The use of education theory to guide the implementation of participatory rural appraisal in the Kingdom of Tonga

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DISCUSSION AND CONCLUSIONS

The economy of Tonga depends heavily on agriculture, providing approximately eighty percent of employment opportunities to the workforce (Pelesikoti, 2003; van de Velde et al, 2006). To achieve better yields from farming activities, local growers have often used pesticides but they have not always used them appropriately and have failed to recognise the potential dangers to themselves, the consumers of their products and to their local community (PASA TCDT/FSP Annual Reports, 2003 & 2004; ATSDR, 2008).

This study was designed to implement a community education program, Participatory Rural Appraisal (PRA), that would inform and educate local communities on how to contribute to safe farming practices. It made use of Participatory Action Research (PAR) as a broad theoretical perspective that was designed to encourage local people to actively participate in Ecologically Sustainable Development (ESD).

As an alternative to conventional, top-down approaches to rural development, PRA is based on village experiences but the evaluations of it, as discussed in the literature review, showed that it could be enhanced if PRA was supported with an appropriate pedagogical framework. This study identified Cambourne’s conditions of learning (Cambourne, 1988) as providing such a framework as it could be linked to the broad objectives of PRA and PAR. As previously stated, Cambourne’s conditions of learning is one approach that was appropriate for the context of this study and it is acknowledged that other approaches are possible. However, it is beyond the scope of this study to explore all of these possibilities. This chapter will, therefore, contribute to the evolution of the Cambourne’s conditions of learning model and this contribution to theory will be presented as an integrated theoretical framework that may have the potential to be applied in other contexts.

To summarise, the purpose of this study was three-fold:

i. To assess the strengths and limitations of Participatory Rural Appraisal (PRA) as a framework for organising community education designed to improve ecologically sustainable methods of crop pest control in Tonga.
ii. To identify an educational theory that would be suitable to support the PRA framework and also addresses the reported limitations of PRA.

iii. To use the perspective of a participatory action research framework (PAR) to guide and evaluate the implementation of this theoretical educational model in the context of a Tongan community groups who were the focus of the data collection.

The following questions were posed:

1. What are the strengths and limitations of PRA as a framework for community-based action that focuses on the safe use of pesticides (SUOP) and ecologically sustainable agricultural practices (ESAP) in rural communities in Tonga?

2. How can educational theory be combined with PRA to guide the planning and implementation of a community education program designed to improve the SUOP and ESAP within a group of women and young men in rural communities in Tonga?

This chapter is structured into two parts that focus on these research questions.

7.1 Part 1: What are the strengths and limitations of PRA as a framework for community-based action that focuses on the safe use of pesticides (SUOP) and ecologically sustainable agricultural practices (ESAP) in rural communities in Tonga?

7.1.1 Strengths of PRA as a framework for community education

In the past, local communities, government and non-government agencies have incorporated Participatory Rural Appraisal (PRA) approaches in data collection, analysing of information, development and evaluation of projects (Ecowoman, 2000; Halavatau & Hazelman, 2003; Pretty, 1995). The strength of the PRA approach is that it helps local communities to identify their needs, rank priorities, and develop possible solutions in moving towards sustainable development practices. Because of these experiences, a community can collect information about localised issues such as marine conservation,
watershed resources, agriculture, and traditional cultural activities, and the final decision-making is shared among them.

The key steps recommended include:

- Site selection and clearance from local authorities;
- Preliminary visits (site classification, comparison and contrast);
- Data collection (spatial-time-related, social, technical, problems, etc);
- Synthesis and analysis (preliminary analysis, statistical analysis);
- Setting problems in priority and exploration of opportunities to resolve them;
- Ranking opportunities by priority and feasibility and preparing an adult education plan.

In general, these steps are implemented in the sequence that they are presented. The general rules of PRA meetings are: allow all persons to speak and encourage them to give ideas, even if they repeat what any person or leader has said openly and without influence. This gives everyone the opportunity to express and clarify his or her ideas.

Some of the key strengths of PRA if used as intended are that it includes: time for full community consultation and input, and the process allows the community to take ownership of the issue and respects the local culture.

7.1.2 Some limitations of the PRA as a framework for community education

Whilst the approach is useful in identifying problems and proposing solutions, it has limitations in the adult education, implementation and evaluation phases. As such, there is the potential to generate disappointment when an agreed solution to a problem is not fully implemented and evaluated.

As the key steps recommended are meant to be implemented in sequence, there can be a long lag time from the start of the process to the actual implementation of the education program and this can lead to learner disengagement as most adult learners expect to make progress and see concrete outcomes within a limited time-frame. Even though the process is meant to respect the local culture, it has the potential to create ‘tensions’ when ‘outside experts’, who may not be fully cognizant of local cultural nuances, are used as facilitators. The critical adult, community education stage needs to be carefully planned, implemented
and monitored in order to achieve the desired outcomes and if this is not done well, learner disengagement occurs and disillusionment of the stakeholders occurs.

A recurring theme throughout this study is the importance of cultural knowledge and the status of the facilitator/researcher. Very early in the study, this became apparent as the facilitator/researcher needed to know how to handle social and sensitive issues such as land ownership, values and culture of local communities in a traditional way. Participants were more likely to be engaged and committed to the program if they felt that their culture was understood, respected and supported.

7.1.2.1 *The first stage of PRA can disengage potential participants if the facilitator does not have the skills to engage stakeholders at the initial meetings and presentations.*

Analysis of field notes and the interviews showed that after the initial presentations some participants did not fully comprehend the information about the project. As a result, some did not believe that the project was relevant to them. Therefore, some of the participants sometimes responded by saying what they thought the facilitator/researcher wanted them to say rather than what they actually believed. But, the experience of the facilitator/researcher here enabled him to ‘read’ non-verbal signals and to follow up on such responses in ways that uncovered the true beliefs of the participants. This then allowed concerns to be raised and addressed. If the facilitator/researcher had not had the ability to recognise and deal with such issues then stakeholder engagement would have been reduced.

7.1.2.2 *Some participants can become bored by the need to repeat tasks at various stages to ensure that all participants have the necessary knowledge and skills.*

Repetition is quite common during the PRA process because the activities could occur more than once in each phase. This has the potential to be boring and even confusing for some participants. On the other hand, repeating PRA activities using peers as tutors can be a way of ensuring that the majority participants understand what is to be learnt. During this study the facilitator/researcher made use of more experienced participants to conduct demonstrations when activities were repeated. However, there were times when
the more experienced learners dominated group discussions giving little opportunity for other members to participate. Also some participants were quiet and appeared reluctant to participate in group discussion. The facilitator/researcher needed to develop strategies to overcome this; for example, one-to-one discussion with the quieter participants in their local settings. Thus, the wide differences between the levels of knowledge, skills, attitudes and practice of the participants had an impact during the planning and implementation of the PRA activities. The application of Cambourne’s conditions of learning helped to promote engagement and contributed to overcoming this difficulty.

7.1.2.3  The PRA process cannot be followed as a ‘lock-step’ timetable

It was inevitable that family commitments would have an impact and slow down the planning and implementation of the PRA activities to some extent. It was important to have a flexible approach that took into account the strong ties that participants had with their cultural and social upbringing. The facilitator/researcher took into account family commitments and social obligations such as housekeeping, child-care and church and village activities and recognised that these had to be fulfilled before full participation in the programs. However, if the timeframe was made too flexible, the project could not be completed on time. Therefore, a delicate balance was needed to accommodate the context of Pacific culture and extended local time.

7.1.2.4  It is important that the publicity phase for the project is realistic and varied

The facilitator/researcher was conscious that publicity of the PRA activities might create higher expectations than what the participants could actually achieve during the project. This had happened in the past and participants had withdrawn when the publicity was too optimistic. The project then appeared to be a failure as it did not achieve the publicised goals and objectives. In such cases, participants developed mixed feelings and were confused about the programs. Negative attitudes were developed by local communities about such projects because the previous education programs were seen as a failure. During this study, press releases were controlled and realistic.

In the past, education programs such as companion planting, composting, etc., were not always successful in educating participants about SUOP and ESAP. Halavatau and Hazelman (2002:4) listed the different level of knowledge, skills, attitude and practices acquired by the extension officers (MAF officials) compared with the farming
community, as shown on Table 9.1. They noted that the vital ingredients for success of PRA are not the methods themselves but the attitudes and behaviours of those who use them and this study supports their findings in the deliberate implementation of Cambourne’s conditions of learning.

Table 7.1 below briefly summarises the findings of Halavatau and Haselman (2002) and compares the knowledge of the facilitators (extension officers) to that of the farming community. The challenge is to combine, in a meaningful and productive way, the knowledge of the farming community with that of the extension officers. One way of enhancing this process is to increase community engagement through a theoretically informed process such as embodied in Cambourne’s model. To achieve this goal, the education theoretical framework must be integrated with the PRA, enhancing learner engagement and the development of a practical blend of theoretical and traditional knowledge.

**Table 7:1 Differences between extension officer knowledge and farming community knowledge**

<table>
<thead>
<tr>
<th>Extension Officers</th>
<th>Farming community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>Traditional</td>
</tr>
<tr>
<td>Scientific</td>
<td>Traditional/non scientific</td>
</tr>
<tr>
<td>Trained skills</td>
<td>Untrained</td>
</tr>
<tr>
<td>Level of education (specialist oriented)</td>
<td>Based more on experience (trial &amp; error)</td>
</tr>
<tr>
<td>Broad knowledge (food security and commercial)</td>
<td>More food security and less knowledge (especially of pests and disease)</td>
</tr>
<tr>
<td>Improved knowledge</td>
<td>Rely on other farmers</td>
</tr>
<tr>
<td>Have access to modern technology</td>
<td>Do not have access to modern technology</td>
</tr>
<tr>
<td>Can identify pest and disease</td>
<td>Most cannot identify pests and diseases</td>
</tr>
<tr>
<td>Depend on trials basis</td>
<td>Experience basis</td>
</tr>
<tr>
<td>More active knowledge</td>
<td>More passive knowledge</td>
</tr>
<tr>
<td>Wider scope</td>
<td>Limited to their own</td>
</tr>
</tbody>
</table>

*Source: Adapted from Halavatau & Hazelman (2002:4)*
7.2 Part 2: How can educational theory be combined with PRA to guide the planning and implementation of a community education program designed to improve the SUOP and ESAP within a group of women and young men in rural communities in Tonga?

7.2.1 Participatory Action Research (PAR) as a guide to effective community participation in PRA

As previously stated, Participatory Action Research (PAR) is a social research perspective and is often associated with social transformation in the Third World. Three particular attributes are often used to distinguish PAR from conventional research including shared ownership of research projects, community-based analysis of social problems and an orientation toward community action.

The reflections of the facilitator/researcher and the participants here appear to show early commitment to the program and this was sustained throughout the program. Further, there is evidence of genuine appreciation for the opportunity to participate in a meaningful way and to influence in various ways the final outcomes. In particular, the quotes from the participants indicate that the three particular attributes of PAR were present during the project and the researcher/facilitator, as an experienced member of the Tongan community, was able to focus events so that these broad principles were at the forefront of the interactions that he had with or facilitated with participants and their surrounding communities.

While PAR provides a guide to effective community participation, it is not the ‘magic bullet’ offering a simple solution. Instead, it offers a broad set of principles that guide the way that PRA projects are implemented and, as such, it needs to be recognised that the understanding of the cultural context and the ability of the facilitator to understand and work within the culture are important factors that contribute to the success of this and similar programs. There is, however, a need to apply an education theory to activate participant learning, as participation alone is not sufficient to sustain a project such as this.
7.2.2  A review of how the conditions of learning were applied during the various activities of the project

In this section, the application of individual conditions of learning is discussed in relation to learner engagement.

7.2.2.1  The application of immersion

Throughout the project, participants were saturated in local language that described and explained what they were expected to learn. During the community talks, group meetings and individual interviews, field trips, demonstrations and home visits the learners were immersed in many demonstrations of effective SUOP and ESAP practices that were described in their local language. The exchanging and sharing of experience among the participants, field trips, home visits and kava circle (faikava) ceremonies also motivated the participants to acquire and implement more knowledge. As previously mentioned the continued application of immersion made a significant contribution to the ongoing engagement of participants.

7.2.2.2  The use of demonstrations

The participants saw and heard demonstrations of actions and/or artefacts of effective practice that could be learned and employed in their daily lives. The field visits, group discussions, group meetings and home garden visits immersed the participants in demonstrations that they saw as relevant and of some value in their daily lives. In addition, demonstrations were repeated so that most learners were confident with implementing the new skills.

The preparation of the training materials in the local language and clear presentation of garden activities to local community members including secondary school students and teachers provided the opportunity for participants to demonstrate to others the new knowledge and skills that they were using. Publicity associated with these demonstrations via newspaper, radio and television interviews further encouraged them to continue to carry out the learning tasks in their gardens.

7.2.2.3  The application of expectation

During the initial interviews, group meetings and community talks, the participants became convinced that the demonstrations of activities such as composting, companion
planting, seed saving, etc., were do-able and that they could employ them purposefully in their lives. They also believed that what they were setting out to learn was not only do-able by them but also by other family and community members. That is, they expected that they, their families and community members were all capable of developing the knowledge and skills that they were learning and these expectations were borne out in the success of their applications of SUOP and ESAP in their own gardens.

7.2.2.4 Learner responsibility

As Cambourne claims, learners should be responsible for their own learning. The facilitator/researcher here promoted responsibility by giving participants the opportunity to decide which particular parts of the learning activities to participate in and apply during the initial interviews, group meetings and community talks. The facilitator/researcher did not try list a sequence of tasks describing what the learners should learn but instead encouraged the participants’ decision-making and progressively raised expectations of the participants and their ownership of and responsibility for their own learning.

In addition, the participants exchanged and shared information about SUOP and ESAP, further showing that they were taking increased responsibility for their learning and the learning of others.

7.2.2.5 The importance of accepting and supporting approximation

The participants were able to try out what they had learned and were able to experiment during the home garden visit activities and learn from “mistakes”. And even though their initial attempts were not always successful, the facilitator/researcher and their peers all provided informative feedback and encouragement that was warmly received. This helped the participants to accept approximation as positive and necessary for successful learning.

7.2.2.6 Practice and Use

As the project progressed, the participants became more skilful and were able to put their learning into effective practice, trying out, in the real world, knowledge and skills that were contextually relevant and meaningful. Home visits and individual interviews revealed that the participants were practising composting, companion planting, mixed
cropping and moon planting which gave them many opportunities to experience success in the use of knowledge about, and skills in, ESAP and SUOP.

7.2.2.7 Response

The facilitator/researcher had built trust among participants during planning, demonstration and early implementation of SUOP and ESAP. He consistently placed a strong emphasis on the positive “acceptance”, and “celebration” of the participants’ activities and this was reflected in their confidence during sharing and exchanging of experience during discussion (talanoa), field trips, home visits and (faikava) ceremonies and group meetings about SUOP and ESAP. The kava circles (faikava) and group meetings (talanoa) reinforced this response as did the obvious success of their practical SUOP and ESAP. The public awareness programs, such as, village clean up, recycling of domestic wastes, and companion planting also promoted SUOP, ESAP, tourism and safer environments for local communities in Tonga.

The facilitator/researcher emphasised positive responses of acceptance and celebration to the learner’s performance during the group meetings, group discussions at the training workshop, the drama presentations, radio and television interviews and newspaper articles. Further, the preparation of the training materials for community education in local language and the presentation of gardens to local community members and other participants, and the secondary school visits helped to reinforce broad positive “acceptance” of the success of the SUOP and ESAP.

The study also shows that the PRA process can be adapted to the cultural setting of Tonga provided the facilitator has a deep understanding of the culture. The status of the facilitator/researcher in environmental education and community development helped to build up the trust of participants during the planning and the development of the program. His experiences in cultural interactions and deep awareness of cultural values such as taboos, respect, oratory and traditional values helped the participants to share their knowledge and skills during the planning and implementation of the SUOP and ESAP.

7.2.2.8 The impact of applying the theoretically informed models in Tongan society

The positive responses of the majority of participants throughout the phases of this project, clearly indicated in observations and more informally through conversations with
the facilitator/researcher, were confirmed in the more formal interviews and the informal conversations during the final phase of the project. These data support the view that the project was successful in achieving its outcomes. Further, the data confirmed the value of Cambourne’s learning model as applied here. In addition, the guiding perspective of PAR helped the research/facilitator to maintain a clear focus on key outcomes throughout the project.

Both groups of participants emphasised the importance of their early participation in planning and decision-making, of the use of their own language in teaching and teaching materials and the location of instruction and practice in their own communities. Initially, however, the young farmers did not engage as fully as the women, but their engagement was enhanced when the facilitator/researcher held follow-up, informal meetings at their farms. During these meetings the young farmers were able to discuss openly ideas and concerns while the facilitator/researcher was able to immerse them more in the purpose of the project, helping them to understand that the project would be of value to them and that they were capable of completing the tasks and contributing to the learning of others.

Both groups indicated that the demonstration workshop and field trips were major factors in their engagement with the project. Again, the real-world, real-life contexts of home, community and language were seen as important. Participants said that these activities made them see not only the potential advantages of SUOP and ESAP but significantly, they themselves could carry out the tasks involved successfully. In particular, they appreciated the demonstrations and the way that processes were explained in their own language. This confirms that engagement was enhanced by the application of immersion and demonstration, two of the conditions of learning in Cambourne’s model.

This was further confirmed as participants’ own composting and gardening activities were put into practice. Not only were the participants encouraged by their own successes, they also spoke of the pleasure of being supported by other members of their groups, particularly in providing additional guidance and suggestions in overcoming difficulties. Their engagement was enhanced both by the application of immersion and demonstrations as well as their acceptance of approximation and increasing responsibility for their own learning.
The support and encouragement of the facilitator/researcher, and other ‘experts’ and the response to their work by their own and other communities, schools, agencies of government and the media were all important both to the participants’ engagement and to the overall success of the project. Learner engagement was further reinforced by the response of other stakeholders.

During this project, the facilitator/researcher ensured that Cambourne’s (1988) conditions of learning were applied as far as possible throughout the phases of the PRA process but these two approaches alone would not have been successful in improving the knowledge, skills, attitudes and practices of the participants in SUOP and ESAP, if the cultural context of the applied education theory was not understood and utilised. This has particular implications for the implementation of similar programs in the South Pacific.

7.2.2.9 The traditional greeting and communication with local chief
The traditional greeting of the chief and his spokesmen, the village elders, the church leaders and the participants must be acknowledged in SUOP and ESAP education in Tonga from the first group meetings, community talks and initial interviews. Once these key people are informed about the program, their support is likely to be voluntarily offered, helping to encourage people within their local communities to support the program.

7.2.2.10 The use of local language
The use of the local language as a means of communication in local and traditional communities is essential. Local language helps the communities to better understand the aims and purpose of the program. Further the use of local language as a means of communication during the program builds up the trust and confidence of the participants in their own capabilities. Participants here were proud to use their language and felt confident when they communicated with each other in that language, especially at training workshops. In the past, local people felt inferior and frustrated when their mother tongue was neglected during community-based training activities and in printed materials and instructions.
7.2.2.11 The national dress code

The use of traditional national dress is respected and is important in Tonga and other South Pacific communities. Local participants are more confident in wearing the national dress when attending formal activities such as a training program. They will be even more willing to engage in the program if the facilitator/researcher is also wearing the traditional dress. In Tonga, local participants must wear ta’ovala during a training program. There is an exemption for foreigners to wear acceptable suits but local participants, particularly the facilitator/researcher of the learning program must put on the national formal dress, symbolising the identity of the communities and their cultural heritage.

7.2.2.12 The traditional kava ceremony

The facilitator/researcher should participate in the traditional kava ceremony in the South Pacific Islands. A kava circle is common in islands nations such as Fiji, Vanuatu, Samoa and Tonga. The serving of kava before the learning program is a cultural message that signals the importance of working together for the unity, peace and solidarity of the community. The kava circles here were good sources of information from the chief, the church leaders, town officers and the participants and contributed to the planning, implementation and success of the program. Their inputs and feedback could be analysed in evaluating the progress and success of the program. The kava circle also contributes to the engagement in and ownership of the program by participants.

7.2.2.13 The social structure and local authority

The social structure of the local community must be well known to the facilitator/researcher. Most local communities have their own chief or spokesman to direct and inform community activities. The chief and the town officer must be informed about a program before further contacts such as group meetings and community discussions. These contacts allow the local chief and the town officer to organise a village meeting (fono) to discuss (talanoa) the program. The local chief is a figurehead in the community because he is the representative of the village and the land. The town officer is a representative of the Prime Minister’s Office and the Tongan government. The chief and the town officer can invite all the members of the local community to village meetings to discuss the program before reporting to the facilitator/researcher about the views of the community. These networks and communications are important in traditional, local communities and are very influential and powerful.
The allocation of tasks and responsibilities must be discussed with the local people. Local people know better the human resources in the community and who can assist during the community-based training activities. When local people allocate the tasks and responsibilities among the participants, the participants are more willing to give their full support during the program.

7.2.2.14 Cultural restrictions (taboos)
The facilitator/researcher must abide by the social and cultural restrictions of the local community. These restrictions are not always documented but must be known and adhered to to gain local support for the programs. The opening ceremony must be started with opening prayers by one of the church leaders and an opening speech by the local chief. These cultural elements of the opening ceremony are an important component of most Pacific Island training programs as are those of a closing ceremony and celebration.

7.2.2.15 The importance of the support of women
In Tonga, most community development programs are carried out by women. Women’s groups carry out various community development projects such as school building projects, garden projects, home improvements, community roads upgrading, kitchen projects, cement tank projects, weaving, handicrafts and household activities. When the women became active participants in this program, they encouraged their husbands, friends and children to help in their activities. Thus, the status of women must be acknowledged in the development of any program.

7.2.2.16 Funding
In the past the impact of PRA was limited by the way it was implemented, as outlined previously. This was partly due to a lack of community consultation about implementation processes that led to a lack of engagement of potential participants, but also to limited financial support for the program. Lack of adequate funding is a stumbling block for many development activities in South Pacific communities. The traditional leaders such as local chiefs and church leaders, villagers, young farmers and women’s groups cannot give full support if there are not enough funds to implement development programs. The allocation of sufficient budget for a program determines the success or failure of the program. It is important to activate an income generation program for local
community development groups in order to effectively implement sustainable SUOP and ESAP and this point needs to be considered by funding authorities.

7.2.2.17 Summation

PRA, as written, appears to be a linear process but in reality a flexible timeframe for PRA is needed to accommodate the ‘Pacific Way’, particularly, the ‘Tongan Way’ which involves following community protocols and life-work patterns.

When PAR is used a guiding perspective, it may add theoretical support to an approach used at the commencement of this project. This approach recognized the ‘Tongan Way’ which involves following such patterns. Further, the facilitator/researcher, who is Tongan, understood the importance of the ‘Tongan Way’ and negotiated the time to discuss the aims and objectives of the program, and the proposed activities with key stakeholders before confirming their participation. Thus, the consultation process developed a working relationship and built up the trust between the participants and the researcher and strongly contributed to learner immersion and engagement.

The study showed that the model used can be adapted to the cultural setting of Tonga provided the facilitator/researcher has a deep understanding of the culture. The status of the facilitator/researcher in environmental education and community development helped to build up the trust of participants during the planning and the development of the program. His experiences in cultural interactions and cultural values such as taboos, respect, oratory and traditional values helped the participants to share their knowledge and skills during the planning and implementation of the SUOP and ESAP programs here. This experience cannot be removed from the context of this study and it is acknowledged that the status and cultural knowledge of the facilitator/researcher was an important factor, but this alone is unlikely to have guaranteed success.

Activities were designed to facilitate learning in a relaxed atmosphere in a setting that was familiar to the learners and within a familiar cultural setting. For example, the group of women were confident to talk about the program during community talks with the facilitator/researcher at their homes, as the home environment provided a relaxed atmosphere. Also the facilitator/researcher conducted community talks with the young farmers in their gardens as they were more relaxed in this setting. Through these activities
and in these settings throughout the phases of the project, the application of Cambourne’s conditions also contributed much to the learning of participants in the PRA program.

7.2.3  Adapting and applying the model to similar contexts

This section describes how PAR and Cambourne’s conditions of learning could be applied to other contexts. At various times during this project the facilitator/researcher discussed his methodology, findings and conclusions with Cambourne. In 2009 Cambourne published a revised version of his conditions of learning and this model is presented in Figure 7.1.

The remainder of this section will discuss how this model links to the findings of this study.

Figure 7.1: Cambourne’s revised conditions of learning (2009)

Figure 7.1 places engagement at the centre as learning cannot occur without engagement. When the conditions of learning that surround engagement as depicted in Figure 7.1 are
applied, they help to promote learner engagement. The promotion of learner engagement also helps to reinforce the application of these conditions. These conditions do not, however, work in isolation; instead, they are inter-related and inter-dependent. As a result, the facilitator needs to be aware that many of the generic strategies depicted in the outer ring are inter-related and may influence the effect of others.

In the context of this study, we would need to add another two layers to the model. The first is a ring of PRA strategies that were modified to employ specific ways of activating the conditions of learning to promote learner engagement. The second is the importance of considering the cultural context as this was the starting point for effective engagement and commitment to this program. A third layer that permeates the whole model is that of the perspective of PAR - shared ownership of research projects, community-based analysis of social problems and an orientation toward community action. This is depicted in Figure 7.2 which is a modification of Cambourne’s revised conditions of learning. The new sections are added in a different colour so that their relationship to Figure 7.1 can be clearly seen. PAR is placed at the top of the figure to emphasise the importance of this perspective in guiding consultation and meetings with stakeholders and community leaders that informed the facilitator/researcher’s understanding of the cultural settings of the villages involved in this study. This was an essential first step and time had to be taken to ensure that this was done in a culturally sensitive manner, which then allowed the facilitator/researcher to work with the local community to develop the modified PRA program, activating the conditions of learning, leading to high levels of engagement and commitment during this study.

This model may have the potential to be transferred to other contexts, but, as such, it is only presented as a framework that could be used to guide the actions of facilitators who may be considering similar projects. However, a word of caution is needed. The framework is a guide, but a key element is the facilitator, as this person must have the ability and status to establish credibility within the communities in which they work. In the context of this study, the facilitator/researcher was already a significant leader within the Tongan community and it is suggested that the successful transfer of the framework to other contexts would depend on who leads the program.
Figure 7.2: A model of how the approach used in this study could be used to guide projects in other contexts.
7.3 Concluding remarks

The original purpose of this study were to:

i. To assess the strengths and limitations of Participatory Rural Appraisal (PRA) as a framework for organising community education designed to improve ecologically sustainable methods of crop pest control in Tonga.

ii. To identify an educational theory that would be suitable to support the PRA framework and also addresses the reported limitations of PRA.

iii. To use the perspective of a participatory action research framework (PAR) to guide and evaluate the implementation of this theoretical educational model in the context of Tongan community groups who were the focus of the data collection.

At the conclusion of this study, the researcher is justified in claiming that he achieved these purposes. Certainly PRA is a suitable framework for community education but it is limited by the lack of a theoretical framework that could help to apply key learning conditions for greater learner engagement and commitment and of inadequate consideration of cultural elements in developing and implementing the PRA process. Further, an overall guiding perspective is needed as the broad principles can become ‘lost’ during the stages of a project. Once this happens, genuine community participation will wane and the long-term viability of the project will be compromised.

The framework presented at the end of this chapter represents a first step by the researcher to integrate cultural and community links within an educational framework that supports PRA. As such, it should be viewed as a ‘work in progress’ that can be further informed by similar research in other contexts.