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ARTICLE

Learning through feedback in the field

Reflective learning in a NGO in the Peruvian Amazon

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ABSTRACT

The article discusses an action research project conducted in the Upper Amazon region of Peru that focused on the *working approach* of a NGO partner called PRADERA. In its land management projects PRADERA's working approach was characterized by a close collaboration with farmers. Its emphasis was on grasping the farmers' perspective on agriculture, targeting of local institutions in the villages as natural arenas for learning, and including topics in their analysis such as culture and worldview; this is analyzed through the framework of a reflective learning organization. The organization's capacity for learning is described as consisting of single-, double- and the possibility of triple-loop learning. During our collaboration with PRADERA, though we did not find established internal arrangements that could foster a triple-loop learning process, incipient signs were noted of *space and potential* which could favor deeper levels of learning. The importance of deeper levels of learning in the work of small highly action oriented NGOs such as PRADERA that act as a bridge between local farmers and the outside world, and how action research methodology can be a tool for developing reflectivity within such an organization, are discussed.

KEY WORDS

- action research
- Amazon
- learning loops
- NGO
- organizational learning
- Peru

Classic agricultural research has mainly focused on the implementation of external expert knowledge originating from universities and experimental stations (Biot, Blaikie, Jackson, & Palmer-Jones, 1995). The adoption of these results by local farmers has often been limited (Fujisaka, Jayson, & Dapusala, 1994) and various stakeholders have analyzed why research and development work intentions are not taken up by the farmers. For example, when the Center for International Forestry Research (CIFOR) analyzed the slow results on land recuperation in the Western Amazon in Peru, by inviting local professionals to a workshop in the city of Tarapoto, in 2004, the professionals pointed out that they do not reach the farmers in their work, that the alternative land use packages they work with were too complicated, and that the measures suggested often required investments out of reach for many small farms (Meza, Sabogal, & de Jong, 2006). Simultaneous to the CIFOR workshop, the first author (KMA) was working in the Upper Amazon region (San Martín) in Peru in a multi-year action research project which aimed to address the local responses among farmers who face rapidly changing land management conditions. The work was carried out together with PRADERA (*Proyecto de Apoyo Rural de la Amazonía*), one of many small, local and development-oriented NGOs found in Latin America. Parts of the land management research was planned and performed together with PRADERA, and their role in the research was crucial for achieving results about how farmers handled rapid land management changes (for a detailed description of the collaborative land management action research process, see Marquardt Arévalo, 2008; Marquardt Arévalo & Ljung, 2006). In comparison to the NGO stories told at the CIFOR workshop (where PRADERA did not participate), PRADERA stood out as different in the way they worked, with a deliberate approach to reach the farmers by achieving very close long-term relations and commitments between the NGO and collaborating farmers. PRADERA did not work with agricultural proposals resting only on external experiences, but deliberately worked within the frames of the traditional swidden agriculture of the region. This approach generated an interest within the action research project in a broader development work perspective. This came to include how the farmers' own experimentation and experiential learning can be supported from outside in order for these to be scaled up; and also to examine how action research could be the means to establish the necessary reflective arrangements within such farmer-supporting organizations and to thereby develop actions relevant to these farmers' land management. The findings and reflections from this latter part of the action research project, particularly PRADERA's working approach and PRADERA's inherent ability to learn as an organization within such an action research context, form the subject of this article.

This article analyzes PRADERA as a learning organization: in particular, what characterizes their approach when working with farmers, and how could this be of benefit to other NGOs? How can PRADERA's organizational learning

processes in relation to other actors be described? What challenges have to be overcome in order for them to continue to develop as a learning organization? And, what should an organization that functions as a bridge between farmers, other local actors and external financiers look like, in order to support local farmers in their efforts about learning for land management? This will be done by describing the organization in terms of both the single- and double-loop learning processes (Argyris & Schön, 1996) taking place in it, and then to further discuss what the potential is for triple-loop learning to eventuate in an organization like PRADERA. We will argue that action research can be used as a way to enable different levels of learning within an organization.

NGOs in transition

The role of NGOs in the Andean and Amazon regions is often complex. NGOs are assumed to work for sustainability, participation and efficient development, and, in many areas, are also expected to handle roles that were previously handled by the state (e.g. rural credit system, extension, research, management of national parks) or commercial organizations (e.g. promoting certain crops or products) (Bebbington, 1997). Many NGOs in the area were created when the state failed to carry forward alternative development strategies, the market failed to do so as well, and the popular community movements were either too weak or repressed from acting. That many NGOs appeared during the last decades of uncertainty and political and economical shifts is reflected in the challenges faced by the NGOs today, according to Bebbington (1997). The NGOs in South America are almost exclusively dependent on external resources. They take on roles of consultant groups, social enterprises and financial service institutions in order to bridge a gap between farmers, the state and the market, in the absence of domestic, endowed autonomous civil society funding mechanisms (Bebbington, 1997). The situation of the NGOs can be seen both as a weakness and a strength; weakness in that donors and governments may set norms and rules that influence their activities, and strength in that they play an increasingly important role when truly being an intermediary between local institutions and governmental and/or international programs.

Organizational learning

Many NGOs maintain a commitment to action as well as gaining understanding, promoted by a focus on learning and communication. They have developed a willingness to learn and evolve and thus remain in an advantageous position when it comes to organizational learning (Edwards, 1997). However, it might be difficult to find a balance between learning in different parts of the organization and for different purposes. For example, a balance between field-based learning

and how this is connected to wider policy and advocacy-related work is often problematic, and requires strategic planning (Edwards, 1997).

There is considerable literature on what enables organizations to learn. Beginning with the work of Gregory Bateson (1972) who proposed that learning occurred at different levels or orders, and that each such level represented a different logical type among the learners, the notion of levels of learning by individuals and organizations has been variously described. All of these descriptions, in line with Bateson, suggest that learning denotes change, and that among the different levels of learning, each level provides the context for the next in a nested manner. Applying Bateson's idea of levels of learning to the organizational context, Argyris and Schön (1996) made a distinction between single-loop and double-loop learning. Taking the view that learning involved the detection and correction of error according to the strategies selected, single-loop learning occurs when the goals, values and strategies are taken for granted and the emphasis is on the routine learning of 'how to do things'. In contrast to this, double-loop learning occurs when the individual or organization examines not only the goals, values and strategies, but also *critically* examines the governing variables that underlie those strategies (Argyris & Schön, 1978). Then the question becomes one of not 'simply doing things right' but 'doing the right things'.

Bateson (1972) did refer to higher forms of learning available to humans such as his third and fourth orders, but believed that these were seldom reached because the required levels of psychological transformation were rarely achieved. By adopting the terminology used by Argyris and Schön, Bateson's third order learning (L III) can be called triple-loop learning, wherein the learner steps back and reflects on the underlying assumptions and goals and on the reflections themselves. Schön (1987) referred to this level as 'reflection on reflection-in-action' and Qvortrup (2004) defined the third order as knowledge about the preconditions of reflexive knowledge. For Flood and Romm (1996) the third loop enabled thinking about the way knowledge and power are entangled in knowledge construction in society. From their perspective, the key question at this level was not just about 'doing the right things' but whether 'rightness was buttressed by mightiness or vice versa'.

An important contribution, taking a different stance to Flood and Romm's to the discussion on levels of learning, has come from the work of the cognitive psychologists Kitchener (1983) and Salner (1986). The epistemic dimension of cognition was highlighted by Kitchener (1983) who marked three levels of learning in terms of cognition, meta-cognition and epistemic cognition. For an individual, if cognition was about using simple learning routines such as reading and memorizing at the lowest level, at the meta-cognitive level the same individual will have developed the capacity to monitor their own progress while engaged in the tasks of the first level; and at the epistemic level, they would reflect on the criteria and the limits of their knowing, and question their epistemological assump-

tions, their overall worldviews and the truth value of knowledge itself. Parallels to these levels of epistemological development in the individual, and their application in the education of that individual for the systemic competence required for them to work within organizations, can be seen in Bawden and Packham (1993) and Salner (1986).

For the purpose of examining the important learning within PRADERA as the key partner organization in this study, we adopt the single-, double- and triple-loop learning as a framework in this article.

Methodology

This study was part of a larger land management action research study that took place from 2002 to 2005 (Marquardt Arévalo, 2008). During the research process, the collaborating NGO, PRADERA, emerged as different from other organizations working with land management issues in the research area. Their approach was characterized by close collaboration with farmers, farmers being present at all stages of the work. There was also an emphasis on taking the farmers' perspective on agriculture, targeting local institutions in the villages as natural arenas for learning while PRADERA also included topics such as culture and worldview in their analysis. Therefore, the action research process was extended to include PRADERA's working approach. The collaborative land management research process (2002–2004) has been described in (Marquardt Arévalo, 2008; Marquardt Arévalo & Ljung, 2006) but the particular part of the research process that focused on PRADERA as an organization will be further elaborated here.

Research process

During 2002–2004, the first author (KMA) had the opportunity to participate in PRADERA's work. Based on the initial participatory observations and interviews regarding PRADERA's working approach, it was clear that the staff members of PRADERA felt very confident about their field work and the arranging of activities together with the farmers, but were less confident when it came to writing about these experiences. PRADERA worked with an extremely detailed level of farmers' knowledge; for example, discussing sowing condition for each of the 18 cassava varieties found in one of the villages they worked in, which generated quite unique but voluminous information, all evidence of single-loop learning. To analyze these data, synthesize the ideas and implications, and particularly to write about this was an arduous task for the organization. During the joint work on the land management action research process, PRADERA expressed a wish to improve their way of systemizing, analyzing, and publishing their experiences

as a part of the joint action research project. They wanted to reflect on how they performed their work, interpreted and presented results. Analytical discussions between the researchers and PRADERA led to PRADERA proposing that a workshop be held on action research methodology. The aim of this workshop was to create and facilitate space for internal reflection within the NGO. One result from this workshop was an agreement that researchers and PRADERA would together write a methodological book, focusing on PRADERA's working approach in their local development work environment. The idea was that several of the staff members would write different chapters, both as a way to enable reflection on their own work, but also as a way to document their working approach. Due to limited resources and the subsequent rapid change of the funding situation for PRADERA (see the very last part of Discussion), the outcome was that in place of writing this book the first author (KMA) interviewed PRADERA's staff members about their working approach as basis for this reflective article. Therefore, this article builds on interviews, proceedings from the methodological workshops, participatory observations and the study of PRADERA publications (all research methods are further described in the next sections) in order to examine how PRADERA could develop as a learning organization and as an effective actor in the villages they work in.

Participatory observation

The participatory observations took place during field visits, workshops, farmers' meetings, village celebrations and collective work arranged within the villages and conducted by PRADERA, but also during office work. Additionally, there were analytical discussions held among PRADERA staff members in between field sessions. Notes were taken of all observations during these discussions and a detailed research diary was kept. These methods enabled both access to PRADERA's way of working in the field and the capturing of their contacts with farmers, while also allowing the researcher to become involved with the staff in analytical discussions between field sessions.

Methodological workshops

Two workshops were held, the first a two-day workshop in 2003 (January) and the second a one-day follow up workshop in 2004 (February), both arranged by two of the authors (KMA and MJ) together with PRADERA. During the methodological workshops, PRADERA's staff members reflected on their working approach within the institutions and what implication this might have for their role as professionals, the kind of data they were interested in, systematization of data material, the results they wanted to achieve and how to communicate these insights with other NGOs and funders. The workshops were a way to create

space for this dialogue and for internal reflection on their own working approach. The idea was that the process would continue through ongoing internal reflection, where staff would write about PRADERA's working approach. With time this idea was transformed into a series of semi-structured interviews performed by the first author (KMA) as a starting point for the reflective writing.

Semi-structured interviews

At the time of performing the interviews, PRADERA had seven permanent workers and four trainees, all of whom were interviewed. The one administrative person was not interviewed. The interviews varied in length from 15 to 80 minutes, and were based on questions concerning PRADERA's approach to the concept of knowledge; the perceptions they held about the people and the geographical context they interacted with; the relations between farmers and professionals; the kind of activities undertaken; how the work was linked into a context of meaning; why PRADERA worked differently from other regional NGOs; and the social structures within the contexts that PRADERA worked in (in villages as well as in relation with other NGOs). The interviews were tape-recorded, transcribed and the information categorized. The aim was to capture in depth PRADERA's notions about their work, and to try and describe these notions in a systematic way so as to be able to share these with other institutions in the region, and to use them for further reflection. Some of the interview material is presented in this article in the form of boxed quotes, with the initials of the participants used to identify these quotes.

Study of PRADERA publications

The data also included the study of PRADERA's publications, where PRADERA had made statements about their working approach. These publications included book chapters discussing farmers' views of their agriculture (published by the network PRATEC *Proyecto Andino de Tecnologías Campesinas*), internal field-work reports and annual reports for external funders. The lack of reflection in the written work in comparison to their oral discussions was one of the reasons that triggered the development of complementary activities to encourage internal reflection, and for the action research project to include the analysis of PRADERA as part of that research process.

Findings

Organizational background

PRADERA was born out of a frustration experienced by the three founders when they started to question the agricultural development in progress in the area of San Martín in the 1990s. They all worked in rural areas and were concerned about how the agro-biodiversity of the region was diminishing, the cultural aspects of agriculture were being disregarded, numbers of small brooks were running dry around the villages and how governmental and non-governmental organizations were offering agricultural alternatives which did not fit with the farmers' everyday reality. PRADERA's founders decided to create a NGO that would particularly focus on developing the potential for traditional Amazonian small-scale swidden farming, by starting from the farmers' own knowledge, practices and worldviews, and with a working approach whereby the farmers and the NGO-workers would be seen as equals (see Box 1). PRADERA had been working in this way for 15 years in San Martín calling their approach 'a cultural affirmation viewpoint' (*afirmación cultural*), giving particular regard to maintaining crop diversity and reviving traditional seed varieties. While doing this they recognized that the traditional institutions within the village were highly important (*la organisidad*) for the success of agricultural work. PRADERA started very early to collaborate with one particular local institution named the *choba choba* groups (described below), a traditional way of exchanging labor, which they perceived had a key role in the rural areas.

At the time of the research, PRADERA had seven permanent workers and four trainees and was internationally financed for a project to support farmers in the buffer zones of one of Peru's largest and newest national parks, Cordillera Azul National Park. They also worked in one of the key geographic areas in UNDP's *Conservation In-Situ* projects, the aim of which was to conserve agro-biodiversity in Peru by targeting crop species, local varieties and wild relatives (PRADERA, 2003; UNDP, 2005). As PRADERA is a small NGO, all permanent staff members were acquainted with all projects within the organization. Although each permanent staff member had a specific responsibility within one of the projects, they often had to cover for each other between the projects. One of the founders was the current coordinator and was the one who took the final decisions about PRADERA's priorities and work.

PRADERA's mission and strategy

The work of PRADERA was planned from the conviction that farmers have important knowledge, and that these farmers act rationally within their own world. PRADERA believed the institutional role was to have a sensible dialogue with rural people, and through this to highlight local and traditional knowledge

in contrast and as complementary to scientific knowledge. The mission was to join with and co-operate in farmers' efforts to re-establish their agricultural areas using a holistic perspective, including re-establishing of productive fields and forests, and the collective life of the family and the village including *choba choba* groups.

Single-loop learning

Learning by participating in farmers' agricultural activities

A large part of PRADERA's single loop learning process was reflected in what they did and can be characterized as *learning with* farmers about practical working skills, and *learning from* farmers' agro-ecological knowledge. This corresponds to an instrumental manner of learning in Argyris and Schön (1996) view of single-loop learning.

PRADERA's everyday work was oriented towards the farmers' agricultural practices in the fields, and was roughly divided into individual farm visits and group meetings and activities. Individual farm visits meant that PRADERA staff visited all farmers collaborating with them in their own fields. During these visits the farm was mapped and the crop species and varieties managed by the farmer were inventoried. The staff also discussed with the farmers how they managed their crops and crop varieties in relation to agro-ecological circumstances and traditional farming practices.

The group meetings/activities were normally arranged out in the field, in association with traditional collective institutional¹ arrangements, such as the labor interchange system *choba choba*. The *choba choba* groups were formed by members of the concerned families, neighbors or other villagers. The participants of these groups make mutually convenient arrangements to work on a rotational basis in each other's fields (Arévalo Rivera, Panduro, Quinteros, & Rengifo, 1999; Hiraoka, 1992). The group members (men or men and women mixed, depending on the agreement made by the group) do not receive payment when working on each others' fields, although the host farmer provides meals and drinks to all participants. Typically, most of the food comes from the hosting farm: hens, cassava, plantain, rice, chili, *chicha* (maize beverage), and *masato* (cassava beverage). The institution of *choba choba* (and other traditional institutions) establishes the organizational arrangements for the structure and function of the interaction between PRADERA and the farmers; for example, a farmers meeting was normally designed so that the group met to do practical work in a group member's field (a *choba choba* session), and during breaks and/or after the work the staff reflected together with the groups on the work done, on the fields' development, problems spotted in the field, etc.

For a new PRADERA worker learning PRADERA's working approach, their work focused on participating in the *choba choba* sessions and thereby getting to

Box 1 Examples of how PRADERA staff perceived their relations with the farmers

'The contact you have with the farmer is central, if it is not with empathy it will be from above and looking downwards, like everyone (all the development programs) does. Our work has been to have the sensibility in order to equalize with the farmer in order to listen to him, to rescue ancestral wisdom.' (M.A.)

'I need to make myself sensible, to capture, and to have enough capacity to reach (the farmers) (---). To have the skill to perceive what their feelings are, not only their words but what they are feeling.' (S.H.)

'Because you get to the very inside of the farmers, you live together, you speak to his feelings with cultural roots, their fiestas, their traditions, their food, their language, what is (the farmer) himself . . . Because the farmer has always identified himself with the forest, the field and the landscape. He might feel like a hero, like Tarzan, like a chullachaqui (an Amazonian legendary being) but he does not feel like the owner (of the forest), he knows the kindness of the medicinal plants. When PRADERA values all this kind of work they feel like home, one feels it when arriving, that they see the PRADERA team as one more of them. Not like the boss, not like a master, but like one more in the choba choba group.' (P.R.)

Source: Interview transcripts, Tarapoto, 2005.

know the farming reality; to handle a machete while opening a field or weeding, and to recognize species and varieties that were cropped in the field, as well as the wild plant species frequently gathered by the farmers such as liana vines for construction and medicinal plants. This practical and experiential learning with the farmers in a large number of *choba choba* groups was then incorporated into PRADERA's organizational learning, when separate learning experiences were brought together in the development of written syntheses of crop cycles, distribution of crop varieties and the traditional management practices of crops.

A personal relationship built on confidence between staff members and farmers was seen as something important, as exemplified by three of the staff members (see Box 1). They stated that it was the farmers who were 'the real maestros of nurturing fields and forests' and that PRADERA were accompanying them and learning from them, in order to represent the farmers and act as their voice in the contacts with the project financiers. One symbolic part of building this relationship of confidence with the farmers was to share practical work, food and drink together during the *choba choba* sessions (see Figure 1). Knowing the farmers' reality and understanding this in relation to the farmers' context (the next level of learning presented below) together formed the basis for how PRADERA chose to develop their work as an organization.

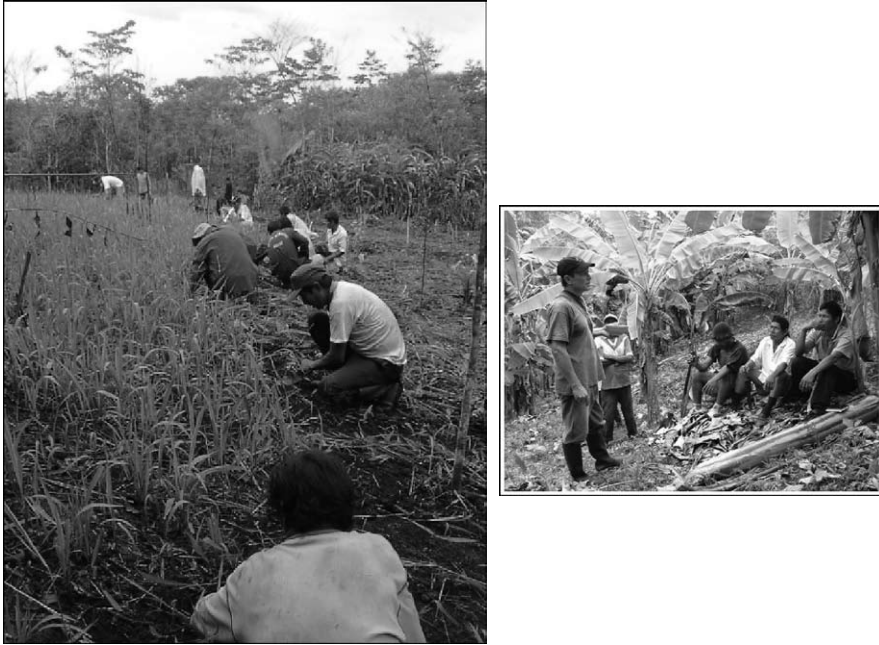


Figure 1 PRADERA staff joining a *choba choba* group weeding (left); a break for sharing *chicha* while reflecting (right) 2004.

Double-loop learning

Double-loop learning implies a reflection on the instrumental learning in relation to strategies and values. To start questioning what we and others are doing, we also need to question if we are doing things right as well as doing the right things. While engaging with the farmers in the field, PRADERA started to reflect on external influences that caused changes for the small-scale agriculture in the region as well as for those practicing this agriculture. PRADERA expressed concerns about the land management processes that had been going on over previous decades in the region, and how space could be created for action, change and learning. These concerns related to why the farmers were changing from their system of poly-cropped fields to practicing more intensive agriculture with shorter fallow periods and why the farmers and the development projects do not understand each other. This reflection process on land management and learning can be described as a double-loop learning process.

Land management processes

The area of San Martín has a history of periodic economical booms of particular cash crops. The problem with this was that the farmers abandoned their multi-

Box 2 Example of how a PRADERA staff member described the triangular connection between humans in collective organizations, agriculture and forests, as the base for agricultural development

'What I like most with PRADERA is the approach and the strategy; that we set off from the institutional structures (organicidad) and the community, (combined with) the seed, the field, the forest. For me this is a triangulation because there is no (agro-) diversity if there is no field and there is no field without seeds either and no field without forest. When it comes to organizational structures (organicidad); there are no choba choba groups without the family (structure), if there is no choba choba there is no community, or it would be a divided community. Of all the advantages the Western (modern) world has, some of them are disadvantages for the farmers, or at least they feel so.' (P.R.)

Source: Interview transcripts, Tarapoto, 2005.

crop fields to get into mono-cropping of the particular cash crop being promoted at the time, often with great expectations of financial and other benefits that were not always fulfilled. When leaving the traditional multi-cropping system they also left the food security they had when doing agriculture mainly for subsistence, resulting in these farmers having to rely on the monetary economy to fulfill the family's food needs. By supporting the huge local variation of crops and crop varieties – including the cash crops – PRADERA aimed to express the idea that they were supporting the farmers to find a balance between subsistence and cash crops. Additionally, PRADERA believed that institutional and collective arrangements (*la organicidad*) among local farmers were important systems components for the maintenance of agricultural diversity. By supporting these institutions, PRADERA intended to contribute to a shared access to diverse genetic plant material and to facilitate labor intensive land management measures. In practice, PRADERA's work could be, for example, to support a group of farmers to form their *choba choba* group. PRADERA's position was that the traditional swidden agriculture was tightly linked to the Amazonian forest resources, offering an area for opening up fields but also for additional livelihood options such as hunting and fishing. 'Without the forest the field suffers' was a quote from one of the collaborating farmers which PRADERA used as a slogan. A triangle which connects humans in collective organizations with agriculture and forests was PRADERA's base when discussing agricultural development (see Box 2). If one of the points of this triangle was weakened, the other two would also be affected, meaning that no land management improvements would be attained if such land management was not seen from all the angles of the social institutions, the people's relations to the forest, the agro-diversity as well as from particular agricultural technologies.

Learning strategies applied

When looking at land management processes affecting the small farmers in San Martín, PRADERA pointed out that there was very little research or written documentation about the local small-scale swidden agriculture. The literature used in the education of agricultural professionals originated in very different ecological and cultural contexts where the agricultural practices were more mechanized and intensive than those used in San Martín. Thus the staff members felt that their professional training with its focus on mono-cropping, external inputs, irrigation and use of machinery, was distant from the local context. The agricultural professionals at PRADERA ‘do not use even 1%’ of their training in their work as most of the topography of San Martín, with its small steep fields, was not conducive for machinery use and few farmers had the economic means to buy inputs or have irrigation investments. No technical college or university in the region combined agricultural and forest-related issues in its education in a manner that matched the local farmers’ agricultural approach. The land management packages implemented by the local NGOs and governmental organizations were also external in origin and were developed in an agricultural context different to the local context. The problems experienced by these professionals became visible when professionals and farmers met to discuss project proposals. The professionals did not understand the farmers’ reality and did not communicate with the farmers, as expressed also by the participants in the CIFOR workshop referred to in the introduction. In the case of PRADERA, searching for a close relation with the farmers implied that they wanted to develop learning processes which matched the frames of the learning context familiar to the farmers, characterized by practical, experience-based and hands-on learning in the field. One such approach to learning was to participate in the *choba choba* activities. Another way was the joint work between PRADERA and the researchers to develop collective experimental fields on degraded land (see Marquardt Arévalo & Ljung, 2006).

A natural meeting place for NGO staff and the farmers was where the experiential learning promoted by PRADERA, and the associated activities, were connected to the traditional institutions of the region. By linking into these institutional frames that were familiar to the farmers, PRADERA created a space for shared learning. How PRADERA perceived that they had reached the farmers through this close collaboration is elaborated in Box 3. In practice this meant that PRADERA used the *choba choba* work as an opportunity for the group to reflect on what was happening with agricultural matters in the village; what had been seen in the field; why was there so much weed; why did the maize crop not develop better; why wasn’t there any virgin forest around any longer, and so on. Likewise, during the practice of traditional seed swapping (*mujeo*), cycles of learning together with the farmers arose: why have some species and varieties disappeared from the village; was it possible to find new seeds elsewhere; could

Box 3 Example of how the PRADERA staff described their close collaboration with the farmers by using choba choba groups as the institutional frame

'With the choba choba groups we discuss several aspects such as that they (the farmers) should care for their forest, how to diversify the fields, how to unite themselves in order to continue to care for their lands (---) We are constantly with them. (--) During the small breaks, after the food or when we are sharpening the machetes or after finishing the juyo (the width of participating farmers which systematically weed from one side to another in the field), we motivate the conversations.' (P.R.)

'What has helped us (in our work) have been the choba choba group, which have always existed there, and if you give them some importance there arise even more.' (M.A.)

'In PRADERA we want to accompany the process which started within the farmers themselves to re-establish their wisdom, their fiestas, their rituals, their institutions, their fields, their forest, their water.' (M.A.)

Source: Interview transcripts, Tarapoto, 2005.

anyone from the group bring some seeds and share with the rest; and how to plant and nurture these? These discussions were documented by PRADERA and became part of the planning of future activities together with the farmers.

Central to both the single- and the double-loop learning processes was PRADERA's conviction about the legitimacy of farmers' own knowledge. However, farmers' knowledge was not viewed as the opposite to knowledge provided by science but that science should be used as a complement to farmers' own knowledge. PRADERA further concluded that farmers might need to know more about science, as the positive use of science in traditional agriculture could complement existing farming practices with well-balanced decisions about practices which may or may not be suitable in a particular context. PRADERA perceived that the pressure from outside on the farmers to become 'modern' in the sense of using mineral fertilizers, herbicides and pesticides were so strong that such activities as PRADERA's support of the traditional subsistence agriculture was necessary to help achieve a more balanced situation for the farmers.

Triple-loop learning

We believe that the most obvious triple-loop learning happening in PRADERA's history was at the time when PRADERA was formed by the founders as a response to how development work was done in the rural areas, and their decision to work with different issues in different ways. This kind of response is often what happens in a mobilization period when an organization decides why it should exist. Following this, while the organization is consolidating, the mobilization thinking becomes routine and the triple-loop learning is not maintained, particularly when

there are no inbuilt structures to promote and even force critical reflection on the organization's own working approach. Such organizational learning is not easy and few organizations and companies carry out this kind of learning.

For an organization like PRADERA today, triple-loop learning would very much mean learning how to learn intrinsically. By this we mean that the organization itself should critically look at the way it learns during the extrinsic single- and double-loop learning processes described already in this article. During the work with PRADERA we did not find any established internal arrangements for continuous intrinsic reflection, nor any ways of working that would foster an ongoing triple-loop learning process within the organization. However, we believe there to be incipient signs of space and potential which could favor triple-loop learning to develop within the organization.

During the two workshops which focused on the vision of a professional organization, the staff recognized that they had a well established organizational core capable of working well at the field level. However, they felt they needed to develop a shared vision at all levels within the organization, and to become more stabilized as an organization through reaching out more to the outside world via networking, holding regional debates, writing funding proposals and publishing their work. They also recognized that a weakness of their organization was the existence of too much action and too little reflection. Their view on how this should be handled was that 'the organization must learn and become re-born' in order to handle the changing environment for a NGO. We associate this concept with the triple-loop learning process that was evident at the time of the institution's birth, a process which now needed to be reviewed and adapted for the organization to develop and professionalize as an NGO working with and for traditional small-scale farmers in San Martín. Although PRADERA as an organization might not have been undertaking organizational triple-loop learning, some of the workers had reached this understanding at an individual level. An overview of the single-, double- and triple-loop learning criteria as they relate to the case of PRADERA is presented in Table 1.

Discussion

When NGOs are examined in general, it is clear that many of these perform well in the single-loop learning process and are successful in their work in the field, often filling a vacuum left by the state in the agricultural extension sector. Some NGOs manage to also perform double-loop learning, and a few may have the potential to achieve triple-loop learning. This article denominates PRADERA's practical involvement in farmers' agricultural activities as single-loop learning. Further, it is argued that double-loop learning activities relating to land management processes and associated learning strategies, such as when they initiated

Table 1 The three levels of learning with the criteria applied to PRADERA

<i>Learning loop</i>	<i>Criteria</i>	<i>Evidence</i>	<i>Verified by</i>
Single-loop learning	Task oriented instrumental learning on how to do things	Detailed knowledge in local farming: <ul style="list-style-type: none"> • agro-biodiversity, management, institutional structures, and the cultural ingredients in agriculture (e.g. farmers' spiritual relation to nature) 	Field work/ participatory observation Interviews Publications
Double-loop learning	Reflective learning questioning what is being done	Analysis on how traditional farming relates to its surrounding environment: <ul style="list-style-type: none"> • need of farming system to develop diversely • promotion of collective working arrangements which also house collective learning processes 	Field work/ participatory observation Interviews Publications
Triple-loop learning	Reflexive consciousness when fundamental purposes, core values and power knowledge dynamics are questioned	Potential for a reflective reflection process: <ul style="list-style-type: none"> • aiming at an internal reflection on the working approach in an action research process 	Methodological workshops

learning processes together with farmers and the development of PRADERA's own learning about agriculture through reflection, enable PRADERA to direct and design its activities in such a way that these become relevant for the farmers. By focusing on the local small-scale farmers' agricultural reality, and by creating space for learning within a known framework for the farmers, PRADERA uses a working approach whereby they develop a very close relationship with the farmers, and also integrate themselves into the village's existing institutional structures such as *choba choba* and *mujeo*. In this way PRADERA seems to have found a working approach that can deal with the *problematique* experienced by other NGOs of not empathizing with the farmers, and their alternative land use package proposals being too complicated for the farmers. These problems are experienced by many governmental organizations as well as the NGOs in the area, as expressed during the CIFOR workshop in 2004 (Meza, Sabogal, & de Jong, 2006).

PRADERA, like many other NGOs, is undertaking reflections particularly on the environment it acts in (double-loop learning), but does not extend this into the next level of learning. So why is there so little triple-loop learning going on in NGOs such as PRADERA which has a high capacity for reflection? McWhinney (2005) claims that Bateson's idea of the third level of learning has been used

simply to indicate this higher level of change creating diffuseness in the interpretation of the third order. His own way of distinguishing between double- and triple-loop learning is to say that Bates's LIII is 'a stable eddy in a stream of change' (McWhinney, 2005: 30). For him the continuous questioning and the fluid change processes associated with LIII could be better seen not as producing an increase in knowledge, but as advanced levels of engagement and having to live with uncertainty. NGOs as relatively small action-oriented organizations arguably have an advantage when aiming for such deeper levels of learning, as they are used to adapting their work to conditions of uncertainty. However, even such an NGO might find it hard to handle the added uncertainty associated with triple-loop learning, because many structures around the NGO demand stability and make all-pervading changes difficult to carry out (e.g. donors' norms and rules, financial arrangements, etc). The work of PRADERA, as for many other NGOs, was planned and organized around the demands of their donors in terms of budget, scheduled report writing, and accounting which altogether defined which activities were to be carried out, when and where. One example was that the donor only accepted official receipts for reimbursements of project costs, which made it hard to work in remote communities where no official receipts were to be found, but which would have been important communities to collaborate with when working with agrobiodiversity. Another common example of clashes between NGOs such as PRADERA and donors was the administrative regulations systematized around the calendar year, where many NGOs are left without finance during the first months of the year (the period between accounting for one previous year and waiting for reimbursement for starting the following year's work). PRADERA states that they 'can live with such institutional inconveniences', but the one thing that is not negotiable for them is their institutional mission; to work together with farmers on traditional swidden agriculture. They declare that they intend to stick to their area of interest, which is a key aspect of their passion for work, and not become tempted to create projects around the areas currently promoted as prioritized areas of development by donor organization. One contemporary example in San Martín, was promoting projects related to coca eradication. This reflects the risk that NGOs follow the money, that is, the main interest of the donor at the moment, instead of the needs of the beneficiaries; this also leads to donors creating a certain kind of NGO.

We believe that even in these situations, opportunities will arise now and then which favor triple-loop learning, not in the sense of it being McWhinney's kind of continuous change, but rather occurring as significant moments with the potential for contributing to the organization's transformation. As to whether such moments of learning are of the second or third order can be debated, but taking advantage of those moments will require that they are recognized by some members of the organization, perhaps by a charismatic leader, who could then engage the rest in the transformation process. If Salner's (1986) idea of epistemic

cognition, and the systemic competence of the individuals in the organization have been reached through prior experiences, the task of the leadership in facilitating deeper levels of learning within the organization would be much easier. This way the learning abilities of the individuals could contribute to the desired level of organizational learning (Salner, 1999). If the different levels of learning take place in a successive manner, from single to triple mode, or if they occur more or less simultaneously, is a vast question which could not be explored in detail in this article. We confine ourselves to stating that, in reality, all probably take place. The single-, double- and triple-loop learning processes might go on in parallel in a dynamic and systemic manner, but there is always a place for a build-up phase where prior experiences contribute to deeper levels of learning in succession.

So why would it be important for PRADERA and other NGOs to reach an ongoing triple-loop learning process? In order to finance their activity today, most NGOs worldwide need to respond to increasing demands within a climate of growing competition for donor funds (Britton, 2005). These NGOs need to demonstrate that the resources received from their donors have impact. Consequently, many NGOs are very action-oriented in their work in order to produce the outcomes expected by donors (Britton, 2005). At the same time, NGOs have to be reflective in the way they develop as an organization in order to be successful, survive the hard international competition and maintain the farmers' attention and support. Thus, a tension emerges between action in the field and internal reflection, in terms of the time and money required in order to develop relevant action. Also, PRADERA recognized that there was more space and time for action than reflection within its organization. NGOs good at deeper levels of organizational learning have the potential to make the *implicit* become *explicit*, and thus work for intrinsic learning development within their own organization. Such *internal* learning processes could be reinforced by the *external* context and vice versa, as learning about oneself is created through both the meeting with others and the possibility for self-reflection. This has been called the power of dialogue by Kögler (1999). In the case of PRADERA, the staff indicated how easy it was to build a learning relationship with the farmers in contrast to other actors in the outside world such as the funders and the local NGO community.

In Peru, many NGOs working with agricultural issues are filling a space left by the state in the agricultural extension sector, and the professionals in these NGOs are working in an agricultural reality which is different and far more complex than the ones they were exposed to during their university education. Such NGOs, acting as intermediaries between the small local context and the wider international context, have the potential to become a bridge between the local farmers and the outside world such as the global funding community. We argue that in order for them to act as such a meaningful link, a NGO would have to develop in its professionalism by reaching a degree of reflexive consciousness that enabled continuous transformation. One way to build such a capability would be

to adopt action research methodology for the organizational learning purpose, and thereby become an ‘inherently action researching system’. We claim that action research has an added value as it forces the actors to take part in a joint process of knowledge seeking, where the actors have to reflect on each other’s and their own role, and thereby create a shared knowledge and understanding that is often not captured with other methodologies. We therefore argue that action research as a tool to develop reflectivity among the farmers as well as within their own organizations during action, can be a valuable working methodology for a small, local, highly action-oriented NGO, such as PRADERA, enabling the attainment of deeper levels of learning. Viewing action research as a learning process about how people interact with the world and with others, how these people understand the world and what they value, and the discourses through which they understand and interpret their world (Kemmis & McTaggart, 2000), can very well describe what PRADERA and many action-oriented NGOs are already doing. Therefore it is possible for them to take the step required to formalize the NGO’s action-oriented approach into an action *research* approach, where the NGO’s own organization is included in the reflection process, and the NGO reflects over this reflexive learning processes, thereby developing an ‘internal action researching system’. That said, we can of course question if the true potential of action research to create a conscious learning organization has ever been, and indeed can ever be, fully exploited in practice.

What would a good NGO look like from the farmers’ point of view then? What support for land management might the local farmers gain from a NGO such as PRADERA? We argue that a NGO grounded in the farmers’ reality and deeply knowledgeable about the context of the farmers’ work – in everything from being able to recognize and discuss management differences regarding different varieties of a crop, to knowing the implication of institutional structures in the village, and understanding their view on human, natural and spiritual relationships – is an important condition for reaching a mutual dialogue between a NGO and farmers. With a mutual dialogue, founded in the farmers’ context, there is a greater possibility to reach (through a learning process) feasible and lasting land management alternatives that are truly adapted to the humid tropical conditions of the Amazonian basin, in contrast to the current problem of outside solutions not fitting with the farmer reality, as referred to earlier. However, an organization needs not only to be good at a field level from a farmer’s perspective, but also needs to be able to open itself up towards the other actors and donors, in order to get enough funding for continuity and stability in its work.

This in fact became the issue for PRADERA in its ability to continue as a stable organization. Towards the end of the researcher’s stay with PRADERA, a period of crises began, brought about by several organizational issues. Though PRADERA had started to internally reflect on its working approach, it was not yet able to execute the deeper levels of learning in the internal action research

process in order to confront its organizational problems. At the time of writing, PRADERA's activity in the field had been reduced to a minimum with its entire staff having to look for work elsewhere, while the coordinator was trying to bring the organization through this process of confusion to begin creative work again.

Conclusion

PRADERA stood out as different from other such non-governmental organizations in the region by working with farmers in a manner that built very close collaboration with these farmers. Their organizational learning could be viewed as a combination of single- and double-loop learning processes. Though taking some initiative towards an incipient third-loop (or epistemic) learning process, there was no evidence of having yet established the internal arrangements for reflection to become ways of working that would foster an ongoing triple-loop learning process. The problems of reaching deeper levels of learning are partly in-built in the NGO-donor system whereby NGOs invariably have to be very action oriented, leaving them little or no time for internal reflection of the required degree. We argue that action research offers the means to develop reflectivity within these organizations as well as with the farmers. NGOs like PRADERA, working in close relationship with farmers, knowing their agricultural activities and practices, searching for space for learning with the farmers within the farmers' frames of practical work, and using these as arenas for reflecting on land management processes happening in the region, can be valuable bridges between farmers and funding institutions. They are engaged and knowledgeable about the local context and have an interest in continuity of their development work.

Acknowledgments

We would like to thank PRADERA for sharing their knowledge and work with us, especially PRADERA's coordinator Marío Arévalo Rivera, but also the rest of the knowledgeable and hardworking team. We would like to thank Jorge Ishizawa at PRATEC (Lima, Peru) and Roger Packham (University of Western Sydney, Australia) for valuable comments. The study was made possible by grants from the Swedish International Development Agency in cooperation with the International Center for Tropical Agriculture (Cali, Colombia). We thank Dr Meghna Guhathakurta for leading the review process for the authors of this paper. Should you have comments/reactions you wish to share, please bring them to the interactive portion of our website: <http://arj.sagepub.com>.

Note

- 1 Institutions in this context are defined by what is often called the ‘rules of the game’; established customs, usages, practices, organizations or other principles or conventions which regulate the needs of an organized community (SLIM, 2004).

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