. Although mentioned in the case studies, experts are known as principal researchers, it is obvious that active researchers are the people themselves. These experts understand the participatory research approach and maintain a healthy

environment with the people.

**(5) Bottom-Up approach**

Needs assessment procedures used in the case studies are characterised by a 'bottom-up' approach which is not dominated or manipulated by the top level. As people research their own educational needs, the service agents should take those needs to the higher level in order to help people to overcome their problems instead of pumping knowledge decided by the top level to the grass root level. A 'bottom-up' approach is characterised by building up the services according to the needs requested by the grass roots level.

**(6) Higher degree of potential learners' participation in needs assessment process**

The case studies showed that potential learners were actively involved in meaningful interaction with one another over decision issues in the needs assessment process. These involve voluntary participation, sharing knowledge and experiences, clear understanding of the needs assessment work, etc. They contribute to the decision-making process and feel that they are doing so. They are able to maintain a healthy environment with resource personnel.

**(7) People are motivated and empowered**

The case studies showed that the participatory research approach can motivate local people to contribute to their community development work by their voluntary involvement. They were positively motivated to think they are no longer neglected by society. People were educated and empowered by doing needs assessment work and they dealt well with the experts and other community development agencies.

**(8) Unity development**

The case studies show that participatory needs assessment has a collective nature of bringing people together for unity. People discuss and decide together and think as a unit in order to change not only the individual but

society as a whole. In the previous chapters, the author discussed failures of peoples' co-operative systems which were created by the higher levels in the third world countries. When the higher levels try to organise people together it does not succeed, but when the people voluntarily organise to solve their problems, they understand and enjoy its values and the organisation will be sustained. The participatory research approach organises people together with voluntary involvement, sharing experiences, helping each other and working for the whole society to enhance social development.

#### (9) Interactive communication

Active and verbal involvement in the discussions and interviews and other movements shows a high degree of interactive communication in the needs assessment procedures of the case studies. Individual participants had the freedom to define their own needs, observe and analyse not only their own ideas but also those derived from other participants. Individual participants interpret ideas according to their own perceptions. Because that is important and meaningful, messages are conveyed to others. When potential learners are involved in planning educational programs, meaningful interactive communication can be developed with the resource personnel. Resource personnel receive the chance to learn about adult learners' experiences which may result in effective extension and educational programs.

### Summary

Panyanuwat (1985) conducted a study to find out educational needs assessment of the rural people of Thailand. He used the participatory method and all of the research work was done by the people themselves. The people had the freedom to identify their needs. Panyanuwat developed the methods and empirically tested the participatory method. His result shows a remarkable gap between the expert's judgement and the learners' ideas.

A study which was done in Northern Canada shows people have the capacity to conduct the research on community needs assessment and to decide their own needs for community education development.

Tanzanian President Nyerere's Arusha Declaration provided chances for the local people to become involved in their educational needs assessment work and the case study proved that the people are the experts who can assess their own needs, rather than outsiders.

A study done in Honduras which is situated in Latin America showed that poor rural women who were willing to take responsibility to conduct the needs assessment research worked out well with valuable findings which were very useful to plan their future agricultural education programs. Participatory research approach for needs assessment work not only found out fields for future education needs but also found out existing administrative problems which were barriers for their development work.

The Sri Lankan experience shows that participatory research methodology empowered the poor underprivileged women in the rural area of Sri Lanka.

In general, common features of the above case studies are that potential learners' involvement in decision-making was very high, the use of local resources for the research was very high, experts were only involved in guiding learners to make their own decisions and that unity and development follow 'bottom-up' approaches to rural development.

It can be concluded that a number of countries who used the participatory research approach for assessing the educational needs of the rural poor people have conducted efficient educational programs for community development.

## **CHAPTER SIX**

### **Introduction**

Chapter six starts with discussion of the appropriateness of participatory approach for educational needs assessment in the Sri Lankan situation. Then suggestions are presented for the implementation of the participatory research approach to assess adult learners' educational needs through the Department of Animal Production and Health. Then the findings of the study and general recommendations are presented. Finally there is the conclusion to the study.

### **A need to change the "Top-down" approach**

As discussed in the earlier chapters, the Department of Animal Production and Health transfers new technology which is generated from livestock research directly to the livestock farmers through livestock extension services. This livestock research is conducted in the Veterinary Research Institute of the Department and there is no research conducted in farmers' fields. The DAPH does not give priority for the farmers' traditional knowledge, and new technology is generated only according to the experts' objectives. Livestock researchers are concerned about their personal development. Most of the researchers conduct research in order to publish research papers which may help their professional development rather than helping rural livestock development. As new technology comes to the farmers from a 'top-down' approach, Sri Lankan livestock extension is not concerned with being family farm centred or with a whole-farm approach. The main reason for this situation is neglecting small livestock farmers' real needs and not defining of livestock farmers' needs from the perception of the farmers.

When generating and disseminating livestock technology, the Department of Animal Production and Health does not consider the socio-cultural and economic environment of the small livestock farmers as technology flows

from top to bottom. This 'top-down' extension approach produces bad results not only for farmers but also for livestock development officers at the bottom part of the channel.

Although livestock extension officers learn the benefits of the 'bottom-up' approach, as a result of the 'top-down' approach, they still depend on experts' views. Their thinking is limited within the framework developed by experts. This situation never allows livestock extension officers to think through their own views and their experiences. Extension officers may have original ideas to support the 'bottom-up' approach. As a result of the top-down approach, livestock extension officers depend on higher officers' ideas and do not think beyond that frame. Although the Department continuously conducts training programs to improve the extension knowledge of livestock extension officers, the top-down approach does not encourage them to develop themselves with their own livestock extension views which are gained from long term field experiences. Therefore it is essential to change the existing livestock extension approach.

## **Suitability of the Participatory Research to the Sri Lankan situation**

According to its basic principle, Participatory Research will be completely carried out by the people themselves. At the initial stage people may need guidance from an outside facilitator. In participatory research, people believe the work is their own work. Therefore, people's voluntary participation in the participatory research is usually very high. If the farmers themselves conduct the research, it does not need research officers from the Department. However an Extension Officer is needed as an outside facilitator to help the poor farmers with the research in the initial stages. Experience from third world countries shows high empowerment of neglected people in society as a result of conducting participatory research work. When the people are empowered they do not need much assistance from an outside facilitator. But in Sri Lanka, almost all the social science research is solely conducted by government officers or persons temporarily appointed by the Government. For example, if a Livestock Extension Officer conducts a survey to find a livestock farmer's needs, he has to do that as part of his normal routine duties within the Department of Animal Production and Health. As he does

not give a priority for needs assessment, he always gives priority for technical livestock work such as vaccination of sick animals, artificial insemination, etc., because he needs extra payment for after hours and holiday work. If DAPH does not have a financial allocation for this work, officers do not work after hours or during holidays. Therefore it is very hard to collect data for social science investigation like needs assessment. In a poor country, DAPH does not have a separate financial allocation to spend for that type of social research. Therefore the Participatory Research approach for social science investigation is relevant to the DAPH because participatory research does not demand more officers to implement research as it is conducted by the people themselves. As one livestock extension officer has to cover a very large area, it is impossible him to conduct farmers' needs assessment with other normal duties without peoples' participation.

If the DAPH needs to collect information it follows the survey approach. Surveys use structured questionnaires and interviews which were developed by the livestock experts to collect the data. These surveys not only require extra manpower, but also expenses for stationery, mailing, etc. The DAPH usually prepares and sends surveyors questionnaires to collect the necessary information. In the experience of the author more than 60% of the completed questionnaires are not returned. Survey research is not based on adults' needs, and does not contribute adult participants' ideas for planning stages.

Budd Hall (1981) notes that:

*We find that the dominant research methods in use today, and the ones being generated as adult educators begin to do more and more research, are alienating, inaccurate as a means identifying needs, and stem from the assumption that certain adults are marginal or incapable of articulating their own needs. Research in adult education is at an early stage of development. We still have time to select research approaches that suit adult education uniquely and thereby keep us one step ahead of other social sciences, which are now in the throes of questioning and attempting to replace unsatisfactory approaches.*

(Hall, Gillett, Tandon, 1981: 20)

Developed countries use other tools like the telephone conversation or the mailing of structured or open-ended questionnaires to collect the data. But in Sri Lanka most of the rural areas do not have electricity, telecommunication facilities or good postal services, and also the majority of the rural farmers cannot understand the questionnaires which are prepared by the expert officers. Therefore, the participatory research approach, which does not demand the above facilities and which farmers can fully participate in, is more suitable for the Sri Lankan situation.

All the livestock farmers in Sri Lanka do not have the same objectives for rearing animals. Farming systems are different in different areas. Therefore one method which is recommended by the DAPH may not be suitable for all the areas to assess the needs of the farmers. Participatory Research does not have a particular method or way which is recommended by experts. In this approach needs assessment procedures develop according to the collected ideas of the farmers which are more convenient for them. As farmers have a high involvement in the development of the whole procedure of the needs assessment, the PR method is more suitable to understand the reality of rural livestock farms in different farming systems of Sri Lanka.

In Sri Lanka, development work in rural areas is especially conducted to eradicate problem conditions of the poor. But nobody has asked for the ideas of the rural poor people before they planned the development programs. Participatory research gives high priority to poor neglected people in society, such as uneducated people, women, etc. If PR is used to assess the educational needs of the rural livestock farmers, this would help to conduct efficient livestock development programs in rural areas of Sri Lanka.

Participatory research uses local resources in the research process, which are very helpful in coming to a more correct decision. In rural areas of Sri Lanka, there are many local resources available. For example, farmers know how to predict the weather by the behaviour of the birds. They have records of animal diseases and their spread pattern. Some rural villagers record their experiences as a history in a traditional book called "puskola potha". Puskola potha is a book made out of specially prepared palm leaves. People write in this book with a very sharp instrument. These books can be kept for more than two or three thousand years. Usually these records are stored in the Temples of the villages. Surveys and other kinds of research do not use this

local information in the research process. As rural areas of Sri Lanka have many local resources which can be successfully used in the research process, participatory research is very suitable for farmers' needs assessment because it uses these resources. Participatory research is very useful to minimise the effect of copying overseas experiences without considering the value of local experience.

Although several world organisations generated farmers' agricultural producer co-operatives in rural areas of Sri Lanka, these do not function well as they were not initiated by the farmers themselves. In Sri Lanka, people try to develop individually but not as a whole society. Although there is unity among the people in the society through rural Sri Lankan history, at present people do not work cooperatively. This situation directly or indirectly affects the peace in the country. However, if there is some opportunity for people to think as a whole society, the result may help to keep peace among the people of the society. Empowerment of the underprivileged people in the society will help to minimise the distance between different levels of the society and extend equality among the people. This may stimulate a peaceful environment among all the people in the society. At present, the big distance between different levels of the society badly affects peace in Sri Lankan society. Therefore, if DAPH can implement Participatory Research for educational needs analysis of the rural farmers, this may create a path for people to work together. It may be a good start for people to think as a whole society and may help farmers to develop their own producer co-operatives.

Agriculture and livestock production of the rural farms is usually used for home and local consumption. But all the farms produce extra, which can be sold as finished products. For example raw milk can be converted into powdered milk which is the finished product. But individuals cannot sell or do anything with this small extra production unless they all get together. Livestock products cannot be kept for a long time without good storage facilities. As rural people do not have good storage facilities at their homes it is necessary to collect all the extra production and store it well until sold. Otherwise private business organisations collect all the extra production without paying good value to poor farmers. That is why rural Sri Lanka needs livestock producers' co-operatives to collect all the extra produce and convert this into quality animal food for other people. For example, a

farmers' milk producers co-operative can collect more than one thousand litres of milk per day by collecting one or two litres of the extra milk from all the farmers in the area. If the co-operative can produce butter and Yogurt from one thousand litres of milk per day, this would bring a good profit for the farmers which could not be achieved without a co-operative effort. Therefore, introduction of participatory co-operative work through participatory research needs analysis may help to create co-operative thinking among the rural farmers of Sri Lanka. Therefore PR is very suitable for Sri Lanka where a gap exists between poor and rich people in the society. PR really treats the neglected poor people in the society and empowers them to create equality among all the people.

Participatory research is very suitable for educational needs analysis of rural livestock farmers because farmers themselves find out the real needs of the farmers. These results may also reflect future livestock research needs, as well as helping to suggest necessary organisational changes and administrative barriers affecting for rural development in Sri Lanka.

At present there is no recognition for the farming occupation and farmers' traditional knowledge. At present traditional knowledge is being eradicated little by little. Sri Lankan rural farmers have very valuable traditional knowledge gained through the experiences of the older generations. Participatory research will protect traditional knowledge as it gives high priority to traditional knowledge. If farmers are actively involved in needs assessment, it will promote other participatory research in the livestock field which may in turn help to protect traditional knowledge.

As PR uses all the local resources for the needs assessment process, DAPH will not only depend on the information which exists in the Department. In the PR process, the Department can use information available in other organisations in the area. Therefore this needs assessment work will help to develop a good relationship among the other rural development agencies of the particular area, which may be very important for community development.

As farmers themselves do the needs assessment work in the PR method and find their real educational needs by themselves, it is easy to evaluate future educational programs with them. At present, educators are not giving much

attention to the evaluation of educational programs. If farmers are very aware of objectives of their educational programs and involved with program planning, it is easy for them to evaluate effectiveness of those programs for their lives.

There are many rural agricultural development organisations in Sri Lanka, such as: Agriculture Department, Animal Production and Health Department, Department of Export Agriculture, Coconut Development Board, National Livestock Development Board, Nestlé Lanka Limited, Milko, etc. Although poor rural farmers have big extension services to improve their farms, still farmers are in the same poor condition. Experts from all the organisations advise the poor rural farmers in order to develop their living conditions. Poor farmers may listen to all the advice and orders from all the experts. Usually farmers expect help for any current problems existing in the farm from any officer. Farmers do not differentiate between officers. For example, a farmer can ask for help to overcome the mastitis problem of his cow (a disease condition of the udder of the milking cow) from an extension officer from the Agriculture Department and extension officer from the Department of Animal Production and Health, or officers from the Nestle or Milko companies. As all these officers have general agricultural knowledge, they will advise farmers in possibly five different ways, so a farmer may receive five different messages for one problem, and thus he may face a bigger problem. At present in some situations agricultural extension officers from different organisations do not know each other due to lack of co-ordination. As needs assessment which follows the participatory research approach uses all the possible information from the local environment, there will be the opportunity for all the extension officers to meet together and develop understanding and co-operation.

At present, training officers of some farmer training centres evaluate the training program as soon as it is finished, and discuss matters which may help to improve it in the future. But no representative from the adult learners attends or participates in that kind of evaluation session. Most of the time, program organisers, higher administrative officers and training staff of the training centre are present at these sessions. If the learners' educational needs come from the learners themselves, and adult learners also participate in program planning, automatically learners will also participate in evaluating their training programs, which may provide better ideas to

improve the curricula for future programs. Learners are the people who really can evaluate their training sessions. Therefore, Participatory Research will provide a chance for adult learners to identify their own needs and to be involved with educational program planning and evaluation of educational programs.

At present, educators of the training centres design courses without knowing the real situation of the farmers. If educational needs are identified by the farmers themselves, educators in the training centres would also be aware of the real needs of the fields. At present, educators of the training centres do not have the experience of real field problems as they do not have opportunity to become involved with rural farms directly.

Although DAPH is willing to provide support to help poor rural livestock farmers, chapter four showed most of the farmers do not want to continue with the advice given by the DAPH officers because new technology which is not completely suitable for the farmers' environment causes risk conditions for them. Resources which are spent for rural farmer development do not help to achieve the objectives of the farmers as well as the objectives of the Department. Therefore, it is very critical to develop a better approach which allows farmers to be involved.

If Participatory Research is used for the needs assessment of the farmers, the whole program planning procedure will follow the Participatory Method as needs assessment is the first step in the program planning. If the whole program planning procedure follows the participatory approach, it may help to change the whole extension system into a bottom-up approach.

At present, there is a big gap between the veterinary office and poor farmers. Most of the poor farmers believe only rich people who can afford money for vaccination and treatment can have good relationship with the veterinary office and get advice to develop their farms. The majority of poor farmers do not have a friendly relationship with their livestock extension officers. If extension officers respect farmers' ideas, and genuinely work as facilitators for farmers to assess their needs, farmers will trust them. This situation would help to develop a good relationship between farmers and the livestock extension officers, which is required for community development

## **Suggested plan for the implementation of participatory research for assessing educational needs of Sri Lankan livestock farmers**

The implementation of Participatory Research to assess educational needs of the rural livestock farmers in Sri Lanka is not an easy task as the whole extension and education approach followed by the Department of Animal Production and Health is top-down. Therefore, it is necessary to educate the relevant officers on participatory research.

Livestock Development Instructors (LDIs) who are livestock extension Officers are the people who directly link with the livestock farmers. As part of their duties, they should assess farmers' educational needs. Unless decision makers of DAPH understand the importance of PR for needs assessment, and provide the opportunity for extension officers to work on it, and extension officers change attitudes towards the participatory research approach, it will be difficult to implement it for farmers' needs identification. Therefore, it is very important to assess the extension officers' education needs by using the participatory research approach to educate them practically. At present the educational needs of the extension officers are decided by the higher officers who may not consider the extension officers as adult learners. If extension officers have the opportunity to contribute their ideas on their educational program planning they may understand and follow participatory procedure for farmers' needs assessment.

### **Suggested plan**

The author of this study is involved in providing inservice training programs for the Livestock Extension Officers who work in the Veterinary Offices. Usually all Livestock Extension Officers in the country participate in at least two in service training programs per year. The In service Training Centre (where the author works) is a main in service training centre and provides in service training programs for extension staff in animal husbandry as well as extension methodology. Sometimes Regional Farmer Training Centres are also used to train extension staff of a particular province.

The author plans to assess the extension officers' educational needs by using the Participatory Research method. For this plan, the following steps will be followed:

- Conduct regional seminars to introduce participatory research methods. Participants of the seminar will be Livestock Extension officers and other higher officers of the Provincial Departments of Animal Production and Health.
- The author will plan and organise small groups from livestock extension officers and guide them to assess their own educational needs. The author will follow principles of participatory research and provide complete freedom for them to identify their problems and determine their educational needs.
- Compare the expert judgments about educational needs of the livestock extension officers with the needs produced from participatory research
- Develop curriculum and planning for extension officers with them and conduct educational programs accordingly.

Alan Rogers (1993) showed a somewhat similar principle of participatory research to develop the curricula for educational programs of agricultural extension staff in the Republic of South Africa. Rogers explained this participatory curriculum development program gave adult learners the opportunity to be involved with the decision-making of their own educational programs, and he writes:

*The use of participatory approaches in curriculum development brought in completely new dimensions to the final products; without this participation, the program of in service training and the format to be developed would have been very different and no doubt less acceptable to the trainees and their supervisors. The results however make it clear that such participatory curriculum development is very valuable.*

(Rogers, 1993, 53-54)

While educating extension staff of the DAPH on participatory research for needs assessment, the author will select at least one area of different farming system in Sri Lanka to implement participatory research for farmers' educational needs assessment. The author will facilitate the extension officer who is responsible for implementing PR for needs assessment work, whenever the officer needs guidance.

The author will encourage extension officers to develop farmer 'peer groups' from volunteer young farmers to work with him/her and provide necessary training for them to takeover the needs assessment responsibilities.

The author will plan to develop a local training group for pilot project areas and allow the training group to design educational programs for farmers. Members of the local training group will be voluntary male and female farmers, trainers at the nearest livestock farmer training centre of the pilot project area, livestock extension officers responsible for the area, and other officers involved in livestock development activities in the particular area. The number of farmers in the group will be a majority in order to ensure priority for farmers in the decision-making process.

Final steps of the suggested Plan will be an implementation of an educational program according to the needs discovered from the participatory research, and evaluated by farmers. The author will guide and facilitate extension officers to improve the procedures which they develop to conduct the needs assessment with the participatory research approach.

While implementing participatory research methods to assess the needs of the farmers, responsible extension officers who work as principal investigators will be encouraged to develop farmer groups to assess their needs completely without an extension officer. If farmers voluntarily conduct PR to assess their needs, they will be empowered to handle the situation without any involvement of outsiders. A number of case studies show that poor and neglected people do have capabilities to contribute to their own development process.

Jones (1994) explains the experiences of participatory research conducted in Tonga and Niue. Participatory research brought rural women together and empowered them to analyse their own situations and problems. They

examined, to some extent, their position in their own societies and were voluntarily involved with an action plan. Jones says:

*In both cases (Tonga and Niue) my final input was to point out to other participants that as a facilitator, I had initiated their coming together, but as an outsider, I felt that I could not be involved in their action plans. That was their task, though had time allowed, it would have been better to go further in working out plans.*

(Jones, 1994: 53)

It is clear that a principal investigator is not necessary to guide continuously people's decision-making procedures. It is necessary to have frequent involvement of the facilitator at the initial stage of the participatory research process, but the facilitator's involvement should be reduced and allow people to be empowered and take action for sustaining development programs.

With the experience of South Africa, Kotze (1991) argued that rural poor people can successfully become good grassroots level educators. Kindervatter, (1985) explains that Thai village women become adult educators to help other villagers become literate.

Usually experts underestimate poor rural people. The above experiences show that rural people have the capability of handling their own situation and successfully contribute to the development of society.

Therefore, the author's suggested plan is highly recommended to develop farmers' 'peer groups' in pilot project areas, and finally hand over needs assessment work completely to those local groups.

The collection of information for the needs assessment is expected to be carried out locally by using local information sources. To collect necessary information, transact work, mapping can also be done with local people.

## **Findings of the study**

1. Livestock extension system in Sri Lanka follows the 'top- down' approach.
2. As a result of the 'top-down' approach, needs of the livestock farmers are mainly decided by the experts in the livestock field. Farmers do not have an opportunity to contribute their ideas in decision-making of educational program planning.
3. The Present situation of DAPH does not have proper co-ordination between farmers, extension officers, and trainers, especially in planning of educational programs for farmers. Therefore, educational programs conducted by the training centres do not help overcome the real needs of the farmers.
4. Education programs for the farmers are designed according to the Department's expectations, not according to the farmers' expectations.
5. Most of the technological recommendations are not suitable for rural livestock farm situations.
6. Present educational programs which are conducted by the DAPH for farmers usually expect to change individual behaviour, but not to change the whole society.
7. Creativeness in their own thinking cannot be seen among the lower level officers of the DAPH (extension officers, educators). They depend on views of the higher level livestock experts.
8. Existing extension and education programs are no help in empowering the neglected livestock farmers in the society.
9. In the present situation, livestock experts underestimate poor rural farmers, and there is no place for traditional knowledge, experience and capabilities of rural farmers.

10. A 'Bottom-up' extension approach is greatly needed for Sri Lankan livestock sector to develop rural livestock farmers.
11. A ready-made method is not suitable for assessing the educational needs of all Sri Lankan livestock farmers, as Sri Lanka has very heterogeneous livestock rearing systems.
12. The Participatory Research approach is very suitable for assessing the educational needs of the rural livestock farmers as it provides an opportunity for farmers to contribute ideas for educational planning, as PR is completely handled by the farmers.

### **General Recommendations**

- \* **Inclusion of subjects like Adult Education, Sociology, Needs Assessment, Participatory Research in the Animal Husbandry Diploma Schools and for in service training programs.**

90% of the Livestock Extension Officers (Livestock Development Instructors) are students who attended Diploma courses in Animal Husbandry Diploma Schools of the DAPH. Livestock Extension Officers cannot judge farmers' needs with brief discussions or by observing farm situations alone, or by looking at animal husbandry knowledge gained from books.

The above mentioned subject should be included in the Livestock Extension Officers' in service training programs too.

- \* **Increase of library facilities including books and journals on adult education and related subjects.**

At present, the majority of books and journals available in the libraries of the Animal Husbandry Diploma Schools, regional training centres and in service training centres of the DAPH are on animal husbandry, veterinary medicines or related subjects. To help officers increase their knowledge on other subjects like adult education and sociology, library facilities could be extended with the inclusion of books on the above subjects. Adult education

research journals such as *Convergence*, *Adult Education Quarterly*, would also help increase the knowledge on those subjects and help to change the top-down attitudes of the officers of the DAPH.

- \* **Provide Opportunities for Livestock Extension Officers to work after hours**

At present, Livestock Extension Officers' normal duty hours are 8.30 a.m. to 3.30 p.m. As livestock husbandry is generally the second source of income for Sri Lankan farmers, they are very busy with other agricultural work during the day time. Farmers are usually free and available in their homes after 5.00 p.m., when Livestock Extension Officers services are not available. Therefore, in order to provide an opportunity for farmers to meet Extension Officers freely, Livestock Extension Officers should have official permission to meet farmers after hours. Panyanuwat (1985) also shows that the majority of rural Thai farmers are free after 5.00 p.m. Therefore his needs analysis discussions with the farmers were conducted at night in the village temple. If Livestock Extension Officers can work after hours, there should be extra payment for them or they could have free time during the normal duty hours. At present Livestock Extension Officers work according to the orders of the higher level. Extension Officers must have freedom to work with their own experiences, thinking with their own ideas, at times appropriate to their farmers.

- \* **Organisation of Seminars, Workshops for Higher Officers to evaluate disadvantages of present Needs Assessment Procedures**

Workshops and seminars should be organised for politicians, high officers and experts to discuss disadvantages of the present needs assessment procedures which follow a 'top-down' approach, all the officers should be encouraged to change their attitudes to respect farmers' indigenous knowledge gained by experience, and the capabilities of rural people.

#### \* **Formation of Farmer Peer Groups**

Government development programs seem to exist in complete isolation from the poor rural population. To encourage the rural people's participation in livestock development, peer groups can be developed in every village. A peer group includes a team of volunteer farmers who would be able to give leadership for personal and community development in their own village. Tandon (1980) explains his experiences when working with a number of peer group development projects in India. He shows that young people with some education are most suitable for peer groups. Peer group development is basically people's development by themselves. The first step of the peer group development is selection of young farmers (may be young children of poor rural farmers) who are voluntary participants for their development programs. They receive necessary training on leadership development, basic agriculture, livestock husbandry, home economics, motivation. Peer teams can communicate with their own farmers in the village and farmers' ideas can be brought to Livestock Extension Officers. Members of the peer group can be trained to work as adult educators for the village. To empower the poor uneducated farmers in the village, these peer groups can also conduct the necessary literacy training. Peer groups can work freely with their own ideas. Livestock Extension Officers can facilitate and guide them when they need assistance.

#### \* **Formation of 'Provincial Adult Education Groups'**

At present there is no systematic co-ordination between trainers (adult educators) in regional training centres, Livestock Extension Officers, farmers and National level DAPH. Leaders from the farmers' peer groups in villages, selected Livestock Extension officers from veterinary offices, adult educators from particular provincial training centres, a national level adult educator, a higher administrative officer from a particular province, livestock research expert can be included as members of the provincial adult education group. The number of peer group leaders should be greater in order to provide more opportunity for people's ideas. Peer group members should take leadership of these groups too. All the provinces should have provincial adult education groups for better co-ordination. National level officers would be included in the group, as provincial and national co-ordination would also be done.

**\* Formation of Co-ordination between Livestock Extension Officers and other Livestock Development Agents**

At present a number of livestock advisory services exist in rural villages (advisers from milk collecting agents, advisers from non-Government community development organisations, etc). All the services finally expect to develop poor people in the society. At present there is no co-ordination or communication between these services.

Therefore, it is essential to have friendly co-ordination and communication between them so that they can share their facilities to work for people in the village. If a farmer needs help in subjects other than livestock husbandry, a Livestock Extension Officer can organise a responsible Extension Officer to help the farmer. For example if a farmer needs to learn how to control pests in his coconut cultivation, a Livestock Extension Officer can organise for the farmer to meet an extension officer from the Coconut Cultivation Board if they know each other.

**\* Inclusion of Social Science Research which is related to Animal Husbandry**

At present, all the animal husbandry research is conducted by the Veterinary Research Institute and veterinary investigation centres of the DAPH. Mainly this research is animal husbandry technical research, which are related to veterinary science or animal production. In order to provide good animal husbandry services for the farmers, it is very essential to conduct non technical research such as investigation of farmers' adaptation of new technology; farmers' needs investigation; use of print media, mass media, electronic media; messages by livestock farmers, effectiveness of farmer training programs, etc.

At present, the majority of the animal husbandry research is conducted in the laboratories or in the fields of the research institutes. Therefore farmers do not have an awareness of this research and farmers do not have an opportunity to contribute their ideas for livestock research. So animal husbandry research needs to be conducted at the farmers' fields, rather than very high level technical research which cannot be adapted by rural farmers. Simple research should be conducted with farmers. This situation will help

farmers to better identify their educational needs better.

- \* **Farmer Training Programs should be evaluated regularly**

At present there is no regular evaluation conducted after farmer training programs. Within the DAPH, it is very difficult to conduct the training evaluation by adult educators in the training centres. If farmers themselves evaluated their educational programs, genuine results may be received. Responsibility for the education program evaluation could also be given to the farmers' peer groups which it is suggested be developed in villages.

- \* **Preparation of a simple Manual on Participatory Research for Needs Assessment**

To educate the Livestock Extension Officers in the participatory needs assessment process, a simple booklet could be produced for them on participatory research for needs assessment.

- \* **Modification of Participatory Research Procedures for Educational Needs Assessment**

Implementation of the participatory research approach to assess the educational needs of the rural livestock farmers can be conducted in a few selected areas first, and then procedures can be modified further.

## **Conclusion**

The main purpose of this study was to examine the appropriateness of the participatory research approach for educational needs assessment of rural livestock farmers in Sri Lanka, and to investigate a suitable system to apply it.

The major conclusions of this study may be summarised as follows:

- \* This study examined the present educational needs assessment procedure of farmer educational programs of the Department of Animal Production and Health in Sri Lanka. Generally it has been characterised both by an expert judgment approach and the system of 'top-down' extension.
- \* Presently, the needs assessment system of DAPH neglects the underprivileged farmers in the society. The participatory research approach especially involves underprivileged people in the society.
- \* Participation of adults in their educational programs is highly recognised by the world adult education organisations. Participatory research follows adult education principles, by providing more and more opportunity to people to become involved with their development programs. In the adult education field, needs should be defined by the perception of the adult learners.
- \* The study examines the experiences of different countries which follow the participatory research approach for educational needs assessment. Experiences from third world countries, prove evidence that rural people have successfully conducted their needs assessment work with the necessary facilitation of principal investigator.
- \* In the application of the participatory research approach in Sri Lankan society, the participation of the potential adult learners with the necessary facilitation of the livestock extension officer should be regarded as the most important factor.
- \* The study found that the development of livestock development 'peer groups' from young farmers is the most suitable way to conduct the needs assessment study with the approach of participatory research. Peer groups can be developed as efficient adult educators and a good link for the Department of Animal Production and Health. By providing them necessary education and motivation, responsibility of their needs assessment can be given to the peer groups.

- \* Before the participatory research approach is officially applied in the DAPH to investigate farmers educational needs, it is suggested that the procedure should be improved by conducting small pilot projects.
- \* The participatory research approach appears to be the most suitable way of investigating the educational needs of rural livestock farmers as it would provide an opportunity for neglected farmers to contribute their ideas for their educational development programs. This participatory research approach may help to change the existing livestock extension system from a "top-down" to a "bottom-up" approach.