

Extended Study Circles as a Means of Facilitating Change Towards Sustainable Management of Ecosystems: Is there a new role for agricultural universities?

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Tell me, I'll forget

Show me, I may remember

Involve me, I will learn!

Ramirez, 1980, referred in Tydén, 1990

Abstract

Societies all over the world are seeking new paths towards a sustainable and equitable development. Farmers and farming systems may hold the key to addressing many of society's environmental problems, but modern European agriculture is not sustainable with regard to, for example, use of fossil fuels or inputs of foreign substances in agroecosystems (Lowe et al, 1997; Adger et al, 1997). There is an urgent need for farmers, together with new partners, to explore ways of changing technologies and socioeconomic relationships in order to contribute to the achievement of more sustainable natural resource management systems and societies.

Universities may have an important role to play in this process. New ideas and knowledge have to be developed and turned into long term practices which will cope with deeper processes of change in the surrounding world. The traditional role of transfer of information that prevails in many universities of today gives no room for mutual learning processes or for coping with these changes. We believe that there is scope for a far more active role for universities in the process of guiding and facilitating changes which will lead to positive improvements in conditions for farmers, rural communities and environments.

As a response to this situation, a group consisting of farmers and researchers, has been started at the Swedish University of Agricultural Sciences, with the purpose of investigating possibilities for the development of sustainable practices in organic/ecological vegetable production. The work in this group will be based on the methodology of the study circle, a Scandinavian form of adult and popular education. By taking an active part in and monitoring the work in the group, we are aiming at analysing how the encounter between farmers' and researchers' different perspectives will produce beneficial results such as development of new knowledge for both actors, as well as opportunities for a collaborative learning process.

This paper discusses how shared perspectives between farmers and researchers can be developed, and how participatory methods can result in an increased effectiveness when formulating the research agenda, developing a new curriculum and moving towards a more sustainable farming and rural environment in the 21st century.

Introduction

Many stakeholders need to be involved when formulating the research agenda for the 21st century. The challenges are immense and involve the development of more sustainable agricultural practices and natural resource management. Agricultural universities have an important role to play, but there is also a need for mutual learning processes, involving both researchers and practitioners, farmers, in the process of change (Röling and Wagemakers, 1998).

This calls for a new role for the agricultural universities, or possibly the reinstatement of a former role, and for the development of new methods in order to integrate scientific and public knowledge. The starting point for this development should be the real-life problem situations that farmers experience today. With the ambition of meeting these needs, a development project has been introduced at the Swedish University of Agricultural Sciences, SLU, based on the methodology of study circles and on the concept of research circles. The project is called "Extended study circles to generate experiences leading to development of sustainable farming systems", SCSFS.

Study Circles

The former Swedish primeminister Olof Palme once said that Sweden is a „study circle democracy“. The fact that over 340,000 study circles were arranged, with approximately 1.5 million participants, during the year 1994/95 emphasises the description (Swedish National Federation of Study Associations, 1995).

The study circle - a traditional form of non-formal farmer education

The study circle is a traditional form of non-formal adult learning with a „learning to learn“ perspective (Byström, 1976). In the Nordic countries, the use of study circles in popular education started in 1902 (Törnqvist, 1996). The method had two overall aims; personal development and democratic training. Since the method was first introduced, it has been of great importance for the standard of general education, not least in the Swedish farming community (Aronsson, pers. comm. 1997).

The Farmers Association is itself a member organisation of one of the largest Study Associations; The Adult Educational Association of the Swedish Farmers' Union and the Centre and Liberal Parties („Studieförbundet Vuxenskolan“). The methodology of the study circle is often used when implementating strategies or when organising educational programs in the farming community. A current example is The Farmers' Association's work with environmental investigations at the farm level (LRF, 1997). The study circles are supported and financed by the state together with the Farmers' Association's. Almost every farmer has at least once participated in a study circle.

There are several reasons for its popularity among farmers. First, there are not so many opportunities for farmers to attend relevant educational programs. Secondly, by creating learning environments which 'fit' farmers' daily or seasonal working situation, for example „on-the-job-training“ or educational programs in the winter, it is more likely that farmers can participate. Finally, the study circles have an important social function. Studies have shown that almost 60% of the participants who attend study circles, do so mainly for social reasons (Lundholm, pers. comm. 1997).

What is a study circle?

The common form of study circle is a small group of people, normally five to twelve, who meet and carry out planned studies or cultural activities under the facilitation of a trained leader or of someone in the group. The studies take place for an extended period of time - normally three to four months. The entire group decides the goal for the group studies, which literature to read, which field trips to take and the pace at which they will work. A good study circle is based on the synergy of participant and facilitator experience and knowledge supplemented by written materials.

There are several positive aspects of the study circle. Perhaps one of the most significant is that the method focuses on what the participants view as important and aims at helping them to learn more about the context of which they are a part, in order to make it possible for them to influence their own situation and the future development of the larger society (Bergstedt and Perneman, 1990). It helps the participants to „learn to see themselves as members of a community as well as to increase their awareness about the world around them“ (Härnsten, 1994).

The original pedagogy has, however, become less obvious. Bergstedt and Perneman (1990) write that „the ideological awareness of the origins and purpose of the popular education movement is easily blurred by external forms. A person who has not felt the need to study can easily be misled into assuming the role of leader or teacher and may believe that the point is to transmit a pre-packaged form of knowledge...the goal of popular education is precisely the opposite - to create knowledge out of the collective experience“. Fortunately, the study circle is still seen as a relatively informal and participative educational form among farmers in Sweden. In this paper 'extended study circles' is a phrase that implies the increased participation of researchers, in the study circle methodology, with the aim of creating 'research circles'. Conceptually, a research circle is a forum for the generation of shared knowledge through the mechanism of a participative learning system.

Mutual Learning Processes and the University

Mutual learning implies joint development of knowledge. The traditional view of knowledge within universities has been that it is researchers who research, develop new information and spread this information. That is, universities have knowledge processes on instrumental or strategic rationalities. The challenge to universities is to develop knowledge processes based on communication rationality (Röling and Wagemakers, 1998). The non-communicative role is being challenged in society today, as demands on the universities to produce and present information that can help solve real-life dilemmas and support decisions on change are growing (Ison, 1990). As a response to this challenge, different strategies are being developed in the academic world which encourage systems thinking, openness towards society and

flexibility in regard to change (Daniels and Walker, 1997; Ison, 1996)). Another aspect in the demands on the universities to become more relevant is that the economies of universities are becoming more and more pressured, and external financing is increasingly necessary. The relevance of research, and the privilege of making priorities in research planning is being discussed in relation to the changing world around us.

The universities have many services to offer when it comes to dealing with processes of change in society: the capacity to structure problems, the contacts and networks within the universities, the meeting places for people of different disciplines, the education of people. In an ideal situation, this can be used in working towards sustainability. One especially important service that the university can offer is the opportunity to test ideas before they are brought in to enterprises. In this way, the university is carrying some of the burden of risk with something new and untried.

Research circles

History

Research circles were developed in Sweden in the late 1970's (Nilsson, 1990). The first research circles were closely attached to the union movement, and sprang out of a need for initiation of research in relation to development of knowledge within the unions (Lundberg and Starrin, 1990). The background for this was a period of change in society and the labour market that demanded development of competence and knowledge in the unions (Härnsten, 1993). The tradition of study circles formed the basis for the work with research circles, but a major difference in relation to the study circle was that there was no previously identified body of knowledge that was to be absorbed by the participants.

Many research circles have been conducted in different areas and within different disciplines, but the emphasis has always been on the social sciences. To work with research circles in the natural sciences is a rather new approach. Research circles may be more inclined towards applied sciences in general, since people outside universities have more contacts with the applied disciplines.

Basic Principles

A research circle can be seen as a "...a place for meetings and a model for cooperation where researchers and practitioners different experiences can be brought together" (Holmstrand and Härnsten, 1993). Together, the participants in the circle create new knowledge, and the experiences and knowledge of the participants is the greatest asset in the work. It is important to consider that the research circle is not seen as a method, it is seen as a platform for meetings (Härnsten, pers. comm. 1997). By using research circles, one has an opportunity not only to find common ground, but also a higher ground: a ground for engagement on issues on terms such as openness, integrity, equality and responsibility among all the participants. The fora that are created fulfills not only technical needs, but also moral needs, which are important when establishing a new role for universities and researchers (Duke, 1996).

In the meeting among people of different experiences, there is also a meeting of different perspectives. In the research circle there is the assumption that "... no part has a monopoly on the truth" (Holmstrand and Härnsten 1993). Rather, it is a case of different perspectives on the

same problem. Often the goal of the circle is not more than to illuminate a problem from different perspectives, and to increase knowledge about the problem; "...the development of new knowledge is facilitated for all participants" (Holmstrand and Härnsten 1993).

Possible motives for starting a research circle are (Lundberg and Starrin, 1990; Tydén, 1990):

- Initiation of research.
- Illumination/Solution of a problem.
- Research information.
- Development of new knowledge or methods.
- Inclusion of researchers and practitioners as a part of a larger research project.

Research circles are usually started with a mixture of the above mentioned motives, but with emphasis on one or two. An important aspect is that if research information is the motive for the research circle, then the perspective of meeting between different perspectives may lose its power. Rather, research circles can be a way for researchers to spread information about their research in a more successful and democratic way (Tydén, 1990).

Analysis

The researcher in a research circle can be seen as a scientific guide, a person whose competence in methods and capacity to structure problems, and meetings, is often appreciated by members in research circles. The participation of the researcher in the circle vouches for a scientific approach to the problem. In spite of this, empirical and theoretical knowledge of the researcher in the specific area concerned is desirable, but not a prerequisite.

In cases where the problem is partly defined in advance, there is a possibility to call the activity a "problem based research circle". Lundberg and Starrin (1990): "The composition of participants in the circle is decided on the basis of the initiative, and what liaisons that are demanded to carry out the circle, but also on the basis of the problem and the context. When the circle is established, the participants decide themselves how, where and with what they will work, at least if it is a research circle with the above mentioned criteria of integrity and sharing of knowledge that we consider fundamental".

The choice of frame for the circle is always done by the person/persons taking initiative to the group, which may in itself be a way of steering the work in a certain direction. But for a circle to at all be realized, there is a need of something to gather around, some kind of predefinition of the theme for the circle. This theme should not be too narrow, and what the circle does with the theme after the circle has started is another matter.

The popularity of research circles in some fields can probably be attributed to the fact that information about research is difficult to spread. The reason could also be that there is a basic view on humanity and knowledge with the people who work with the research circles. Participants in research circles are often familiar with the background of study circles, hence, the methodology is not strange to them. But the perspective of equality may be something new, in itself controversial. Among researchers, research circles may be even more controversial, because there may be a scepticism towards involving "amateurs" in research, losing objectivity, not in line with the traditional scientific method.

As previously mentioned, agriculture is a special case in that there is a strong tradition of transfer of knowledge to the farmers through extension services closely connected to the universities. Many farmers still experience formal research as difficult and intangible, even if they are, as a group in society unusually close to a practically oriented university such as the Swedish University of Agricultural Sciences. But the contacts with the university have diminished over time, since applied research has been deemed of lesser priority. Consequently, we see a need to develop new platforms with the perspectives of research circles.

Participatory Research

Participatory research is a concept that is very popular in developing country agriculture, social development and is today a strand in research traditions everywhere, not least because it meets pressing practical and policy needs. The concept of participatory research means that a group of persons participate actively with the researcher in planning the research, collecting and monitoring data, analysis and presentation of results. The researcher is not in control of the process of producing knowledge and the research agenda is driven by the participants. There are three central parts in all participatory research: training, research, and action leading to change. (Lundberg and Starrin, 1990).

For those of us who have spent many years in developing country research and development work the discovery of the study and research circles in Sweden is a most encouraging revelation. Many of the ideas and principles are identical to those that have been developed independently by many individuals and institutions in the north and south over the past twenty years (see the work of Robert Chambers and colleagues at IDS Sussex, Gordon Conway, John Thompson, Ian Scoones, Irene Guijit and Jules Pretty of IIED in London, Stephen Biggs and colleagues at ODG at East Anglia, ILEIA in the Netherlands, Roland Bunch of World Neighbours, Jacqueline Ashby of CIAT, Janice Jiggins, early FSRE initiatives and many others) (Farrington and Martin, 1988; Scoones and Thompson, 1994; Sumberg and Okali, 1997). In developing country research and extension systems, the early work on participatory analysis and contributions from anthropological theory and methods have led to the constant evolution of the farming systems and rural livelihood systems approach, methods and practice. In parallel, the work on systems research in Europe by INRA in France and the household and rural systems studies by many other researchers (as exemplified by key papers in the previous E-AFSRE meetings), shows that there are many parallels and similar work to learn from. The other key recognition by scientists in the course of this work has been the valuation of local knowledge and the understanding that farmers are often capable researchers themselves though such an understanding is rarely acknowledged within many formal research systems. Such a recognition reinforces the need to incorporate farmers into the research process at all stages (Okali et al., 1994).

One of the major contributions to research methods from participatory research experience has been to show how crucial the role of social sciences is in the analysis of and the search for solutions to what are initially perceived as natural resource problems (Lundberg and Starrin, 1990). The combination of these scientific traditions and skills seems as a crucial step in the search for more sustainable solutions. However, the participation of social science analytical methods has always presented a problem for agricultural universities which have developed a very narrow natural science focus, specially over the past 30 years. The idea that science and

scientists are now part of the problem is barely acceptable in many natural science departments. This will be discussed further below.

We might usefully summarise a few of the factors that are common for research circles and participatory research:

- Orientation to commonly agreed goals.
- The will to change and action being the driving force.
- Cooperation, sharing of responsibility for the work.
- The development of a common view on a problem and how to address needs.

Recording, monitoring and evaluation

As with all similar, participatory research work, it is essential to keep a visible and clear record of the group process. This can be done through a series of meetings and workshops to which all the participants will contribute. The recording may take a number of forms, such as notes, diagrams, videos, papers and any other form of recording that is considered relevant. At key moments, workshops may be held at which external stakeholders or interested parties will be called in to participate and comment on the process. On a regular basis, the whole process will be reviewed (together with the case study materials) and an opportunity will be given for changes in membership and agenda. The recording and monitoring of the process will be agreed upon within the research circle in the SCSFS-project described in this paper.

Conducting case studies

The case study, like other research methods, is a way of investigating an empirical topic, household or individual by following a set of prespecified procedures. Case study research can contain a wide range of elements, from collecting information by doing interviews of individuals or groups, researchers participating in groups, to action research. The data collection procedures are for that reason not always subject to a strict routine (Yin, 1996). For the investigating researcher this is of course more demanding. Yin (1996) concludes that „a well-trained and experienced investigator is needed to conduct a high-quality case study because of the continuous interaction between the theoretical issues being studied and the data being collected“.

A basic list of commonly required skills for conducting an effective case study is as follows: to be able to ask relevant questions and to interpret the answers, to be a good ‚listener‘, to be adaptive and flexible, to have a firm grasp of the issues being studied and finally be unbiased by preconceived notions (Yin, 1996).

The extended study circle

The initiative to form the extended study circle was taken at the Horticultural Research Station at SLU. The underlying purpose of the extended study circle, as defined by the initiators, is “to generate experiences that can lead to a development of sustainable farming systems in field production of organic vegetables“. The means to achieve this goal was to create a group with the purpose of developing contacts between farmers and researchers, as described earlier in the text. The frame work for the extended study circle was already set, in

the initiative to the circle, since the competence of the researchers at the Horticultural Research Station lies within ecological vegetable production and cropping systems.

The participants

The participants in the group were chosen in the following way. Producers with farms larger than 1 hectare were taken from lists of producers from marketing organisations and the ecological certification organisation in Sweden (KRAV). This resulted in a list of thirteen producers within 100 km of the SLU. These producers were contacted within the frame work of a preliminary study of the feasibility of the extended study circle. Eleven of the contacted producers expressed interest and willingness to participate in the group. Different farm structures and a variety of crops produced were well represented in the group. Only one participant did not already use ecological farming methods, the others already practiced ecological farming.

First meeting

The first meeting occurred on November 18th at the Horticultural Research Station. Eight producers participated, two gave notice that they could not attend, one didn't respond to the notice to attend. The purpose of this first meeting was to introduce the participants to each other, and to introduce the concept of the work that was to follow. There was also the interest that the participants should start to think about and express their own approach to the extended study circle, and to state what they felt it was important to the work in the group.

Expectations from the participants concerning the work in the extended study circle varied somewhat at the start of the meeting. Some stated clearly that they wanted to learn:

“To get more knowledge about techniques, and methods suitable for small scale farmers“

“To lift the level of knowledge“

One would like to contribute his own experience:

“I want to share my knowledge with the others“

Other opinions were for example:

“I want to work on getting more people involved in the farming system. Consumers/producers relationships, instead of inputs such as fossil fuels“

“Development of ecological farming“

“I am mostly curious“

“I guessed we would do something like participatory research“

The scope of the different expectations could be expected, in relation to the differences in experiences and backgrounds of the participants. During the meeting some of the participants expressed opinions about the concept of research circles.

“It sounds too bureaucratic to me.“

“We need to get beyond the point where farmers and researchers look in the same books to find the answers“

“Oh, was it like that? I thought that this was just another group to help the researchers come closer to ‘reality’“

At the first meeting, quite a lot of time was devoted to the suggestion that the group should work with the farming system as a frame work, and from this frame work, look in to specific questions:

“The local society would also be good to use in this work - the people involved.“

“This sounds too far away from me, I would like to be more specific, about techniques, for example.“

“We will probably always land in the practical questions anyway. We’ve got to have a framework.“

“Maybe we could be active in changing the rules for ecological production (KRAV). That needs active farmers’ groups.“

In conclusion, the comments from the participants at the first meeting indicate that the formulation of the initial goal of the work is of great importance. It was decided that an interview was to be carried out with all the participants, carried through by the organising research assistant, to get a deeper understanding of the needs and wants of all participants, in order to have a circle that was as relevant as possible. It was also clear that the role of the researcher(s) in the circle had to be clarified, so that the participants did not feel that the researcher took command over the process.

Implications for Interdisciplinary Work in the University

It should be stressed that this programme is in its infancy at SLU and the research agenda is in the process of being developed from what is seen by many in the university as a newly introduced programme. However, the fact that the approach is not dissimilar to much of the work that has been going on for many years, supported by researchers in social sciences and by adult education institutions, suggests that the principles should not be difficult to introduce, provided the objectives are clear. We would suggest that there are some obvious benefits of bringing the process to the attention of colleagues in the university and to report back regularly on the process.

The university is currently structured in three large faculties, three main campuses and many departments of varying size. There are very few social scientists (apart from a very few researchers in extension education and economists located in one department at the main campus) who are scattered through out the natural science departments. Although many members of staff would claim that there is much on-going interdisciplinary research and education, there is in fact very little social/natural science collaboration on common problems. Most research emerges from within a discipline, from priorities which are derived from nationally agreed areas or those proposed by external donors. Little, if any, research is derived from an active interaction of researchers, extensionists, farmers and other clients within a social, political and economic context.

It is into this environment that the Department of Rural Development Studies has been newly introduced. The Department has a mandate to:

- Strengthen and develop Swedish competence and capacity in international development.
- Promote and support interdisciplinary research and education, particularly at post-graduate levels.
- Help the Swedish University of Agricultural Sciences re-connect the agricultural sciences to problems in society.

We consider that the work discussed in this paper will play an important part in all three of these tasks. In particular, the development of participatory research on farmer defined problem areas together with farming and rural communities is seen as an important mechanism for an experiential learning process. A process in which scientists, both faculty and research students, can actively engage in the analysis of problem areas and the synthesis and testing of potential solutions to perceived problems within an holistic context.

Many scientists have begun to recognise that the analysis of the current problems in agriculture and natural resource management have to include a systemic approach and therefore much of the theoretical work on systems thinking is relevant here. Systems thinking expands across conventional disciplinary lines; it is a complement to, and not a substitute for disciplinary analytical tools and approaches. The implications of this for the university is that new groupings of researchers, who can develop innovative approaches to ways of improving situations, need to be formed across existing departmental and institutional boundaries.

The key benefits of the approach should be to ensure that researchers in the university: become more accountable to society, develop a greater respect for each other, particularly social science approaches to analysis, and that important longer term and ethical issues in research and development are addressed. This is particularly so with respect to ecological or organic agriculture and horticulture which has been poorly served so far by formal scientific research in Sweden. Issues of human and livestock health and welfare, environmental pollution, changing consumer demands and a greater awareness of global interactions make it essential for the university to engage in active, long term research in these areas. Furthermore, there is much research and action in other European and developing country formal and informal research systems that is worth understanding.

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