What is Action Research?

An introduction to action research

for community development.

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INTRODUCTION

Community Development often involves dealing in complex situations where a great deal of uncertainty exists about the nature of problems and ways to deal with them. Furthermore, the context for community development often changes as external circumstances (including government policies, economic conditions and environmental conditions) change. Flexible approaches are needed to deal with such changing circumstances.

Differing goals and objectives within communities can also be a complicating factor, and approaches to community development which enable different actors and stakeholders to jointly negotiate and plan actions are very useful.

Action research is an approach which is adaptive, flexible and participatory. It can be applied quite usefully in community development and related fields such as agricultural research and extension. The aim of this paper is to introduce the main features of the action research approach and to discuss some way in which it can be applied to community development, including agricultural research and extension.

THE IDEA OF ACTION RESEARCH

The principle behind action research is that it combines action with research. It is a process in which learning (research) is done to enable action to be carried out more effectively and, at the same time, learning occurs through action, through lessons learned by trying things. Action research can be defined as

> *A process in which a group of people with a shared issue of concern collaboratively, systematically and deliberately plan, implement and evaluate actions. Action research combines action and investigation. The investigation informs action and the researchers learn from critical reflection on the action.*

Action research is often presented as a cyclical process with repeated cycles of planning, action, evaluation and replanning. Kemmis and McTaggart (1988a) have presented this as an action research spiral. See Fig 1. The important point about this is that the process of action and research is iterative, rather than being a linear process of research/planning followed by action. In this respect it differs from the more common approach to applied research where research is done to investigate a problem and then the action (applying the solution) is implemented. It is possible to think of action research as a form of applied research, but one in which the action and research occur in parallel.

Another characteristic of action research is that it normally is a group activity, involving a group of people going through the cyclical process (a core team). Some proponents of action research state that all action research must be participatory (eg Kemmis and McTaggart 1998a). Others use the term Participatory Action Research (PAR) to refer to more explicitly participatory forms of action research. I would differentiate between action research where a group of researchers go through the action research cycle and PAR where other actors (such as community members) are actively involved in managing the research process (the action and learning cycles) (Fisher 2003).

My view of action research clearly distinguishes between action learning and action research. Like action research, action learning also involves a cyclical process of planning, acting and evaluating actions. However, in action learning the purpose of the learning is specific to the particular context (we learn to do a particular thing better), whereas in action research a second objective is to make a contribution to public knowledge. Research is a planned and organised attempt to find answers to questions and usually implies the intention of contributing to "public" knowledge, not just individual learning or learning by those involved in the research. According to Fisher and Jackson (1998):

> …action research is also a type of *research*, in the sense that it contributes to "public" knowledge. Experience in a specific situation generates insights and understanding which can *inform* actions in similar situations. The word *inform* is important here. The intention is not to provide recipes for implementation, but rather to provide insights which others may find useful in other contexts. This aspect of generalising from learning in a specific situation is the research element.

Action research can be a suitable methodology in the following types of situations:

- a problem being investigated is very complex (involving diverse elements);
- people don't know where to start in solving a problem (and especially when they lack confidence due to the complexity of the problem);
- change involves people with differing perspectives or conflicting objectives and there is a need for a common vision or negotiated compromise;
- the situation or context is changing.

In most forms of research, the research is framed around specific research questions. In action research, the focus of the activity is a "thematic concern", a general problem area that the researchers and other participants want to improve. The actual research questions may change for different cycles. For example in an action research project where the thematic concern is to improve pumpkin production for a market, the research question for the first cycle might be "what characteristics does the market require in terms of type, quality and timing?" the second cycle might ask "how can we produce pumpkins that are of the regular size required by the market?"; the third question might ask how can the farmers, transporters and exporters arrange their production and coordinate arrangements so that the pumpkins will arrive at the market in peak condition at the appropriate time.[2] The second and third questions could not be asked (probably not even predicted) until the first question was answered. The third question has all sorts of subsidiary questions, some technical, some organisational. All of these are crucial to successful marketing.

[2] Tevita Toafa, a Tongan student at the University of Western Sydney, carried out an action research project aimed at improving the ability of Tongan pumpkin producers and marketers to meet the specific requirements of a seasonal pumpkin market in Tonga (Toafa 1994).

THE DEVELOPMENT OF ACTION RESEARCH

The first explicit formulation of the idea of action research was made by Kurt Lewin, in the context of work with minority communities in urban areas in the Unites States (Lewin 1946). Lewin differentiated between two types of social research. One type dealt with "the study of general laws of group life" and the other dealt with "the diagnosis of a specific situation". He argues that an engineer or surgeon needs to understand both the general "laws" and the specific situation, which is determined by diagnosis. Action research operates at the level of the specific situation, and also assumes that just diagnosing isn't enough to create change. There is a need to complement "the diagnosis… by experimental comparative studies of the effectiveness of various techniques of change".

Later action researchers added new elements. Friere (1982) focused on research based on "learning to do it by doing it". He introduced a strong activist or emancipatory element into action research. In this approach to action research the focus is on empowering people by allowing them to take control of the research process and addressing their own needs. Emancipatory learning and empowerment are strong thematic trends within the action research literature (see Selener 1997). This is very relevant to community development.

Action research is now applied in quite a variety of different situations and is increasingly regarded as an academically respectable form of research. Increasingly PhD theses are being written based on action research. It has been applied in fields as diverse as community development, institutional and corporate contexts (Greenwood and Levin 1998), community-based natural resource management, Protected Area management (eg Fisher and Jackson 1999) and agricultural development (eg Maclure and Bassey 1991). (For a review of different applications of action research see Greenwood and Levin 1998; for collections of readings see Kemmis and McTaggart 1988b and Foote Whyte 1991.)

ACTION RESEARCH AND AGRICULTURE

Community development involves a variety of different fields. Natural resource management and food production are obviously very important aspects of community development. As the first two case studies will show, action research can be very useful in contributing to improved agricultural production and (thus) food security.

Traditional approaches to agricultural extension have tended to be based on a linear approach which assumes that agricultural scientists carry out research to develop or improve agricultural technologies and then agricultural extension specialists communicate the new knowledge to farmers.[3] In this type of approach the extensionists have used a variety of methods to "transfer" new knowledge to farmers, including training and demonstration farms and plots. In practice, new knowledge has often not been "adopted" by farmers and this has raised questions about the need for new approaches which look at the aspects of farming systems which may make new technology attractive or unattractive. Frequently agricultural technology works very well in research situations, and even in demonstration plots, but cannot be applied

[3] The "traditional" approach to agricultural research and extension has been under challenge for quite some time and other approaches are increasingly popular. Nevertheless, much extension still follows the idea that research produces the knowledge and that this knowledge has to be transferred more or less without modification to farmers by extensionists.

easily by real farmers due to such factors as lack of labour, lack of available cash for investment or inconsistency with other existing activities and technologies. Increasingly it is being recognised that flexible extension and adaptive extension processes can be used to ensure that technology is useful to particular farmers and, often, to adapt technology to meet farmers needs.

Case 1: Action Research in a Rainfed Lowland Rice Farming System in Cambodia

Solieng Mak, a Cambodian researcher who worked for the International Rice Research Institute (IRRI) carried out a PhD study on agricultural change in a lowland rice farming system in Cambodia. In action research terms, the "thematic concern" was that lowland rice production in Cambodia is not very productive. IRRI scientists had developed a "green manuring" technology which had been proven to make considerable improvements to yields in trials. However, farmers had shown relatively little interest in adopting the technology. This was a problem for IRRI.

The first step in the research was what can be called an "ethnographic phase". Dr Mak carried out a detailed study of the rainfed lowland rice system in one village, paying particular attention to decision making. A few key points for the purpose of this discussion are:

- The rice yield was quite low largely because there was very limited water besides rainfall during the monsoon. The land was very flat and ponds for rainwater storage were few in number. In a country as poor as Cambodia there were no sources of funds to construct further water storage.

- Virtually the only source of income was from collecting and tapping palm sugar for sale. While the income from this was very low, it was virtually the only source of cash income. Rice production only met local needs. Some supply of cash was essential to enable villagers to purchase essential supplies and small luxuries (such as cigarettes) from the market.

- Labour demands from palm sugar collecting (which occurred before the rice season) were not heavy but were very regular: men had to visit their palm trees twice a day (morning and afternoon); women had to attend a cauldron in which palm sugar was gradually separated from the liquid for much of the day, keeping a fire burning and occasionally stirring the contents.

- Apart from during the rice season, livestock wandered freely throughout the village and fields, eating crop residue and manuring the fields.

All of this had implications for any attempt to introduce the "green manuring" technology, which required labour to keep the livestock out of the fields while the nitrogen fixing plants were growing. Unfortunately this occurred in competition with palm sugar collecting and processing. There was no labour supply to protect the fields. This was complicated by the fact that most households consisted of young couples with very young children. There were very few extended households or older people. This population structure was a result of the decimation of the rural population which occurred under the Khmer Rouge during the Pol Pot era. (The

research occurred in the early 1990s, and the crisis had passed, although there were still some Khmer Rouge in the area at the time of the field work.) In this context, a technology which obviously worked from a technical point of view did not fit easily into the realities of the farming system and social conditions.

The next step in the research was to initiate an action research phase in which Solieng and a number of villagers went through a series of reflection, planning and action cycles. (This phase of the research was genuinely participatory research, as the villagers themselves participated in managing the action research process.) Some people agreed to try green manuring and some efforts were made to in initiate inter-household cooperation to share labour to protect the fields or livestock. This didn't work very well, partly because people had a very negative view of group work due to their experiences in Pol Pot's time when everyone was organised into one group or another. Some people did carry out trials with green manuring. Interestingly, they modified the instructions given by the scientists (regarding planting densities and so on) and tried their own variations. The outcome of this was some adoption and some modification of the new technologies.

In research terms the outcomes were:

- Clear understanding of the Rainfed Lowland Rice system and the reasons for "conservatism" (lack of available labour at crucial times, conflicts between new technologies and other necessary activities).

- Insights into the adoption process – re-experiment and adaptation to local conditions was undertaken by supposedly ignorant and conservative farmers, clearly showing that they were neither ignorant nor conservative.

- Understanding of the limited potential for group extension in Cambodia due to the lack of trust engendered during the Pol Pot period. [4]

It is important to note that the action research dealt both with technical aspects of agriculture and with social and organisational issues.

Much of the learning outcome from research is specific to rainfed lowland rice in Cambodia, but there are insights which have wider application. For example, if we can see how labour availability and conflict with other elements of the livelihood system affect agricultural change in this context, we can be more aware of the possibility that similar factors will be important in other contexts.

Case 2: The Farmer-Back-to-Framer Model of Adaptive Research (Robert Rhoades of the International Potato Center)

The second case comes from a formal agriculture research centre. The methodology was not referred to as action research, but actually displays the key characteristics of action research.

[4] There was a further phase of action research in which the villagers attempted to construct a water storage pond through cooperation and labour sharing. Solieng Mak had obtained funds from an NGO. (I will not deal with this phase here.)

The International Potato Center in Peru (CIP in Spanish) is part of the CGIAR system (Consultative Group on Agricultural Research). During the 1970s and 1980s, CIP scientists worked in interdisciplinary teams to adapt scientific research to farmers needs and realities. Robert Rhoades, an anthropologist working with CIP published a very useful book about this research (Rhoades 1984).

Rhoades describes the farmer-back-to farmer model (see Fig 2):

> Briefly, the basic philosophy upon which the farmer-back-to-farmer model rests is that successful adaptive interdisciplinary research must BEGIN and END with the farmer, farm household, and community. It does not posit that decisions as to what are important problems can be formulated on an experimental station or with a planning committee removed from the rural context and out of touch with farm conditions. The model subsequently involves a series of targets or goals that are logically linked by a circular and potentially recycling pattern of four basic activities: diagnosis, identifying solutions, testing and adaptation, and farmer evaluation. Research must come full circle from proper problem identification to farmer acceptance or rejection. Research, thus, is client – and problem – oriented. Research, extension, and transfer are seen as parallel and ongoing, not sequential, disjointed activities.
> (Rhoades 1984: 33)

The workings of the model can be described in terms of a series of steps (or cycles in action research terms) revolving around a particular case.

Step 1. The research team observed that potatoes produced by farmers were very uneven in size and suggested research to help the farmers produce more standard size potatoes. The farmers didn't see this as a problem. However they identified another problem: they were concerned with budding on potatoes during storage. (This increased labour during food preparation.)

Step 2. The research team identified optimal storage conditions (to prevent budding) and designed storage sheds on the basis of their findings. Farmers thought these were too big and too visible (to tax collectors). In other words, the sheds worked technically, but were not practical for the farmers' conditions.

Step 3. The team developed a small storage system that could be used inside farmers' houses. The farmers then further adapted these, applying the principles for storage conditions identified by the research team.

In this model of participatory technology development, farmers participate in identifying research problems and evaluating the relevance of the technical research. There are two key lessons from this CIP research:

- There is no point in developing technology which farmers can't or won't use.
- The best way to make technology meet the needs of farmers is to have farmers participate in the development or design process.

ACTION RESEARCH FOR COMMUNITY EMPOWERMENT

In addition to the solving of specific development issues, such as improved agricultural production, action research can also be applied in the case of broader community development issues – what we can think of as integrated community development.

Case 3: Action Research, Gender and Empowerment in Northern Thailand

Avorn Sansak applied action research in community development in a small village in northern Thailand. The thematic issue in this research was empowerment of women.

An interesting aspect of this PhD project was that the village was Dr Sansak's home village. It is common in action research to think of the researcher as being a participant along with other participants rather than being a remote observer. In this case Avorn was very much involved in the development issues as a village insider. She had dual roles, being both researcher and facilitator/activist. Being an insider does raise questions of subjectivity. The question is whether the usual scientific expectation of the researcher as an objective observer makes much sense when the research is explicitly concerned with promoting social change.

The research can be thought of in terms of a number of major phases. (This is my shorthand way of summarising a very complex process.)

Phase 1. This was a diagnostic phase in which Avorn was concerned with getting a clear picture of village issues and problems, as well as identifying key actors in village life. One of the main issues identified was that the elected village head was very ineffective in addressing issues or in approaching higher authorities in support of village interests. This phase was more like ethnographic observational research than action-oriented research.

Phase 2. It was at this point that a core team was formed, with Avorn taking an active facilitation role. The core team consisted of men and women with shared concerns about the need to improve village life. These people were all volunteers who already had a strong interest in village affairs but who had not been organised to take any real action. The core team met to discuss issues and identify needs and proposed action based on their perceptions and understanding of the context.

Phase 3. One of the first major things that developed out of the core team's reflections was the formation of a women's group. The first meetings did not lead to any direct action, but gradually the women's group began to focus on developing action plans to address issues. This women's group began by initiating and carrying through a series of small tasks and gradually built to larger tasks. Among the tasks were:

- Attempting to address concerns about water shortages, especially as there was drought at the time. One of the first steps was seemingly simple. Water had been donated by a member of parliament to be delivered by tankers to the village for distribution. However, there was no system for distributing the water and poor people tended to be last in line and miss out. Organising a distribution system was important.

- For larger projects there were some funds available from government departments. Learning to write and submit proposals and to discuss these with officials was identified as a need and steps taken to develop these skills.

- Small working groups were formed for income generation projects (bamboo weaving, pig keeping etc).

- People became wary of depending too much on government funding, so a traditional ceremony was organised to generate income. This ceremony was held under the auspices of the village *wat* (Buddhist temple) and involved donating funds for village development purposes.

There is no space here to go into details about the specific steps. The important point is that the process involved discussion of issues and planning and initiating specific actions. These steps were often quite small and, each time the results were discussed and the next step was planned. Sometimes, when actions didn't have the expected results, new plans were made to deal with the arising issues.

The results of the action research included:

- A great increase in the confidence of the villagers to approach outsiders and to plan and implement actions collectively. (To a large extent the development of confidence was achieved by identifying small achievable tasks which built confidence and established a framework for more complex tasks. This is always useful when problems initially seem so complex that no one knows where to start.)

- Tangible improvements to income and such matters as water supply.

APPLICATION OF ACTION RESEARCH TO COMMUNITY DEVELOPMENT, AGRICULTURAL RESEARCH AND EXTENSION

The examples discussed above represent somewhat different approaches to the application of action research to community development, agricultural research and extension.

In Case 1, the researcher worked with a group of local people to apply a conscious process of reflection and planning to improving agricultural production. They took research developed off-farm by scientists and then attempted to deal with some of the issues which made it difficult for them to apply the research. They also consciously adapted the recommended procedures according to their needs and experience. The farmers themselves (with facilitation by the action researcher), became researchers.

In Case 2, the research involved the researchers working as a team with the farmers participating in the research as clients (identifying needs and evaluating solutions). Although this was not explicitly presented as action research, the process was a learning process and followed the cyclical pattern common to action research.

Case 3 involved a somewhat similar process to Case 1. However, in this case the main issue was empowerment, building the confidence of villagers and trust between villagers so that they became increasingly capable of addressing issues themselves.

The point is that action research can be organised in a variety of ways, but there are some elements in common. Essentially these are the application of conscious processes of reflection and replanning (or refocusing) to addressing a problem or issue.

All of these approaches have direct relevance to community development. In the case of the agricultural applications (Cases 1 and 2) they present somewhat different ways of approaching the need to adapt research to the farmers' world and to encourage scientists to address problems that farmers themselves see as problems. (There is nothing in either approach that makes scientific research unimportant.) Case 3 is an example of a broader application of action research to more holistic (or integrated) community development.

To many people action research, presented as a series of reflective cycles of planning, action, evaluation, seems very obvious. Some people say "we do that anyhow, we always modify what we do according to what happens". To some extent that may be true, but people who practice action research and related methodologies find that the deliberate and conscious process of the cycles imposes an important level of discipline and, in fact, the process is quite different from ad hoc processes of managing change. The main reason for this is that linear management models tend to discourage change until serious problems develop. In opposition to this the conscious process of action research assumes that plans frequently need to be modified due to uncertainty and changing circumstances. This means that plans can be modified or new plans made quite early and quickly without waiting for something to go really wrong.

CONCLUSIONS

This paper has given a brief introduction to action research and some of the key ideas behind it. It has also tried to show some ways in which action research can be particularly useful in community development, agricultural research and extension. One of the key points is that "promoting" change requires very close attention to the specific rural context and that action research is a very good means of working in such conditions, especially where it is difficult to know where to start because much is unknown. Action research is one way to avoid being paralysed by lack of detailed understanding.

But it is important to remember that sometimes action research provides us with broader, more widely applicable insights. For example both of the agricultural cases used as examples remind us that farmers often experiment on their farms, often modifying techniques developed by scientists. The lesson here is that farmers are not passive recipients of knowledge but active learners. This has implications to the way we do extension.

From a research point of view (production of public knowledge) a major outcome of Case 3 was increased understanding of a methodology applicable to rural development and capable of being applied elsewhere.

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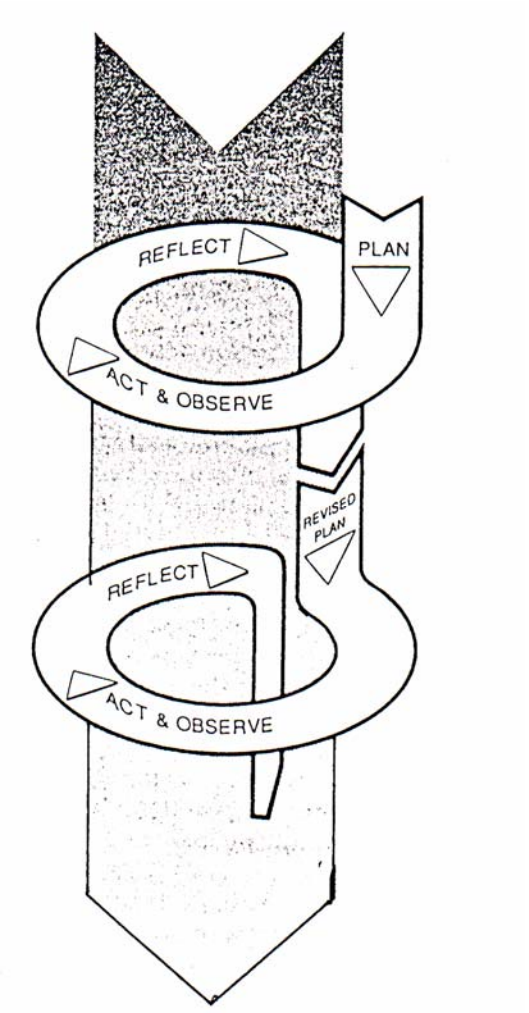

Figure 1: The action research spiral
[From Kemmis and McTaggart, 1988a]

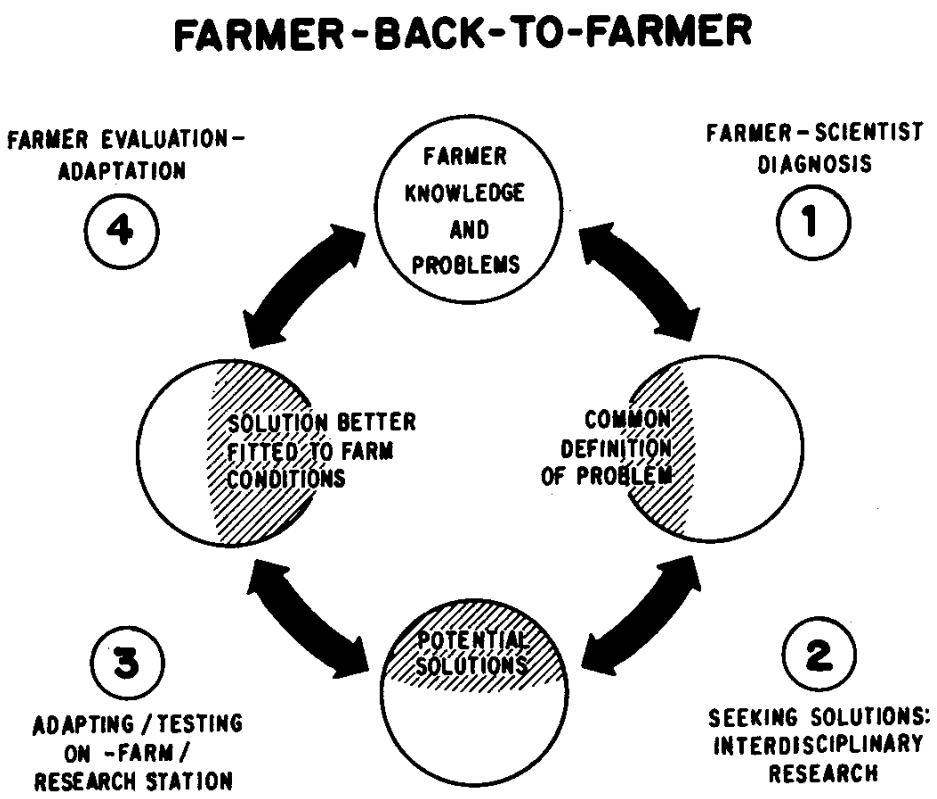

Figure 2: The farmer-back-to farmer model
[From Rhoades, 1984]