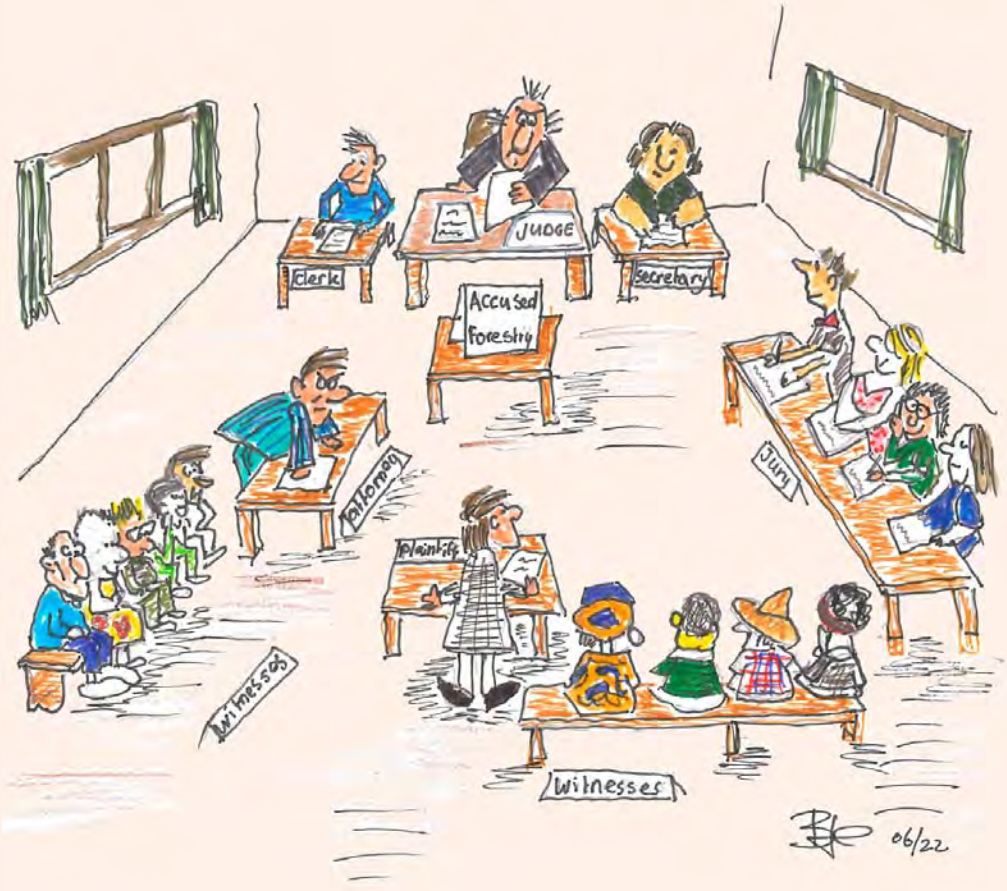
Action Learning, Action Research Association
Action Research Practitioner Papers

No. 1

Spiral of Learning to Promote Participatory Action Research for Sustainable Development



Marc P. Lammerink

Action Research Practitioner Papers

No. 1

Spiral of Learning to Promote Participatory Action Research for Sustainable Development

Thoughts on fear, power, confusion and the 'aha' moment in learning

Marc P. Lammerink

ISSN: 2653-6846 (Electronic)
ISBN: 978-0-9871181-6-5 (Print)

The Action Research Practitioner Papers series has been published by Action Learning, Action Research Association, Adelaide, South Australia.

Front cover: Brenda Sluis Lammerink

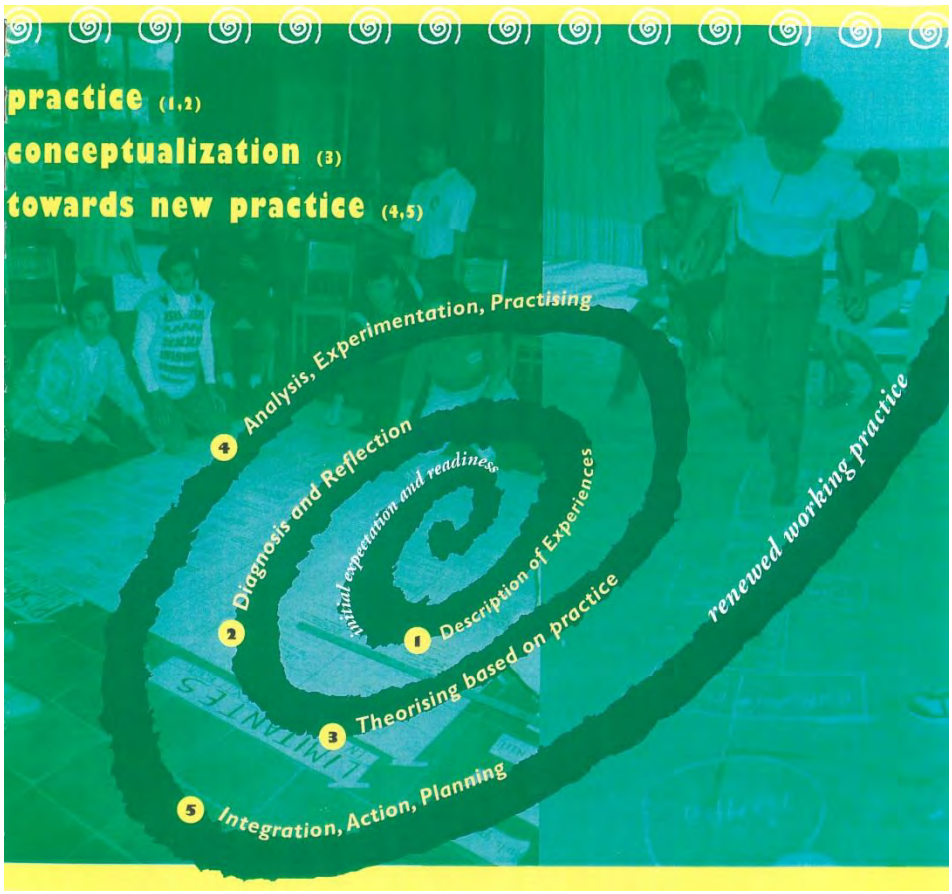


Table of Contents

List of Figures and Images

List of Tables

List of Abbreviations

ADESO	Association for Research on Sustainable Development of the Segovias [Asociación para la Investigación del Desarrollo Sostenible de Las Segovias]
BALT	Business Action Learning Tasmania
ELI	Enhancing Local Initiatives
EU	European Union
FFA	Force Field Analysis
FMD	this was originally the abbreviation for Forestry Manpower Development Consultants
FRD	Forestry for Rural Development
ISCTE	Institute of Lisbon University, Portugal formerly called Higher Institute of Business and Labour Sciences [Instituto Superior de Ciências do Trabalho e da Empresa]
ITC	International Institute for Geo-information Science and Earth Observation, The Netherlands

MDF	Management for Development: a Dutch Training and Consultancy firm nowadays called: MDF Training and Consultancy
NRM	Natural Resource Management
PAR	Participatory Action Research

About the Action Research Practitioner Papers Series

Action Learning, Action Research Association Ltd is a professional association dedicated to the promotion of Action Learning, Action Research and allied approaches to systemic change in any knowledge domain, related to any culture, in any part of the world where social and environmental justice are hallmarks of the effort.

Included in this dedication are a scrutiny on participatory practices and the sharing of practice wisdoms between practitioners, participants, academics, and sponsoring bodies. This dedication is to enable best practice and informed resourcing of initiatives.

The terms 'Action Learning' and 'Action Research' cover a broad range of similar methodologies that are grounded in practices that address questions of significance to the flourishing of the human community, are highly participative, embrace a wide range of knowing, and seek to develop enduring capacities of those involved. The work actively considers the ethics of the practice, appreciates first, second and third person perspectives and engages the context of research with systemic thinking and practices, while the practitioners acknowledge culturally distinct approaches and engage reflectively and critically with the design and implementation of their work.

The Action Research Practitioner Papers series invites substantial contributions from those who implement Action Research and Action Learning related strategies in the living contexts of work.

As a series, it describes details of activity across any aspect of an initiative which otherwise may not be open to scrutiny or learning. These practices may include project management, facilitation, documentation, networking, collaboration, critical thinking, systemic transformation, education, and training in Action Learning and Action Research practice, and/or self-reflection.

Contributions are peer reviewed with a consideration of literary and praxis quality, and accessibility to peer and novice practitioners.

The Action Learning, Action Research Association congratulates the author of the current publication and warmly encourages dissemination for the promotion of a more just and flourishing world.

About the Author – Marc P. Lammerink

Dr Marc P. Lammerink, from the Netherlands, has over 45 years of professional experience in interdisciplinary work, Popular Education, and Participatory Action Research.

Marc trained as a social scientist, and from 1989 until recently, he ran a consulting firm based in the Netherlands, FMD Consultants, which focused on the development of innovative training and Participatory Action Research programmes in the field, and on supporting organisations to systematically integrate a culture of participatory work approaches and creating conditions for longer-term sustainability. He has organized and coordinated various projects in development areas as diverse as social forestry, community water management, biodiversity, and endogenous development in countries in Asia, Latin America, and Africa.

For the last fifteen years, Marc has lived and worked in and from Portugal, where he ran a small rural hotel with training facilities. He also was a visiting professor at Lisbon University (ISCTE), where he taught in the development studies master's programme on approaches that promote active participation, citizenship, and Action Research. He has published several books, contributed chapters to numerous others, and written many articles on Participatory Action Research and Popular Education.

marc.lammerink@gmail.com

Acknowledgements

Prepared following a virtual workshop presentation at the ALARA-BALT Australasian Conference 2020, 10 November 2020, Tasmania, Australia

Synopsis

Practitioners in development often fail to relate their expert knowledge to the logic, knowledge, and experiences of local people. Local people's ways of seeing contain many ingredients for change. Local people are the key to development, and should therefore actively participate in the change process, and not just be seen as recipients. Thus, a major challenge for professionals is to discover, with local people, clues that can help to build a more sustainable environment, to promote and build resilience, to better understand clashes between power groups/cultures and to embrace new perspectives and values.

To support this shift of perspective among professionals, we created a participant-centred learning approach, the Spiral of Learning. The approach is structured as a step-by-step transition process of 'Double-loop learning'. In this inductive approach of exchange, analysis and systemisation, theory arises from the (tacit) knowledge and experience gained by professionals at home and at work. This could then be combined with parts of theory from outside the lived experience (so-called 'expert knowledge'). Thus, the lived experiences of professionals shape the learning process and allow them to actively take part.

This Spiral of Learning approach aims at augmenting professional competence on the topics at hand by refining their knowledge and skills, but more importantly by questioning their taken-for-granted assumptions, values and beliefs and bringing them to the surface, by embracing error, by changing their attitudes, by raising awareness and transforming deeply held perspectives of the world in which they work and act, and finally, by gaining self-respect and confidence. The aim is to empower the professionals to enhance local people's initiatives to improve their environs. This ultimately leads to empowerment of local people and to empowerment of the professionals within the context of the organisations from which they work.

During the learning process, ethical issues are challenged: ethics in learning but also in community participation and research with local people. Power issues are part and parcel of the reflections. Furthermore, 'learning how to learn' is involved through regular reflecting on both the process and the content.

The Spiral of Learning differs from many learning approaches in doing unique work, moving from non-participatory to participatory learning focusing on the participant's lived experience and how this worked out in specific cases. The process followed in the Learning Spiral does not impose any participatory methodology. Underlying principles of this approach are Experiential Learning and Popular Education. Experience is seen as an important source of learning.

In this Practitioner Paper, I will explain and show by means of examples how to achieve the implementation of participatory methodologies in the field in a participative way.

I give two examples of programmes designed to encourage and mentor professionals in using participatory approaches and Action Research for sustainable development. The first describes a three-week learning experience, Enhancing Local Initiatives (ELI), which was developed for social forestry extension workers and other forestry professionals. The second example, Participatory Experiences for Social Development, highlights the learning experiences of researchers in the Association for Research on Sustainable Development of the Segovias (ADESO)[1] in northern Nicaragua. This consisted of three interrelated learning cycles, with periods of praxis in between. Using principles of Experiential Learning and Popular Education, we guided the participants in a gradual process towards the design of an approach to participatory research tuned to the local conditions.

Throughout the different parts, we pay attention to power and equality in the learning processes. For participants to make real discoveries for themselves (the 'aha moment') they must be able to learn without fear, meaning that everything can be said, that communication between participants and between participants and facilitators softens or even reverses power relations. Confusion and uncertainty are important levers in the process. Facilitators play an essential role by ensuring a safe learning situation in which all participants are involved, are genuinely listened to, and respond to each other's arguments. A learning process that aims to re-stage repressed or hidden popular knowledge can be just an example.

1 ADESO: Association for Research on Sustainable Development of the Segovias [Asociación para la Investigación del Desarrollo Sostenible de Las Segovias] is a not-for-profit development-oriented research and training Institute established by 22 NGOs, governmental organizations, education centres and grassroots organisations in 1995.

Keywords: Spiral of Learning approach, Participatory Action Research, Popular Education, Experiential Learning, Discovery Learning, Action Learning, Double-loop learning, participatory approaches, ethics in learning and PAR, fear in learning, confusion, power, and equality.

Introduction

Despite new insights into education and training, professionals engaged in sustainable development programmes often fail to relate their expert knowledge to the logic, knowledge, and experiences of urban or rural residents. It has been claimed that "Learning is the process whereby knowledge is created through the transformation of experiences" (Kolb, 1984, p. 38). Indeed, experiences are an important source of learning. This means starting the learning process with the participants and their experiences gained at home and work. These experiences should shape the learning process and stimulate participants to join in actively in the learning process.

The initiators of FMD Consultants[2], an independent Dutch not-for-profit expert organisation, are Berry van Gelder and myself, Marc Lammerink. We have been involved since the early 1990s in sustainable development programmes worldwide. Berry, my colleague, was educated as a traditional forester[3] with knowledge on how to develop 'industrial' forests.[4] His university forestry programs focussed on the teaching of future guardians of big forest plantations for export wood production. At the start, he told me, he had to design locally relevant woody biomass projects; for this, his university education was almost an obstacle. Over time he developed a growing understanding and experience in projects of wood provision for poor rural people. Basically, he said when we met for the first time, there was a need to train a new type of forester, and to search for a new methodology in forestry that builds upon local knowledge and local structures. We both agreed that the conventional 'development' view of delivery and the assumption that 'local people knew very little' were the biggest stumbling blocks. However, there was no simple, single technical answer, but a need to explore new ways of seeing

2 FMD Consultants was the original name of Forestry Manpower Development Consultants.

3 A forester is a professional who is responsible for caring for, planting, and managing trees or forests. They are traditionally involved in a variety of activities, including restoration, conservation, timber harvesting and managing protected wooded areas.

4 Gelder and O'Keefe (1995) typify this: For an industrial forester a newly planted forest will have rows of a single species of often non-Indigenous fuel-wood trees planted in straight lines and surrounded by fences. (…) To complete the picture sawmills and pulp-mills will be not too far away.

solutions from wood use to local landscape. We clearly identified an increasing demand for approaches to forestry that would contribute to a process of sustainable development.[5] The establishment of FMD was specifically to support new initiatives that would contribute to a participatory, equitable, decentralized, and self-sustaining process of rural development worldwide.

From the start, we acknowledged that local people's perspectives contain many ingredients for change. In our view, their knowledge and skills should be the building blocks for development initiatives. They should actively participate in the change process, and not be seen as recipients or, even worse, as a problem in sustainable development. Failure to recognise such differences of perspective and logic between 'experts' and locals leads to problems that we encountered at all levels of implementation of development programmes (Gelder and O'Keefe, 1995).

However, convincing foresters of a new way of seeing was not going to be the answer. That type of answer had already been tried for many years without success. In our discussions to establish a better and different answer, I stressed what I had learned from Popular Education in Central America: in all learning efforts with foresters, we should take as a starting point their own experiences in their work and in their personal life. In our preparatory discussions, this came up as 'Columbus's egg'.[6]

We had to develop a training process in which foresters became aware of the gaps between the world of their aspirations, hopes and dreams and the world they created with their policies, practices, and everyday activities. In short, making them aware of the gaps between ideals and practical reality, both on the national and local level. That is why we started to design a participant-centred learning approach to support this shift of perspective among professionals.

Through a process that involved many discussions and dialogues, we created a process approach to participatory learning in social forestry, which we call the Spiral of Learning approach. This was originally done to redesign a postgraduate programme in social forestry, called Forestry for Rural Development. Later, we were also asked at the

5 For this type of forestry, a variety of names is chosen, like social forestry, community-based forestry, and forestry for rural development.

6 Egg of Columbus or Columbus' Egg refers to a brilliant idea that seems simple after the fact.

same International Institute for Geo-information Science and Earth Observation, ITC, The Netherlands, to redesign a module for the Master programme on Natural Resource Management (Groenendijk, 2009a, 2009b). The Spiral of Learning approach became the educational approach, and the experiences of students became the source of learning and development.

The Spiral of Learning approach aims to augment the competence of professionals by refining their knowledge and skills, by changing their attitudes, and raising their awareness about using participatory approaches in development (Gelder and Lammerink, 1993a). During the process, taken-for-granted assumptions, values, and beliefs are questioned and brought to the surface, error is embraced as a source of learning, deeply held perspectives of the world in which professionals work and act are transformed, and finally, self-respect and confidence are altered.

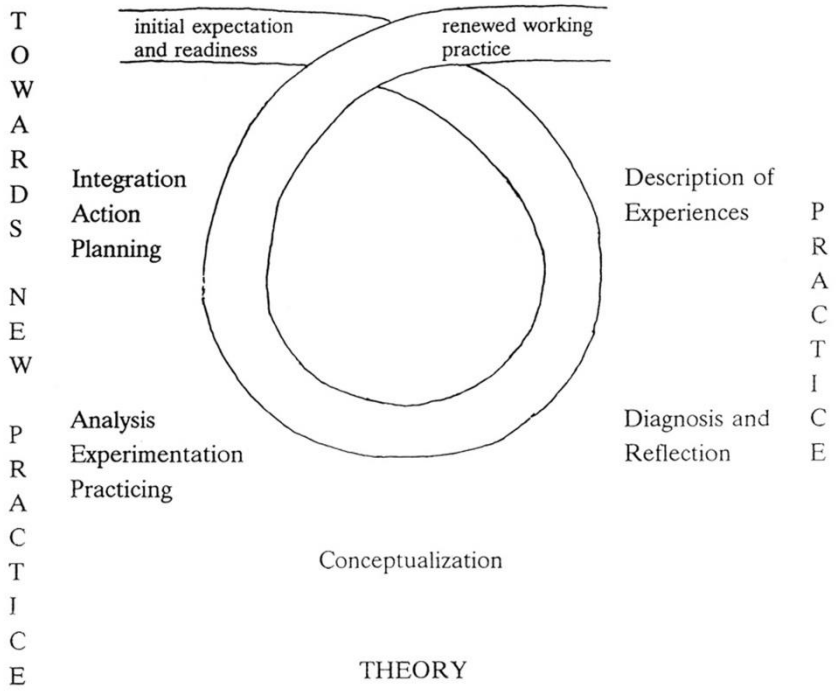
Of course, ethical questions are raised during the learning process: ethics[7] in learning, but also in the case of community participation and research with the local population. The problems of power and control are an integral part of these reflections. In addition, learning to learn involves periodic reflection on both the process and the content.

Different working methods for learning are used like workshops of joint reflection, study circles for study of specific themes, games for analysis and action teams in fieldwork. Lecturing is kept to a bare minimum. The aim is to empower professionals to enhance local people's initiatives to improve their environs. This ultimately leads to empowerment of local people and to empowerment of the professionals within the context of the organisations from which they work.

The Spiral of Learning approach is based on my experiences in Nicaragua between 1984 and 1988 in a University Cooperation Project (Lammerink, 1993, pp. 181-183; Lammerink, 1996) and on the principles of Experiential Learning (Kolb, 1984). It is strongly

7 Ethics are a common set of rules or behaviour that apply to a particular profession and are codified in a way that states clearly and specifically what is expected. For example, a commitment for a learning practitioner could be: He/she will enable the learner to engage in independent, self-directed learning suitable for the development of his/her professional competence.

Figure 1: The Spiral of Learning (Lammerink, 2001)



influenced by Popular Education as practised in Central America (Jara 1981, 2020; Núñez 1985), Participatory Action Research (PAR) (Fals-Borda, 1982; Fals-Borda and Rahman, 1991) and Theatre of the Oppressed (Boal, 1980), all developed by Latin American activist-intellectuals.[8]

Later, I developed learning processes with teams of water engineers and social scientists to implement PAR to improve community management of rural water supply (1993 – 2000). These teams worked in Africa, Asia, and Latin America. We disseminated various publications, videos, and training materials on the experiences, for example (Lammerink and Bolt 2002; Lammerink and de Jong 1999; Schouten 2000). Furthermore, the Spiral of Learning approach has been widely used, for example, in a programme for development research in Nicaragua (1993 – 1998) and in a master's programme for mid-career professionals in Portugal (2003 – 2017).

This Practitioner Paper presents examples of programmes in which professionals have learned about and used participatory approaches and Action Research for sustainable development. The Spiral of Learning differs from many learning approaches in doing unique work, moving from non-participatory to participatory learning focusing on the participant's lived experience and how this worked out in specific cases. The process followed in the Spiral of Learning does not impose any participatory methodology.

In the first section, I discuss a few innovative learning approaches and put them in a historical perspective. After describing the principal characteristics of the Spiral of Learning approach and explaining the main steps, I go into more detail about the learning approach, methodology and methods applied, touching on the challenging task of facilitation.

The second part of this Practitioner Paper is devoted to two case experiences of the Spiral of Learning approach, highlighting the diverse contexts and cultures where it has been applied. It shows how to achieve in a participative way the implementation of participatory methodologies in the field.

One case shows how the approach was used to encourage, mentor and support foresters in developing countries in their use of

8 Augusto Boal had a huge bearing on theatre as a means of empowerment and critical insight. Orlando Fals-Borda contributed fundamental ideas to the global movement for PAR.

participatory approaches to social forestry. Here I describe a three-week learning experience, Enhancing Local Initiatives. The second case focuses on the learning experiences of new researchers in the regional research programme for development (ADESO) in northern Nicaragua, called Participatory Experiences for Social Development, and how the implementation of participatory methodologies can be achieved in a participative way in areas where social injustice is apparent.

In this Practitioner Paper, I will draw on a multiplicity of data types and ways of knowing to reflect on my practice and experiences. For these different ways of knowing, I have opted for the use of boxes in the text. These boxes are presenting conversations with colleagues, diary notes during programmes, results of discussions in learning, examples of training handouts, theoretical explanations of outsiders and the like. They can be read as a support to the general text but can also be left out for a quick review.

Learning approaches that support new perspectives

Approaches to help people learn - learning approaches – involve different strategies and methods. This section discusses a few innovative learning approaches and puts them in a historical perspective. The approaches we discuss here are Experiential Learning, Discovery Learning, Action Learning, Cooperative Learning, and finally Popular Education.

Perhaps the most cited and influential, innovative approach to adult learning is **Experiential Learning**, sometimes defined as: learning through reflection on doing. This approach has spawned many strategies and methods, two of the most prominent being Kolb's (1984) Experiential Learning Theory (ELT) and his Experiential Learning Cycle (Kolb and Kolb, 2005).

Kolb's model (Kolb and Kolb, 2005, p. 193) relies on the work of noteworthy social scientists like John Dewey[9], Kurt Lewin, Jean Piaget, and to a lesser extent on William James, Carl Jung, Paulo

9 John Dewey, an American philosopher, psychologist, and educational reformer said (Dewey, 1933, p. 78): 'We do not learn from experience (…) we learn from reflecting on experience'),

Freire, Carl Rogers, all of whom highlighted in different ways the key role of experience in human learning (Armstrong and Mahmud, 2008). Kolb described Experiential Learning as: 'the process whereby knowledge is created through the transformation of experience' (Kolb, 1984, p. 41). Hence, knowledge arises from the combination of the individual reflecting, grasping and transforming new and prior experiences. One of the key features of this learning approach, is that 'learning results from synergistic transactions between the learner and the environment" (Kolb and Kolb, 2005, p. 194). Synergy is understood as the combined value and performance of any of two parts being greater than the sum of the separate individual parts.

Kolb described an Experiential Learning cycle with four learning aspects starting with an immediate, *concrete experience* that is reinforced through *reflective observation* of that experience. Out of reflection, an individual develops *abstract concepts* about his or her experience and can generalise those concepts to other experiences and settings. Concepts are then tested (*active experimentation*) in actual situations to validate or reframe the learning results. Finally, concrete experience based on the testing induces a new cycle (Kolb, 1984, p. 30).

According to a recent literature review by Morris (2020) the treatment of concrete experiences in Experiential Learning revealed the following themes:

- Learners are involved, active participants
- Knowledge is situated in place and time
- Learners are exposed to novel experiences, which involves risk
- Learning demands inquiry about specific real-world problems
- Critical reflection acts as a mediator of meaningful learning.

Based on this, Morris proposed an interesting revision of Kolb's model: 'Experiential Learning consists of contextually rich, concrete experience, critical reflective observation, contextual-specific abstract conceptualisation, and pragmatic active experimentation' (Morris, 2020 p. 1076).

As is understandable, the role of emotion and feelings in learning from experience is a noteworthy aspect. Facilitating Experiential Learning and reflection is a challenge. The facilitator should ask the right questions and guide a reflective conversation before, during and

after an experience. The Reflective Cycle can be adopted for this critical reflection (Gibbs, 2013; Gibbs, Farmer and Eastcott, 1988). This learning cycle models how learners can link theory and practice through engaging in a cyclical sequence of activities: describing, feeling, evaluating, analyzing, concluding and action planning. This should help to improve the quality of professional practice and close the gap between theory and practice.

Another well-known learning approach is **Discovery Learning**, also referred to as problem-based learning. Jerome Bruner (1961) is often credited with conceiving Discovery Learning in the 1960s. It is a method of inquiry-based instruction. People should learn by doing. This popular theory encourages learners to build on past experiences and knowledge, use their intuition, imagination and creativity, and search for new information to discover facts, correlations, and new truths. Bruner proposed that learners construct their own knowledge (Bruner, 1961). A major theme in the theoretical framework of Bruner is that learning is an active process in which learners construct new ideas or concepts based upon their current/past knowledge. So, learners should not be taught bald facts, but should understand and explain what they are learning and build on that.

The role of the teacher/instructor in adult learning should not be to get the students to memorise data, but instead to facilitate their learning process. The facilitator's role in Discovery Learning is deemed critical to the success of learning outcomes. Both the facilitator and the learner should engage in an active dialogue, also referred to as the Socratic Method (Brunschwig, Lloyd and Pellegrin, 2003, p. 233). This is a form of cooperative, argumentative dialogue between people, based on asking and answering questions to stimulate critical thinking and to draw out ideas and underlying presuppositions. The Socratic Method could be considered a method of dialectical thinking[10].

According to Reich (2003, p. 2), the Socratic Method: 'is better used to demonstrate complexity, difficulty, and uncertainty than to elicit facts about the world'. The aim of the questioning is to probe the underlying beliefs upon which each participant's statements, arguments and assumptions are built. The training environment is

10 Dialectical thinking refers to the ability to view issues from multiple perspectives and become aware of a multi-faceted reality. It is about looking for alternatives and widening our scope.

characterized by productive discomfort. The focus is not on the participants' statements, but on the value system that underpins their beliefs, actions, and decisions.

Action learning is a learning philosophy developed in the 1940s by the British management consultant and professor Reg Revans (1907-2003). It came about when Revans had coal mine managers meet in small groups to share experiences and to ask each other about what they had seen and heard. The lessons learned after a critical reflection on the observations led to a dramatic increase in productivity. In the decades that followed, he further developed his insights into a much-praised methodology, which is used by numerous big organisations. His contribution to the understanding of change management processes gives a central place to learning, both personal and institutional. Revans' approach emphasises the practical and moral significance of personal involvement in action and learning, as a means of resolving the unmanageable social and organisational problems that we find around us. Revans used the descriptive phrase:

> 'There can be no learning without action, and no (sober and deliberate) action without learning', perhaps, as a conscious alternative to Lewin's dictum 'No action without research; no research without action', to emphasise the interdependence of action and learning (Pedler, 2016, p. 5).

According to Revans learning takes place through doing and getting on with the task at hand (Revans and Pedler, 2011) Action Learning is described by Zuber-Skeritt (1993, p. 37) as the deliberate engagement of Experiential Learning in a work setting. Action Learning involves learning from concrete experience and critical reflection on those experiences. It involves trial and error, discussion, discovery and learning from one another on real issues in actual settings.

Cooperative Learning has gained momentum as a strategy designed to revolutionise the learning environment and build student engagement. In contrast to traditional teaching, it claims to promote cooperation and communication in the classroom, boost students' confidence and retain their interest in classroom interaction. Cooperative Learning is an engaging teaching strategy in which small groups work together towards a mutual goal. In this technique, each participant is responsible for their own and the group's progress. Most of the active learning procedures used, such as Problem-Based Learning, Team-Learning, Collaborative Learning, and Peer-Assisted Learning Strategies (PALS), require that students cooperate in small

groups to achieve joint learning goals (Johnson and Johnson, 2018). The elements for designing Cooperative Learning are derived from social interdependence theory (Baloche and Brody, 2017) and structure-process-outcome theory. The five basic elements of any Cooperative Learning activity are positive interdependence, individual accountability, promotive interaction, social skills, and group processing. These are explained by Johnson and Johnson (2018).

Positive interdependence is at the heart of cooperative efforts. Participants perceive that while they are linked with groupmates, they cannot succeed without their groupmates' work and vice versa. In other words, groupmates' work benefits them, and their work benefits their groupmates; they feel they are on the same side. Furthermore, each group member is *individually accountable* for contributing their fair share to the group's work. There is considerable group-to-individual transfer and vice versa. Students *promote* each other's success by helping, assisting, praising, encouraging, and supporting one another's efforts to learn, jointly celebrating the group's success, and modelling the appropriate use of social skills. Participants feel the urge to do their very best.

Contributing to the success of a cooperative effort requires interpersonal and *small group skills*. In the groups, students are expected to use social skills appropriately, such as leadership, trust-building, communication, decision-making, and conflict-management. Finally, *group processing* through regular examination of the effectiveness of the process to improve each other's learning should be part and parcel of Cooperative Learning. According to Johnson and Johnson (2018):

> Group members need to describe which member actions are helpful and unhelpful in ensuring that all group members (a) achieve and maintain effective working relationships, (b) decide what behaviours to continue or change and (c) celebrate group members' hard work and success (p. 9).

Cooperative Learning tends to result in students exerting more effort to learn, building more positive relationships with classmates, and improving their psychological health.

There are many Cooperative Learning techniques available. Some of these utilise student pairing, while others work with small groups of

four or five students. Hundreds of techniques have been created into structures to use in any content area [11].

All these approaches to learning are widespread in the western hemisphere and have been mainly developed and used in adult education, management training in organisations and sometimes even in formal education like secondary schools and university training. A big shortcoming of these approaches today is that they do not necessarily lead to social transformation and equitable development, because underlying power issues cannot be separated from but are an integral part of the learning process. These approaches to learning seem to be politically neutral.

Nevertheless, in a context of social injustice, such as in many Latin American societies in the last century, development and learning can never be politically neutral. An historical analysis of Latin American societies (Galeano, 1971; Gunder Frank, 1967; Halebsky and Harris, 1995) reveals the discord that existed and continues between large numbers of poor, relatively unorganised, and oppressed people, and the few who are rich, powerful, and dominant[12]. These two groups of people had and have conflicting interests, and the social relationships between them determined how society functioned. Poor people, however, are aware of what oppresses them, they are highly organized to deal with scarce resources, and they are at least indirectly empowered. Adjacent violence and cooperation are part of this indirect empowerment. They also often have a long history of unrest and rebellion. Grassroots social change could just occur when the poor and oppressed organised and acted in their mutual interests (Huizer 1973; Molyneux and Dore, 2000).

In this context, the role of knowledge is critical. Firstly, poor people mostly had little access to information, skills, and tools to acquire knowledge. Secondly, the dominant classes increasingly used knowledge and information to maintain their dominant standing. In

11 A well-known book that describes many structures is 'Kagan Cooperative Learning Structures' (Kagan and Kagan 2009). It is interesting to note that many of these tools can also be found in 'Participatory Tools for Popular Education' [Técnicas participativas para la educación popular'] (Vargas and Bustillos 1984).

12 For the record: the situation in the United States in October 2020 is not very different: 'The three richest North Americans, inhabitants of the USA, have as much wealth as the poorest 160 million inhabitants of the USA' (Santos, 2020, p. 8).

the last three decades of the 20th century, knowledge was one of the major sources of power and control, and this will continue to be the case in the near future. In countless instances, media and institutions producing research expertise and knowledge are used to control the thinking of poor and oppressed people. They are made to believe that inequality is inevitable, that they are not experts and thus do not know. As a result, the poor and underdeveloped are made dependent on the dominant classes. Thus, social change in Latin America has entailed informing, mobilising, and organising most people who do not have control over resources, who are not properly informed and not well organised. Grassroots social change implies conscientisation of the poor, enhancing empowerment of the powerless, and organisation of the unorganised – a deeply political process of societal change.

Despite, or perhaps because of, this unique context of hardship in this part of the world Latin American thinkers have come up with a distinct perspective on learning, one that is based on solidarity, inclusion, and humanity. It is a perspective that puts grassroots social change at the heart of learning and is manifest in what is known as Popular Education (Educación Popular). Popular Education is based on the understanding that, in a context of social injustice, learning and education can never be politically neutral. If it does not explicitly attempt to transform society in favour of the oppressed, then it is complicit in maintaining the existing structures of injustice.

Oscar Jara (2010) notes as key factors:

- Popular Education is 'substantively' political
- It is underpinned by a liberating pedagogy, which is possible in both formal and informal education
- It builds on people's capacities to question their reality and existing ideologies
- It enhances continuous learning and unlearning to move from one perspective to another.

The notion 'popular' refers to the 'popular classes', which include peasants, the unemployed, the working class, and sometimes the lower middle class and professionals.[13] According to Jara (2010):

13 The emphasis on the popular is not so much in working with popular sectors, but for the purpose of empowering the popular as an emancipating historical

> Popular Education refers to a new educational paradigm and political-pedagogical processes that seek to overcome relationships of domination, oppression, discrimination, exploitation, inequality, and exclusion (p. 290).

It may be defined as a learning methodology designed to raise the consciousness of its participants and allow them to become more aware of how an individual's personal experiences are connected to larger societal problems. Furthermore, participants are empowered to act and thus change the societal problems that affect them.

Popular Education is most widely known as an approach to education that emerged from the third-world perspective in Latin America during the second half of the 20th Century. Best known amongst popular educators is the Brazilian Paulo Freire (Freire, 1970; 1972, 1977, 1998; Gibson, 1999). Freire, and subsequently, the Popular Education movement in Latin America, draw heavily on the work of John Dewey and Antonio Gramsci.

Figure 2: Mural tribute to Paulo Freire (Cappellano, 2013)

In the 1960s, Freire laid the bases for a renewed approach to literacy in Brazil, in response to literacy campaigns that had proved to be ineffective. His approach, which focuses on adult learning, aimed at

---

subject. Thus, the word 'popular' should not be confused with the connotation it is given by populist politicians. According to the French historian Pierre Rosanvallon (2020, p. 27): Populists glorify unity and homogeneity. They do not regard 'the people' as a collection of different groups with different ideas and interests, but as a unit defined by the contrast with the 'elite' (…) It is as if the people are the unspoiled and united part of a society that would spontaneously form a bloc once the cosmopolitan groups and oligarchies have been reckoned with (M.P Lammerink translation).

raising people's awareness by converging on their interests, needs and expectations. Educación Popular formed the basis for numerous other approaches to learning which all do away with transmitting fixed contents, in which the scope of action allowed students only to receive, fill and store in 'empty barrels' (Freire, 1972, pp. 58-69).

Paulo Freire, according to Jara (2021, p. 15), radically changed the prevailing views on education by proposing four fundamental contributions:

a) Think of education that enables awareness and generates critical action in the light of existing power relations in all areas of society.

b) Develop democratic and liberating practices, as opposed to an oppressive, domesticating, and authoritarian upbringing

c) Think of an educational process in which conditions are created for the construction of learning as opposed to an activity of mere transfer of content

d) Make a dialogical and critical perspective central to the pedagogical processes, which place educators and students in a relationship of horizontality and mutual learning.

During the second half of the 1970s, a variety of experiences with Educación Popular were gained in Latin America[14]. Despite differences in context, the approaches had similar aims: to kindle people's active participation in development, thus enabling them to meet their own needs; to induce the process of self-organisation; to critically re-evaluate local history and customs; to respect and further develop Indigenous knowledge; and to build up new knowledge by linking all those elements.

Several streams of Popular Education have their roots in Liberation Theology. Gustavo Gutiérrez (1982), who first used the term 'Liberation Theology' stressed:

> in other words, it emanates from an experience of commitment and work with and for the poor, of horror in the face of poverty and injustice, and of appreciation of the possibilities of

14 A detailed and extensive systematization of the history and ethical, political, and pedagogical keys of Popular Education is written by Jara (2020). A slightly different view focussing on links between Popular Education and Participatory Research is from Torres (2010).

> oppressed people as creators of their own history and overcoming suffering (p. 127).

For Gutiérrez (1982) it is not just a methodological question, but a commitment to a way of life, of confessing the faith; it is spirituality. In the same line, Jara (2021) states that Freire's contributions are the product of a philosophy of education "based on the understanding of humans as incomplete beings and aware of their imperfection, whose vocation is to be more, to humanize by humanizing the world" (p. 16). Since history is not inexorable, nor predetermined, it is always a possibility to be a protagonist of its construction.

Europe and North America also have important traditions in Popular Education, for example, the Folk High School movement in Denmark, Sweden, and the Netherlands. The idea of the folk high schools emerged in the 1830s. The founding father was N.F.S. Grundtvig – a Danish theologian, writer, philosopher, historian, educationist, and politician. Important were both the theoretical (pedagogical thoughts) of Grundtvig and his practical ideas (the Grundtvigian People's High School) (Broadbridge, Jonas and Warren, 2011).

Popular Education was also a major feature of the upheavals of May 1968 in France, where there was an interest in reshaping relations between students and teachers, as well as between the university itself and society. Famous intellectuals such as Gilles Deleuze, Michel Foucault and Jacques Lacan lectured to full classrooms with standing room only. In the United States and Canada, Popular Education influenced social justice education and critical pedagogy. Scholar and community-worker Myles Horton and his Highlander Folk School (nowadays called Highlander Research and Education Center) can be classified as Popular Education. Highlander Folk School, for instance, played a significant role in the civil rights movement, providing a space for leaders to consult and plan. There the methods of Popular Education continue to live on in radical education and community organising circles.

Jara (1981) called Popular Education "the educational dimension of political action" whereas he called PAR "the research dimension of political action" (p. 10) He iterated in 2010, that learning processes of Popular Education seek to build "equitable and fair relationships, which are respectful of diversity and equal rights among people" (p. 290).

This social and political creativity of popular educators captured my imagination when I was working in Nicaragua in Adult Education in the early eighties. My in-depth learning and experiences in Latin America have led to the Spiral of Learning approach being strongly inspired by 'Educación Popular'.

Learning as an educational process

This section goes into the Spiral of Learning approach, its methodology and the methods applied. I also outline the basics of how to develop a programme based on the Spiral of Learning premises and describe in some detail the task of the facilitator. A more practical guide on how to design programmes of this nature can be found in Supporting Community Management (Lammerink and Bolt, 2002).

In the Spiral of Learning approach, the facilitation team starts with the participants and addresses the experiences they have gained in their home and work spheres. The experiences of the learners and their wisdom are seen as an important source for their learning. The path of transition from conventional training to the Spiral of Learning approach has led to changes in views on learning:

- From a static and mechanical understanding to a more dynamic interpretation of learning
- From the concept of learning as a receptive process to that of taking learning as a process of discovery with the active involvement of the participant
- From a task to a process orientation[15]
- From a standard to a differentiated and individualised approach.

This way of learning is not just about knowing more, but more importantly about behaving differently. It encourages building one's consciousness and examining one's values and beliefs, attitudes, behaviour, and orientations. Learning as such is a process of discovery and growth, a process that activates both facilitators and

15 Process-Oriented Learning means that instead of teaching facts or a way to do something, or improving performance by teaching certain tasks step-by-step, teachers will act more as facilitators, supporting the process by which participants generate ideas and think about it.

participants, and enables the individual to understand him/herself in terms of needs, feelings, motives, and past experiences. The information is used to raise social-political awareness and to gain a clearer understanding of one's own situation and context.

The Spiral of Learning approach is participant-oriented and based on the belief that people can just grow through their own actions (with support if necessary). Thus, this process approach to learning focuses on the development of human capacities to reflect, evaluate, create, choose, plan, organize and take initiatives. These skills can then spill over into numerous other aspects of the person's life. A facilitator develops, supports, coaches, and encourages this process of competence building and self-discovery of the participants, whose needs, experience, and goals are the focus of the process. It is a learning process in which the participants – assisted[16] by the facilitators – are involved in activities which help them to discover how they can improve their performing in various situations. The emphasis is on active learning rather than passively receiving information from others.

The Spiral of Learning approach accepts that people's knowledge can be authentic and accurate, but in some cases, it may not be so. Popular knowledge and wisdom are constantly created in people's daily experiences of work, community life and culture, and are often widely shared, practical, valuable, and resilient. In various publications, Orlando Fals-Borda (1981, 1982, 1992) reiterated this important notion of popular knowledge or popular wisdom as empirical or common-sense knowledge that belongs to the people at the grassroots and is part of their cultural heritage. It is practical, vital, and empowering knowledge that has enabled them to survive, interpret, create, produce, and work through the ages. It has specific purposes and relative truth. Popular knowledge is often of a holistic nature, and is based on intuition, daily life phenomena and human scale inquiry'[17]. However, popular knowledge can also be determined by fear and uncertainty and responds to that fear. The Spiral of Learning approach recognises the value and ambiguity of popular

16 'Assisted' has a broad meaning in the learning process and includes organising experiences, having participants acquire new experiences, bringing in new knowledge, providing radically different knowledge, coaching, getting people out of their comfort zone, but also keeping a good learning atmosphere.

17 Interesting to note how Donald Schön (1983) develops a comparative notion of knowledge and experience of professionals in quite a different context.

knowledge and encourages people to take part in their own learning process. This will contribute to raising people's self-awareness and their empowerment. As they start to appreciate what they already know and see themselves as capable of defining their own reality, they will become more open to seeking new knowledge, which enhances the learning process and builds their self-knowledge. They acquire a feeling of ownership of that knowledge. As a result, they develop their own endogenous consciousness-raising and knowledge generation (Fals-Borda and Rahman, 1991, p. 14) and this is an essential process both for people at the grassroots and professionals that support them.

In this way, the Spiral of Learning approach can play a crucial – albeit limited – role in assisting individuals and groups to change. As the process of learning enhances a feeling of ownership of newly acquired knowledge, it becomes a strategy and a tool for cultural change. It encourages people to investigate their own reality. Its methodology is experience-based, open ended and individual, as well as group centred. In this learning process, the trainer plays the role of a facilitator of learning.

Box 1: Principles of adult learning behind the Spiral of Learning approach

- Adults learn what is of interest to them, using their own personal experiences
- The experience of adults needs to be valued and nurtured during the learning process; otherwise, they may feel worthless or threatened
- Adults learn best when the environment is safe, accepting, challenging and supportive
- Adults enter learning settings with immediate and individualised needs, conflicting feelings like anger, shame, guilt, with problems and fears[18], and with hopes and expectations. These immediate feelings must be recognised and respected if participants' motivation to learn is to be raised

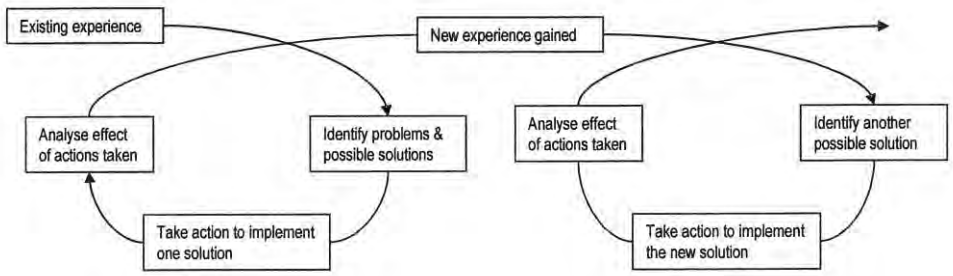
18 Fear or anxiety can be defined as a stressful experience associated with complicated feelings of discomfort and apprehension, which can hinder participants' learning.

- Solutions must come from people's own understanding and analysis and be congruent with their lifestyle and functioning
- Success in satisfying the expressed learning needs and achieving a desired objective is a powerful reinforcement for further learning
- Different adults learn differently, thus a variety of learning styles and modes are needed. (Gelder and Lammerink, 1993b)

The Spiral of Learning

Learning is a continuous process. People learn through tackling problems, experiencing new situations, and obtaining new knowledge. The Spiral of Learning, illustrated in Figure 3, reflects the way in which adults generally learn: through experience and 'reframing' those experiences (Lammerink and Bolt, 2002).

Figure 3: Cycle of learning in real life

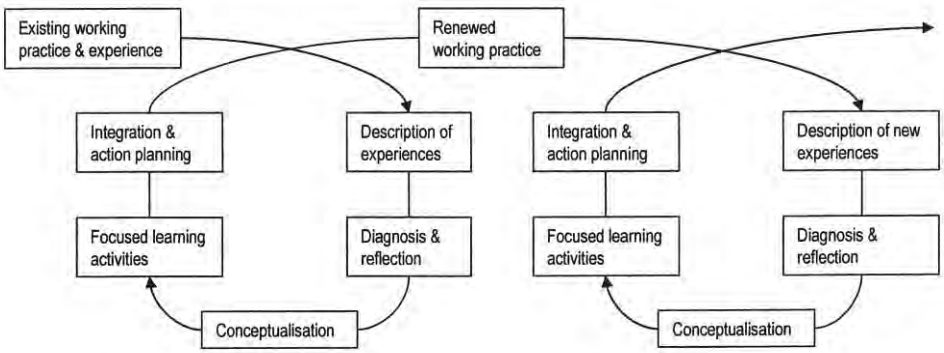


The figure illustrates that problems and possible solutions are identified based on existing experiences and knowledge. Argyris and Schön (1978) call this "Single-loop learning". Trying out a possible solution and analysing its effects give new experience, and more insight into the existing situation. Based on this new knowledge, other solutions can be identified, tried out and pondered upon. In this concept of Experiential Learning, the discovery of knowledge through analysing one's own experiences is seen as the basis of learning. Learning should be structured in such a way that it promotes opportunities for the interchange and analysis of

experiences, systematic diagnosis, and reflection[19] on relevance and pertinency.

Within a particular programming, learning from real life and working experiences means starting with the participants' experiences as opposed to starting with the facilitators' knowledge. The facilitator organises learning experiences through which participants can discover and develop fresh insights. Participants learn from reflection on what they do and how they do it. The actual experience attained during the learning programme needs to give participants tools that they can apply to continue learning in their work and daily life. This may include for example looking at how they co-operated, solved problems, took decisions, handled conflicts, and what can be learned from this. New insights, skills and attitudes are formed by participants through their active participation in dealing with concrete situations and by systematic reflection upon these experiences. The role of the facilitator becomes one that is responsible for creating opportunities for participants to bring out their own experiences and experience new activities that they can draw on and learn from as presented below.

Figure 4: The Spiral of learning: steps in the learning process



The Spiral of Learning can be structured as a stepwise process, which is illustrated in Figure 4 (Lammerink and Bolt, 2002, p. 8). This

19 As we use the word 'reflection' in many instances in this Practitioner Paper, here is a working definition: Reflection is a state of mind, an ongoing part of practice. It is a way of learning from one's own experience to inform practice, broaden perspectives, and challenge blatant and harmful assumptions, social and cultural biases. It is also a way of learning from the experience of others (Bolton 2010).

stepwise process can be used in all kinds of settings. The figure clearly visualises that the **starting point** for the learning process is the existing experience and practice (in daily life and work). Diagnosis of, and reflection on, these experiences enable knowledge to be systematised and potentially conceptualised. Focused learning activities, including analysis and experimentation, enable practitioners to review the relevance of ideas, and then plan to integrate them into real-world activities. This leads to an iterative process of gaining and applying new knowledge and experience of a Spiral of Learning.

The Spiral of Learning follows a process that deliberately leads to what is called 'Double-loop learning' in organizational literature. Argyris and Schön (1978) describe the importance of getting from Single-loop learning to Double-loop learning.[20] For this to happen, they suggest an inquiry-based dialogue that questions the validity of underlying assumptions and beliefs of learners (Cartwright, 2020, p. 70) and they offer various tools. However, they do not attend this transition process at methodological level. From the outset, the Spiral of Learning approach is a process strongly designed for Double-loop learning. However, at the same time, its implementation is participant-driven and based on experiences of participants. Although the content and subject-matter will be different every time, the same general principles apply throughout the process.

Steps in a learning-based setting

The steps in the learning process, described in Figure 4, can be translated into different steps needed in a learning-based setting. These steps are summarised in Table 1 (Lammerink and Bolt, 2002, p. 35). This framework of steps has been used in various learning environments, as will be shown in the different cases. This section discusses the objectives of each step and gives suggestions on how to facilitate each step. There is, of course, a clear bifurcation between the

20 According to Cartwright (2002, p. 68) Single-loop learning involves changing methods and improving efficiency to achieve stated goals (i.e., doing it right). However, Double-loop learning is about changing goals themselves (i.e., doing the right things), which involves questioning the assumptions about that goal, the ways to discover and invent new alternatives, goals, and perceptions, as well as the ways to tackle the problems. The purpose of double-loop learning is transformation of deep-rooted perspectives of the world in which we work and act. In the process, the taken-for-granted assumptions and beliefs of the learners should be identified and come to the surface.

participant experience and the facilitator's role. How the steps are applied, and how tools and techniques will be used will of course vary according to each situation (adapted from Lammerink and Bolt, 2002, pp. 35-38).[21]

Table 1: Steps in a learning-based setting

Steps in learning		**Main characteristics**
1	Orientation	Clarification of the subject and the reasons why improving knowledge and skills in this field is important. The expectations and fears of participants are discussed, and the programme is adapted where possible
2	Generation of real-life experiences	The participants' real-life experiences are related to the subject and form a solid foundation for learning, making learning more practical and useful
3	Diagnosis and reflection on experiences	The systematic comparison, diagnosis and analysis of experiences enable participants to identify patterns, conditions, causes, inter-relations as well as power structures and inequalities Participants reflect on these experiences with a view to identifying the lessons that can be drawn for future application The triple diagnosis (practice, perception, and context) is the core of this part of the process and often allows for critical moments and opportunities for unlearning and relearning

21 A good guide on participatory tools and techniques for Popular Education is in Vargas and Bustillos (1984, 1988). Some examples of games are in Lammerink (2000) and Lammerink and Bolt (2002). Of course, the tools are used for presentation and animation, but more importantly for analysis and evaluation.

Steps in learning		Main characteristics
4	Conceptualisation	Emerging knowledge is systematised and labelled in terms of concepts and hypotheses concerning the nature of the problem, causes, possible solutions and questions that must be dealt with in more detail Emerging categories of issues concerning the key elements, causes and possible solutions are reflected upon and linked with related concepts and theories The facilitator assists the participants to arrive at a clear frame of reference for the following phases of the learning process
5	Focused learning activities	This is the core of learning in terms of developing new knowledge or skills Participants are provided with new information and content material and are actively involved in practical sessions aimed at problem identification, problem analysis and experimenting with solutions
6	Integration and action planning	The main findings from steps 4 and 5 are reviewed for their relevance and feasibility by participants individually, and then adapted for their own (working) situations Each participant prepares a personal, practical, and realistic plan to improve their (working) situation in the light of the lessons learned.

In all these steps, the interchange of experiences, concepts and hypotheses is important.

Step 1 Orientation

The aim of the orientation step is to clarify and agree upon the objectives of a learning setting. It should also illustrate how learning will be structured and organised. Orientation is not complete without

the development of a clear and shared learning perspective on why the theme is relevant and what the purpose is of the learning. It is crucial to allow room for participants to share their expectations and fears regarding the learning. Expectations should cover the entire programme, either by referring to the programme item(s) that will deal with particular expectations, by modifying the programme to include them, or by explaining why they cannot be part of the learning programme. Fears[22] also need to be discussed and, of course, dealt with as well as possible. In this step, participants also agree on (initial) working definitions of concepts that will be used frequently and approve their rules for learning.

Facilitation in Step 1

The conventional approach of simply introducing and explaining the objectives, followed by a brief explanation of session structure, is often all that time allows. However, orientation may also be an opportunity to enable participants to get a clearer idea of what will be dealt with. This can be achieved by presenting participants with a typical case of the subject under study (verbally, on paper, with a video, via socio-drama, if possible, with examples from the field), and/or by defining working definitions of central concepts. The discussion that follows should allow participants to express their views and address why the subject is important and what the purpose is of developing knowledge and skills in this field. This approach has the advantage of ensuring that participants are focused on the key issues and immediately become immersed in the subject area in a thought-provoking manner. In addition, by agreeing on a set of rules for learning, participants are more likely to be engaged from early on.

22 Edgar Schein (2002) observed in an interview of Diana Couto that there are two competing anxieties: 'learning anxiety' (being afraid to try something new for fear it will be too difficult) and 'survival anxiety' (the fear of irrelevance). Potential learners can experience so much hopelessness through survival anxiety that eventually they become open to learn. This is the inherent paradox about learning: anxiety inhibits learning, but it is also necessary for learning to happen. Learning anxiety will always be there, but if the participants agree to learn, the process for unlearning and new learning can be greatly facilitated by good trainers, coaching, group support, safe environment, and positive incentives. Ultimately, people's fear of survival must outweigh their fear of learning.

Step 2 Generation of real-life experiences

The participants' real-life experiences are used as the basis for learning. Participants describe and exchange their individual experiences in this field and/or with this problem: what did each and every one observe / experience? Where, when, and how? Under what conditions (physical, institutional, social)? What consequences did they observe? How do they normally handle such a situation? What did they / others do to solve the problem, and how did it work out?

Facilitation in Step 2

Straightforward questioning by the facilitator is the simplest and one of the most effective approaches that can be used to generate real life experiences. All examples are valued, all key points are listed. The facilitator can stimulate and direct the generation of experiences by:

- Promoting an atmosphere of relative openness and sharing based on mutual respect and commitment
- Asking well-chosen questions, and providing prompts (e.g., slides, drama, holding discussions in the field) that stimulate and focus participants on the subject or problem
- Helping participants express their experiences by asking for examples and clarification of phrasing.

If the facilitator believes that participants are not opening up in plenary, small group discussions are an effective way to encourage participants to share their own experiences and provide examples. At this stage, it is still delicate to address people personally because the atmosphere is still relatively open. Later in the process, direct naming and questioning is possible.

Step 3 Diagnosis and reflection on experiences

Participants need to have a comprehensive understanding of their experiences and existing practices if they are to improve them. In this step, they are encouraged to diagnose and analyse past experiences and practices by comparing them with those of other participants. They are encouraged to look for patterns, biases, conditions, causes and inter-relations. They then express their views on what the situation might look like if problems were overcome, and then compare this improved vision with the emerging picture of actual practices. Critical reflection on the gap between the actual and the desired situation is very valuable and enables participants to get a

quick first impression of how big the difference is and what needs to be done to improve the situation.

In Popular Education, we often talk of the threefold/triple diagnosis: diagnosis of praxis, diagnosis of perception, and diagnosis of the context[23] (Núñez, 1985). A so-called electric shock or thunderbolt – produced during this diagnosis – between what people would be doing ideally and what they are doing in practice is often a cause of confusion, subsequent unlearning[24], and soon afterwards quick learning. After the 'aha' or 'penny drop' moments, the process of learning and understanding often accelerates. It is as though a threshold has been crossed, which then often produces a transformational shift to a way of thinking that previously seemed inaccessible and initially troublesome (Meyer and Land, 2005).[25]

This step is often marked by critical moments of irreversible conceptual transformation in the educational experiences of learners. Of course, regular moments of examination of the effectiveness of the process to maximise everyone's learning should be part of this and other steps.

Facilitation in Step 3

Diagnosis and reflection are best achieved by combining structured diagnosis of experiences and identification of the desired situation with logical thinking. A simple checklist may be used to facilitate the analysis. The facilitator should stimulate the exchange of views and the search for causes, relations, and consequences, for example by juxtaposing differing experiences or asking thought provoking questions. Generating the 'electric shock' for unlearning often requires meticulous facilitation, and it should not be provoked. This is also a matter of ethics. The Socratic method of dialogue can be used to stimulate critical thinking and draw out ideas and underlying

---

23 Context is understood as a set of circumstances that surround a situation and without which it cannot be properly understood. For example, the historical and socio-political context.

24 Shrivastava (1989) says about unlearning: 'It has been observed time and again that trainees need an opportunity to first unlearn and then relearn. These two processes can be very threatening to a person' (p. 17).

25 Authors (Meyer and Land, 2005) describe 'threshold concepts' as being like conceptual gateways or portals that lead to previously inaccessible and initially troublesome ways of thinking about something (…) These twinned sets of ideas may define critical moments of irreversible conceptual transformation in the educational experiences of learners and their teachers (p. 373).

presuppositions. The diagnosis may be complemented by a brainstorm session on the identification of possible solutions.

Step 4 Conceptualisation and formulation of learning tasks

The emerging knowledge and experience concerning the problem being analysed needs to be systematised and labelled in terms of its causes, effects, relations between different cases and possible solutions (Lammerink and de Zeeuw, 1994). This will lead to a set of categorised concepts or hypotheses. These concepts are reflected on and linked with related concepts and theories. Conclusions are drawn regarding the different concepts and their significance, and priorities are set. This gives a better idea of the questions and issues which need to be tackled and provides a good basis for defining subject areas and issues that need further analysis, and what skills may be required. Participants arrive at a clear 'frame of reference' for the following phases of the learning process.

Facilitation in Step 4

In working groups, participants should be given different categories into which they can sort their accumulated information on experiences and problems. The diagnosis can then be presented back in plenary, followed by a discussion during which participants draw conclusions from the diagnosis. The facilitator should relate this to theory and established principles and concepts and assist the participants to draw conclusions from the diagnosis, relate them to theory, and arrive as a group at a clear frame of reference[26] for the following phases of the learning process.

Step 5 Focused learning activities

This is the core of the learning experience. Participants are presented with additional information and content materials and are encouraged to dig deeper into the subject. They can do this by focusing on specific aspects of the subject, analysing sub-problems or cause-effect relationships, practising specific skills, and experimenting with solutions. They are actively involved in a problem-solving process in which they critically review selected texts,

26 Frame of reference: a set of ideas, conditions, or assumptions that determine how something will be approached, perceived, or understood. See: Merriam-Webster.com Dictionary, Merriam-Webster, https://www.merriam-webster.com/dictionary/frame%20of%20reference. Accessed 2 November 2021.

analyse case studies, do field work, analyse and interpret available records, conduct and evaluate small experiments, or take part in any other activity that may lead to the development of relevant insights and skills. Participants should be encouraged to address both technical and behavioural aspects. By the end of this step, participants should have gained sufficient new information to be able to implement changes and experiment with improving real life work practices.

Facilitation in Step 5

The facilitator should to the extent possible, promote independent questioning and thinking by participants, by encouraging disciplined argument, rejecting easy answers, confronting participants with differing views, and by repeating activities under different conditions. Participants should be presented with appropriate criteria that can be used to evaluate all learning activities, enabling them to assess the relative value of the different techniques used.

Step 6 Integration and Action Planning

Participants need to review the main findings of the learning experience for their relevance and feasibility and reflect on how they can be of value to their own specific situation. They then need to plan how to implement their ideas in their working situation. Each participant prepares her/himself to develop new working practices in their own situation. Peer-to-peer coaching can be used to get a better idea of barriers and drivers. Everyone makes a practical and realistic plan to improve her/his working situation so that it considers the lessons learned.

Facilitation in Step 6

The process of planning activities to support improved change can be greatly aided by providing participants with a simple structure for planning activities and ensuring that they prepare realistic action plans. Here the facilitator invites the participants again into a 'reflexive practice', where participants critically reflect together on what practices are most appropriate for each person and their socio-political and institutional context[27]. The diagnosis on context done in

27 Reflexive practice consists of questioning one's attitudes, thoughts, processes, values, assumptions, prejudices, and habitual actions, to strive to understand complex roles in relation to others. Reflective practice recognizes that participants are active in shaping their environment. Participants critically

step 3 is incorporated into this reflection. Force Field Analysis can also be applied in this step - in addition to peer-to-peer coaching[28] in which participants in couples reflect and help each other to see what changes are necessary in the work or wider context. The action plans should consider the potential and limitations of the individual's role and responsibilities as well as factors within the work context that may support or hamper their implementation (drivers and barriers). This includes identifying follow-up requirements such as additional learning needs, necessary support and coaching in the home situation and supportive and facilitative networks.

As not everyone is fortunate in working in an environment where positive change and constructive challenge are welcomed, sometimes a tactic of experimenting *'under the radar'* is promoted to first obtain some positive results that can be shown low profile to colleagues.[29]

The role of the facilitator

As can be seen in the different steps above, the role of the trainer is more of a facilitator. As such, her/his primary responsibility is to provide the participants with an effective and appropriate learning environment, and to facilitate an active process by which participants determine and address their individual learning needs. Thus, the process requires guidance, support, and encouragement.

Box 2: Appropriate environment for learning

Spiral of Learning is best facilitated in an atmosphere which:

- Promotes people's discovery of personal meaning
- Recognizes people's right to make mistakes
- Accepts differences

consider circumstances and relationships rather than simply reacting to them. They review and revise the ethical ways of being and relating in the world (Bolton 2010).

28 Peer coaching is a confidential process through which two or more colleagues work together to reflect on current practices; expand, refine, and build new skills; share ideas; teach one another; conduct classroom research; or solve problems in the workplace (Robbins 1991).

29 Schein (2002) notes that the autoimmune system of organisations rejects innovations that make people anxious and envious. This should be foreseen and avoided.

- Encourages people to be active
- Tolerates ambiguity
- Enhances trust in self and peers
- Encourages openness, and mutual respect
- Fosters a cooperative process
- Reassures peer ship among learners
- Promotes reflexivity. (Gelder and Lammerink, 1993b)

The initial dependency relationship between the facilitator and the participants involved in the learning process should become increasingly horizontal and cooperative. Precisely because of this, the participants can also use and increase all their social skills. For this, as a facilitator, it is necessary to assume new roles that can best be defined as mediator, catalyst, reconciler, coach, co-worker, counsellor and sometimes devil's advocate.

The facilitator invites those involved in the learning process to dialogue and analysis and tries to provoke different reactions. He (or she) is a co-worker in the triple diagnosis and plays the role of counsellor, who contributes new ideas, seeks solutions, and introduces unknown knowledge in the process. But it is also the facilitator who continually clarifies the learning process. It is a bilateral process aimed at raising awareness among all those involved. It is an emancipating and liberating awareness in which two parties are involved, that is, both learners and facilitators.

This type of process can be accomplished by facilitators who:

- Encourage the active involvement of all learners
- Are being honest
- Promote an atmosphere of cooperation
- Adapt learning activities and exercises to the specific needs of a particular group
- Show respect by answering sensitive questions
- Provide linkages to other components of learning
- Encourage learners to constantly relate learning experiences to their real-life situation

- Direct participants towards materials and human resources they may require
- If suitable invoke humour in learning
- Make themselves available as advisors, not as an expert who 'delivers' answers
- Are able and willing to learn from the participants
- Impart sometimes a powerful talk or powerful message ('lecturette')
- At times embrace conflict or friction to move a group forward ('productive discomfort')
- Are, where appropriate, the devil's advocate.

A very important element in the learning process is the regular facilitation of reflection on both the **content** and the **process**. This places high demands on the facilitator, who must be attentive and able to summarize experiences, discover common themes and help draw conclusions on real learning experiences, involving participants in reflecting on 'learning how to learn'.[30] He/she should also be able to let participants express how they felt about the process they were going through. Such reflection can be structured in a guided discussion, which uses a sequence of so-called objective, reflective, interpretative, and decisional questions (Little, 2019).

With a good facilitating power, the discourse between the facilitator and the participants will be smoothed out or even 'levelled' in a relationship based on mutual respect and trust. This of course strongly depends on the attitude and awareness of the facilitator: being honest, showing respect by answering sensitive questions, being humble and listening, being able and willing to learn from the participants and developing critical consciousness of the existing

30 Again, in organisational learning literature, this is sometimes referred to as Triple-loop learning. According to Romme and van Witteloostuijn (1999, p. 440):

> Triple-loop learning is about increasing the fullness and deepness of learning about the diversity of issues and dilemmas faced (…) Triple loop learning manifests itself in the form of 'collective mindfulness': members discover how they and their predecessors have facilitated or inhibited learning and produce new structures and strategies for learning.

power relationship.[31] This may ultimately reverse the power dominance between the facilitator and the participants and empower the participants to take the lead in their learning process. Of course, collective action and reflection over time reinforces this learning.

Similarly, these types of reversals may also occur in a future relationship between researchers and members of the communities. In that case, the researcher must also develop a relationship of trust, mutual respect and learning with and from the different voices of the community. This can happen when the focus is not so much on collecting data, but rather on initiating a participatory process that allows the community to lead the way in producing knowledge and action for change for its own good. As Gaventa and Cornwall (2006) put it: 'By acting on reality and analysis of that learning, awareness of the nature of problems and sources of oppression can also change' (p. 127).[32]

Methods and techniques for learning

Different working methods and techniques for learning are implemented during the learning process like workshops of joint reflection, study circles for study of specific themes, and action teams in fieldwork. Lecturing is kept to a bare minimum.

Box 3: Methods and techniques used in Spiral of Learning

Methods for learning (according to the participants' situation, needs and characteristics)

Workshop: Intended as joint reflection on part of the learning process or fieldwork, while creating one or more 'end products'

31 This is of course more complex than stated here. Foucault (1975), in his influential work shows using prison as an example how power shapes our life and the institutions around us. He claims that power (control over people) does not necessarily reside in individuals, but rather resides in the position they occupy in institutions and society and in the ways in which discourse is made available to these positions.

32 In their article, Gaventa and Cornwall (2006) elaborate the relation between knowledge, participation, and power. They conclude that the contribution of Participatory Research and Learning may be to challenge and expand the boundaries of the possible, through creating more democratic forms of knowledge, through action and mobilisation of groups of people on their own affairs in a way that involves their own critical reflection and learning.

through joint work of participants. Requires active and creative input from all. It becomes an active, change-oriented knowledge process, in which individual experiences are made common; a process in which theory and practice, action and reflection are related. Role of Facilitator: catalyst and guider of the learning process. Principle: Return on learning by 'seeing and doing' is much greater than acquiring knowledge solely by adopting ideas.

Study Circle: Specific themes can be studied in the study circle. The learning process is guided by a coordinator (sometimes a participant), who organizes lectures, or didactic materials to deepen knowledge about specific topics.

Action research teams: Here, theory is directly related to practice. It serves to guide groups in the implementation of projects. The training activities can consist of: draw up work programme; identify problems to be solved; search for alternative solutions; provide necessary knowledge and skills to put alternatives into operation; continuous analysis of unforeseen difficulties encountered by participants along the way; input of elements from comparable experiences; evaluate and/or disseminate results; design didactic material. Role of Facilitator: respond flexibly to what develops in practice and structure the learning process on that basis.

Techniques for learning

All kinds of games, simulations, socio dramas, group discussions, group meetings, brainstorming sessions, flip charts, schemes, matrices, diagrams, presentation techniques and models. Techniques are aiming at communication, analysis, and evaluation (Lammerink, 1995).

Ethical challenges in learning and participatory research

In all steps of the learning process, as explained above, the facilitator should be conscious of ethical issues of his/her role, especially those related to power in the learning process. In different paragraphs I have already acknowledged and addressed, to some extent, this issue of power. However, the facilitator of the learning process should also be aware of other layers and possibilities that may influence unique ethical challenges in the participatory research practices in which the participants might get involved. These should be nuanced and are

certainly not only related to questions about the responsibility, respect, and rigour of those research practices.

In fact, facilitators of participatory research processes cannot know what is going on as local people share their experiences. It has to do with the place-based nature of the work – practitioners of PAR enter into long and ongoing stories held by local people, become part of their stories for some time and then leave. Such well-intended interventions can be very disruptive in ways the facilitator of participatory processes cannot know. Listening and working from local people's experience is essential but analysing the differences between those experiences may include for example hidden constraints related to power and/or abuse. How do facilitators sense these? How do facilitators work delicately in this space and upset power imbalances? Is a list of guiding principles here enough?

In this context I like to invite participants to rethink ethics as forms of understanding, which they create about themselves and the practices by which they transform their mode of being, which is a continuing process (Foucault, 1975).

So, when appropriate during learning, as a facilitator I will encourage exploratory thinking about approaches to reduce potentially complex ethical challenges, especially when participatory research approaches are applied in culturally diverse contexts and/or with marginalised groups.

Sometimes during the learning, I use a game which brings community experiences of marginality and vulnerability to the surface. The game makes it possible for participants to sense in their own body how power inequalities can feel (see Box 4).

The dialogue, which will allow these experiences on the personal and group level during and after the game, will provide many insights and will alert practitioners to potential concerns that can be developed into considerations for facilitators of participatory processes and participatory research. If an adapted guideline is worked out after such an experience it becomes more powerful. Furthermore, if such a guideline is constantly evaluated and adapted while in action in participatory processes, it can be a useful instrument. Such game experiences make practitioners more aware of these underlying challenges and will ultimately change their mode of being.

Box 4: The Purpose: game to experience power play

The game 'Purpose' can be played with groups of 12 to 30 persons. Ample time is needed for reflecting on what the participants experienced during the game.

Goals/objectives

- To understand and evaluate the importance of community participation
- To enhance awareness, through experience, of conflicting purposes and interests, and the impact they have on the powerless
- To reflect on the role of the outsider in these kinds of conflict situations.

Materials

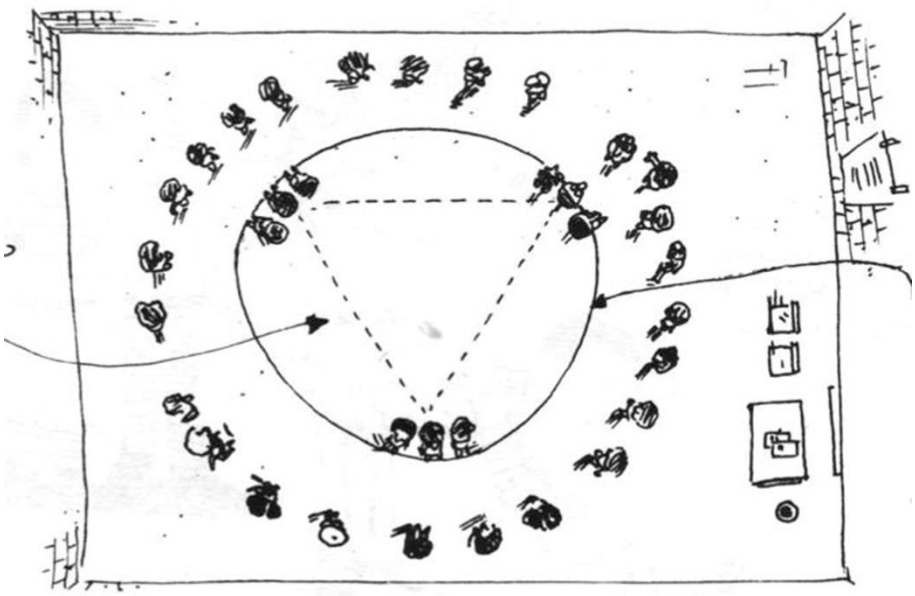
Four blindfolds, pieces of rope to tie hands and feet of several persons, a longer thick rope of about 10 metres. Small objects, each representing a common purpose.

Development

Introduce the game 'Objective'. A minimum of nine to twelve persons are asked to volunteer and these are divided into three or preferably four groups of three to four people each.

In each group, one person is blindfolded, the hands of another person are tied, and the feet of a third person tied. Eventually, a fourth person can be left without any tie. Groups will stand at three or four points on a circle, around which there is a rope connecting the hand-tied persons. Observers stand around the circle. Then four 'objects', each representing a common purpose, are placed outside the circle. The assignment is for each group to reach the goal closest to them.

No talking is allowed in the first round of about five minutes. After a group has reached the object, a second round is played, with a chance to talk. In the third round, a few observers can help as facilitators. There may be a fourth round, with a conscious participatory intervention.



Subsequent critical reflection and discussion in the plenary can follow several steps:

- How each person felt during each round: blind, hands tied, feet tied, not tied at all? What did each person represent? Who was left out? What did each person and group do during each round? What were the different attitudes and roles and what resemblance to reality?
- What is the meaning of the different rounds and symbols used (the thick rope, each object)? What is the relation with reality?

- How did the observers intervene? Evaluate their intervention in relation to people's participation? What differences were there between the rounds?

Summarise jointly the key lessons of the experience: e.g., regarding communities, different interests, different capacities, ways of intervention, the importance of communication. Eventually a code of conduct can be elaborated. (Lammerink, 2000)

Of course, it is useful to have studied ethical principles and codes of conduct in learning and PAR beforehand. There already exists a multitude of information sources, and several guidelines for participatory research, community engagement and/or anthropological research.[33] However, to change modes of behavior of participants through lived experiences are crucial.

Many of the ethical challenges in PAR are common in social research, such as informed consent, anonymity, confidentiality, ownership of data and findings of research. Nevertheless, the dynamic, complex, value-based nature of PAR gives them a more particular importance. Furthermore, there are specific ethical issues related to the work ethic of partnerships, cooperation and power, the blurring of boundaries between partners, community rights, community conflict and democratic participation, ownership and dissemination of findings, and anonymity and confidentiality (Banks, 2013, pp. 267-268).

Most current institutional codes of ethics, guidelines, and ethical review procedures, such as the 'Statements of the American Anthropological Association'[34] are not suitable for participatory research. They mostly apply normative and principle-based

33 Example of such a guideline: *National Co-ordinating Centre for Public Engagement and Centre for Social Justice and Community Action*, Durham University (2012) *Community-based participatory research – A guide to ethical principles and practices*. Durham, United Kingdom.
Articles such as: Cornwall and Fleming (1995), Banks et al., (2013), Rambaldi et al., (2006), and Heard (2022).

34 Statements and their explanations comprise seven fields: Do No Harm; Be Open and Honest Regarding Your Work; Obtain Informed Consent and Necessary Permissions; Weigh Competing Ethical Obligations Due Collaborators and Affected Parties; Make Your Results Accessible; Protect and Preserve Your Records; Maintain Respectful and Ethical Professional Relationships.

approaches to ethics. In PAR, however, the character and relational approaches to ethics are also very important, such as developing reflexivity, competition and complementarity, location of social knowledge, exploring complexity and in whose interests. Longer-term empowerment processes require radical institutional and personal changes of behavior for PAR to have a significant impact on development practice. Ethical challenges can point the way to such changes.

Structuring the design process of learning

Structuring the design process of a learning programme asks for engaging in a dialectic[35] and cyclical planning process, where the different steps and activities are carefully designed, reviewed, and analysed afterwards. On the one hand, this must be done to define learning objectives, corresponding learning contents, as well as methods and means to be used to reach the programme goals that are set. On the other hand, objectives, contents, methods, and means should be carefully selected and be attuned to each other, according to the learning needs of the specific group of participants and in line with available resources.

That is why during the design of a learning event in line with the Spiral of Learning, I will distinguish seven different constituents:

Box 5: Designing Constituents of a Learning Programme

Participants: People for whom the learning event is intended with regard to their specific background, selected on the basis of a pre-diagnosis of their experiences and of their actual situation in terms of the general theme of the learning event. (Who and Who for?).

Timespan and Place of programme: The number of days and place where the programme will be held. (Where and when?)

General theme: Learning subject matter or content to focus on, which will be the object of analysis and reflection within the complex reality of the participants (What?).

35 Dialectic thinking actively aims to shift categories of analysis and create more inclusive categories, in response to the perspectives of others (Basseches, 2005).

Common thread or thematic axis: The theme will allow the learning event to address with greater scope the thematic content in a logical and consistent manner considering the particularity of the group and the circumstances of the reality. This will influence the appropriate organisation of the programme. (How at general level?).

General objective: The general objective indicates the overall learning target aimed at through the appropriate organisation of the event, be it one session, a series of sessions, or a complete programme. (Why?).

Specific topics: These are the constituent parts of the general theme. Selection of these topics should account for particularity of the participants like their previous experience and the context in which the event is taking place. (What?).

Specific objectives: Specific learning targets aimed at, immediately linked to certain aspects of the topics concerned at different stages in the learning process. Together they build the overall learning objective. (Why?).

Methods, techniques, and procedure: A description of how the topic will be handled and how the tools will be applied to obtain the objectives set in line with the specific topics. (How? and With What?)

All these aspects should be neatly attuned one to another, in an internally logical and interactive way. (Lammerink, 2001)

In fact, a learning event must be conceived in such a way that its design is in line with the learning process it is meant to develop and to stimulate. That is to say: starting from participants' own experience and practice the learning should develop their ability to analyse, to diagnose and to qualify information and knowledge in a judicious way to enlarge their problem-solving capacity, enabling them to develop concrete activities to bring about changes in their own or common practices. So, there should be a clear internal relationship between topics, objectives, methods, techniques, and procedures, as well as a logical order in the specific topics. Structuring the design process in a dialectical and interactive way enhances its internal coherence.

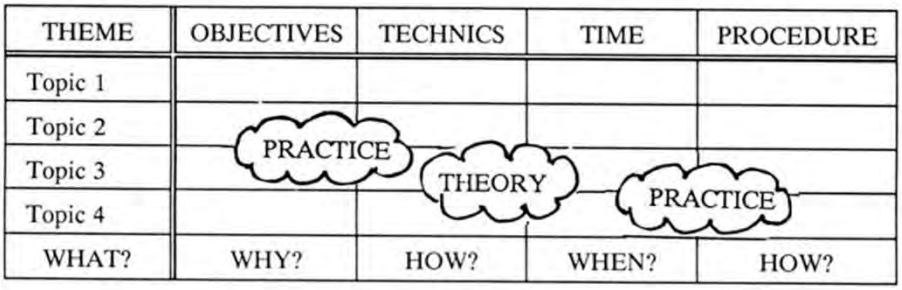
See Table 2, which illustrates the various elements previously outlined in the Spiral of Learning.

Table 2: Dialectical process of designing a learning event

General Theme:

General Objectives:

Participants:



(Núñez, 1985, pp. 94-97; Lammerink and Mazariegos, 1988, pp. 24-25; ADESO, 1997a, pp. 75-79)

Going down from top to bottom in the model above, a dialectical and logical order is suggested: The session should be designed in such a way that it starts from participants' actual practices and experiences. Next, it should abstract from participants' concrete, individual situation to develop a general understanding and deeper insight on a more theoretical and abstract level, also clarifying the complexity of relations between topics being dealt with in the learning event. Finally, participants should be stimulated to apply their deeper understandings on a theoretical base in order to bring about change in their own particular or common and concrete situation in a direction they think will fit.

Box 6: Checklist for internal coherence of learning design

Can the general learning theme and the resulting specific learning objectives be achieved within the set time frame? Do they fit in the overall programme?

How about the logic and sequence of the selected topics and objectives (vertical dialectical logic)?

Is there a logical coherence between the topics, the objectives and the tools and techniques that are proposed? And how about the link between each objective, topic, and the intended tools (horizontal methodological logic)?

Is the way in which the specific topics are extracted from the central theme coherent?

Do the underlying causes of the problems dealt with by learning become explicitly exposed? Are alternative solutions being tested or analysed for their feasibility? (Lammerink, 2001)

Applications of the Spiral of Learning Approach

In this section, I present more background on how we started working with the Spiral of Learning approach for the professional development of social foresters and then, in the second part, I present two applications of the Spiral of Learning approach in different development programs. One case describes a three-week learning experience called Enhancing Local Initiatives (ELI), which was developed for forestry professionals working in social forestry. The second example, Participatory Experiences for Social Development focuses on the learning experiences of researchers in ADESO in northern Nicaragua.

Background

From 1989 to 1995 we, a forester, and a social scientist, have been working with the Spiral of Learning approach in social forestry, exerting it for the professional development of those using participatory approaches and Action Research for sustainable development. During these years, we have jointly developed learning programmes in which local knowledge and skills became the building blocks for development initiatives.

The first opportunity we had to implement the Spiral of Learning approach was when we were asked to develop a nine-month postgraduate course, Forestry for Rural Development (FRD), together with the staff at ITC, the then International Institute for Geo-information Science and Earth Observation in the Netherlands. The

course ran from 1990 to 1997. This cooperative undertaking resulted in major changes at the Institute in educational approach, content, and the assumptions about students' knowledge. Because the FRD course focused on community involvement in forestry, we also promoted participatory and Action Research approaches.

At the end of the first year, the unprecedented changes in attitude of the course participants had not gone unnoticed. Indeed, after each cycle we invited the participants to present a lively account of their learnings to the professors, the rector, the educational coordinator of ITC and students from other degree courses.

Box 7: Course diary notes: Side effect of the Spiral of Learning approach - less fear and anxiety to communicate.

Most of our participants, from Asia and Latin America, had to communicate in English as a second language. However, they lacked the readiness, vocabulary, and practice to speak in a language that was not their native language. Often this led to a form of shyness or embarrassment, characterized by fear, distress or anxiety when communicating with people (peers or facilitators), a type of communication apprehension.

However, the tasks we had them perform as part of the Spiral of Learning helped them overcome this shyness. They carried out individual and small group assignments, rotation of tasks, discussions, all kinds of visual presentations in verbal, theater, games, skits, loud group reading of small handouts in English, lecturettes, summaries, and space for humor, which all took them out of their comfort zone. Without noticing, they practiced speaking, listening, reading, and writing and after a few weeks the shyness almost disappeared, and the creativity was unleashed.

As the participants got over their initial *shyness*, they became much more eloquent and creative, and year after year 'returned' their learnings and new knowledge gained at these occasions in a creative manner, using radio interviews, theatre, or games.

This 'happening' was always a little disturbing for some professors who were used to their traditional top-down approach, and who had 'critical' comments. However, the management of the institute

recognised and acknowledged the importance of the Spiral Learning approach and its innovativeness in international education (Gelder and Lammerink, 1993a).

Box 8: Some ideas on creative presentation (example of handout)

The purpose of presenting the results of the small group work to members of other subgroups is that others really know and understand what the findings are in their subgroup. This grouping and sharing of findings enrich the discussion if the presentations of the subgroup results are lively, engaging, focused on key findings, and easy to understand. Therefore, your presentation should be such that others get a good sense ("I understand what you mean") of your view of the practice to compare with their own.

Here are some examples of expressive techniques your group can use. It is up to you to choose the most suitable, or even better: create your own presentation technique.

Choose:

- a graphic form, such as a mural, posters, comics, and so on
- a physical presentation such as mime, role plays, songs, puppets, and theatre forms
- a written form, such as a chronicle, different kinds of poems, stories, or other narrations
- an auditory form of presentation, such as an interview, narrator, radio report or commentary, and other types of broadcasts.

You can really use all kinds of creative presentation formats you can think of as long as the presentation format doesn't interfere with the content itself (Gelder and Lammerink, 1993b).

In subsequent years, we developed another multi-disciplinary course with ITC staff, the Natural Resource Management (NRM) Module, which marked the start of the MSc degree in Natural Resources Management, which ran for 26 years from 1993 to 2019.[36] Groenendijk

36 A detailed description of this course can be found in Groenendijk (2009b)

(2009a) confirms that 'although there were many curriculum changes, the NRM Module survived them all and adapted very well to new insights and realities' (p. 3). It continued to bring together the experiences of the students, based on which common and solid framework was developed for their further MSc and postgraduate study trajectory. The learning approach, management and basic structure of the module remained unchanged during the years that the module was taught.

The examples of the approach I present in the next part are both shorter learning experiences. One case describes a three-week learning programme called Enhancing Local Initiatives (ELI), which was developed for forestry extension workers and other forestry professionals working in social forestry.

The second example, Participatory Experiences for Social Development focuses on the learning experiences of researchers in the regional research programme for development (ADESO) in northern Nicaragua. This latter programme consisted of three interrelated learning cycles, with periods of praxis in between in which the researchers started PAR projects in the villages and local communities of Las Segovias. Using principles from the Spiral of Learning, the facilitation team guided the participants in a gradual process towards the design of an approach to participatory research tuned to the conditions of the region.

Participatory tools for enhancing local initiatives

The Enhancing Local Initiatives (ELI) course was a six-week programme we at FMD developed in 1994 together with a Dutch training organisation, MDF Training and Consultancy. It was held several times in the Netherlands and was attended by foresters from some 18 countries worldwide. What follows is a description of how participants developed a new social forestry approach that encompasses local knowledge, based on the contradictions in their own working practice (Lammerink and Prinsen, 1994, p. 29-33).

Our purpose was to develop and coach professionals, who would understand the importance of trees outside the forest, appreciate the Indigenous knowledge of farmers, incorporate local knowledge in existing work practices, develop and implement a participatory approach within their specific circumstances, adapt the current

working situation to new conditions, and strengthen relevant existing local, regional and or national institutions.

The context

Trees inside and outside forests play a vital role in the lives of many people; they contribute to economic development and environmental stability. Furthermore, trees and forests play a crucial role in the fight against global climate change. They help to reduce the impacts of extreme weather events. They lessen the severity of flooding, storm impacts, heatwaves, and drought, and provide natural resources that aid recovery. Forests, trees outside the forest, and forest soils are dynamic sinks of carbon. Local people are essential in securing carbon storage, water regulation and biodiversity conservation. The farmers that live in and around forests are well placed to carry out climate change mitigation and adaptation strategies and are often doing this on their own behalf. The management of the scattered and on-farm trees is equally crucial. In recent years, governments and civil society have increasingly come to recognize the need for local populations to participate in the sustainable management of forests and trees. However, we at FMD argued that it should be the other way around: *the outsiders should enhance sustainable practices of forest and tree management of local people*.[37]

Social forestry schemes should support farmers' initiatives to manage trees on farms and forests sustainably. Social forestry programmes can also help them to deliver on economic, social, and environmental goals, including mitigation and adaptation, as recent research shows (RECOFTC, 2020). Thus, there is still a demand for a forestry approach that can contribute to the process of climate change mitigation and sustainable development.[38] In our view, forestry

37 To be successful, rural development must be carried out by rural people rather than for them (Leach and Mearns, 1988 p. 23). To this end, according to Chambers (1997), personal, professional, and institutional changes are essential for the poor to gain greater recognition. He classified these changes for a farmer-first mood as 'reversals' (Chambers et al 1989, p. 182).

38 Sustainable development is defined as development that is equitable and meets the needs of present generations without compromising the needs of coming generations (Report of the World Commission on Environment and Development, 1987).

extension services[39] should contribute to a participatory, decentralised, and self-sustaining process of rural development.

At FMD, we saw the strengthening of local farmers' initiatives (men and women) not just as a necessity from a socio-political point of view, but also as a two-pronged operational strategy, that responds to a very pragmatic need. First, farmers know their environment through experience and continuous experimentation. Therefore, they are an important source of locally proven knowledge. Second, given the magnitude of the environmental and climate mitigation challenges, there is only hope if people themselves, rather than policy makers or policy implementers, are recognized as having primary responsibility for managing their and their children's natural resources.

To effectively improve existing local initiatives, we could see that forestry extension professionals would need to change their attitudes and need new skills for their job. They must correctly identify local initiatives and help local groups of farmers to interchange their knowledge and experiments. They should help develop long-term approaches. Participatory methods are excellent for clarifying local views on problems and solutions. At the same time, these methods facilitate the preparation, in close collaboration with farmers, of simple action plans that can be implemented right away.

A central concept in our methodology for the ELI course was that participants recognised the value of existing knowledge among the rural population. Once this recognition was established, participants were assisted to develop their own participatory approach to incorporate this local knowledge into their work practice. In fact, we, the facilitators, used the same principles during the learning process with the participants that they would later use in the field.

Box 9: Summary of an interview from Dirk Jan Haitsma with Marc Lammerink

Interview 1, December 5, 2020 / Estoril

This Practitioner Paper addresses the issue of the neutrality of learning concepts. Marc sees learning as a spiral in which the

39 Extension is a process of working with rural people (farmers and their families) to improve their livelihoods. Forestry extension has on-farm trees and shrubs as their major area of concern...

student exposes his / her experiences to critical investigation, views these experiences from multiple perspectives and thus comes to a new approach, which is put into practice and experimented with before implementing at larger scale. The cycle can then start again. This seems very similar to such concepts as 'Discovery Learning', 'Action Learning' or 'Experiential Learning'.

However, Marc adds an important ingredient to his Spiral of Learning concept, in the examples presented, namely awareness of the value of knowledge and experiences of the people (farmers) with which participants will work. And thus, awareness of one's own prejudices and core values regarding this knowledge and experiences. This means that power differences between local people and researchers become visible. This ultimately leads to empowerment of local people and to empowerment of the researchers within the context of the organisations from which they work. You could therefore formulate the most important starting point and goal as equality and the insight that this is not self-evident but must be acquired, whereby cultural patterns change[40] (cf. with ideas of Lewin (1946): if you want to know how things really are, just try to change them[41]).

This Practitioner Paper therefore explicitly addresses the theme of 'power' in relation to learning processes: power between 'teacher' and 'student'. It also answers the question: How do you build a learning and development programme that is based on horizontal communication and reflects equality rather than hierarchy. In other words, how can the communication between the participants and between participants and facilitators, (and later between grassroots and external professionals), become non- or less hierarchical, where everyone's voice has equal value? Critical reflection or diagnosis plays an important role in raising

40 This is what Fook calls critical reflection, which promotes social change from the individual level. It provides a better understanding of how (socially dominant) assumptions can be socially limiting and stand in the way of new ideas and more empowering practices (Fook and Gardner 2007). Fook argues that: Once people realize the hidden power of the ideas they have inadvertently absorbed from their social contexts, they are free to make decisions on their own terms (Fronek 2012).

41 The exact quote of Lewin is: "If you want truly understand something, try to change it" accredited by Tolman et al (1996)

professionals' awareness of the power and usefulness of peoples' knowledge and experiences. Ultimately, this leads to changes in relationships and transfer of authority.

There was no standardised model of a participatory approach in which the participants were taught. In the learning methodology, facilitators assisted participants who describe and then diagnose their own experiences. As a picture emerged of what was being done and what participants felt should be done, additional knowledge and skills were introduced to bridge the gap. Only from this diagnosis could a fruitful introduction of new concepts and tools be expected. Practising these new concepts and tools was essential for the participants to develop the self-confidence needed to translate newly acquired concepts into an effective personal action plan. Below we describe the five phases of the Spiral of Learning for the ELI course (Lammerink and Prinsen, 1994).

Describing achievements and difficulties

In the first phase of the course participants described their own practices, listing their achievements and difficulties, and the limitations and opportunities they encountered. According to the participants, most of their achievements were related to the varying, but limited awareness among the population about the importance of trees for generating additional income. It was seen as an achievement that, in recent years, social forestry professionals had succeeded in increasingly involving governments and NGOs in activities related to social forestry. Social forestry broadly refers to any situation where local people are closely involved in forestry and tree-related activities.

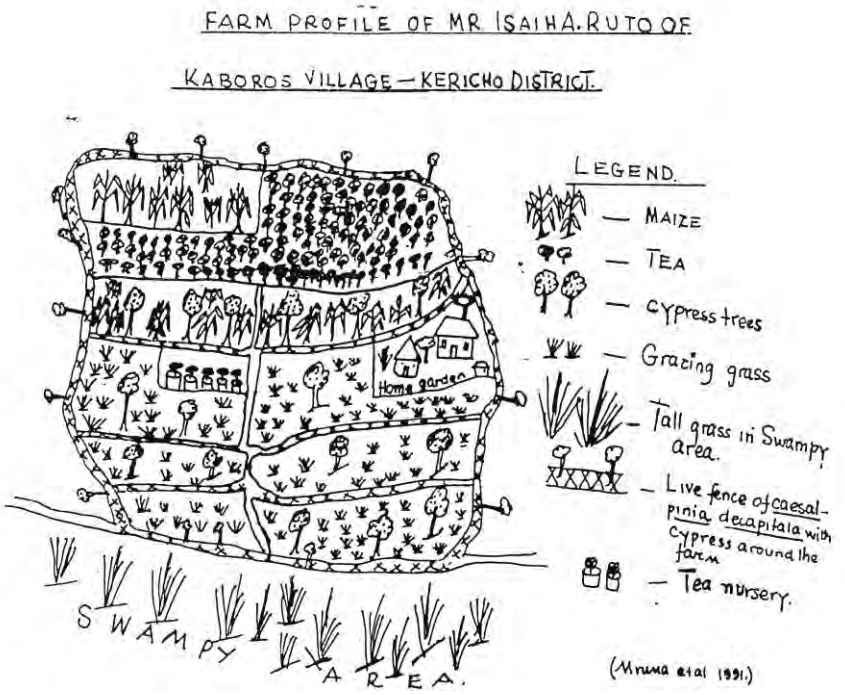
In terms of scope, the difficulties encountered by the participants can be divided into two categories. First there were legal (ownership and tenure), economic (low incentives) and institutional (policy, limited staff) restraints. In general, it would be too ambitious to consider an extension worker in the position to directly influence these forces. Second the participants attributed many of their difficulties to the "people's ignorance and cultural beliefs" or their "lack of technical know-how". Farmers were quite reluctant to attend the forestry extension activities: the opinion was that major efforts had to be made to 'convince farmers to plant trees' and the fewer financial and legal incentives an extensionist could mobilise, the less receptive the farmers were.

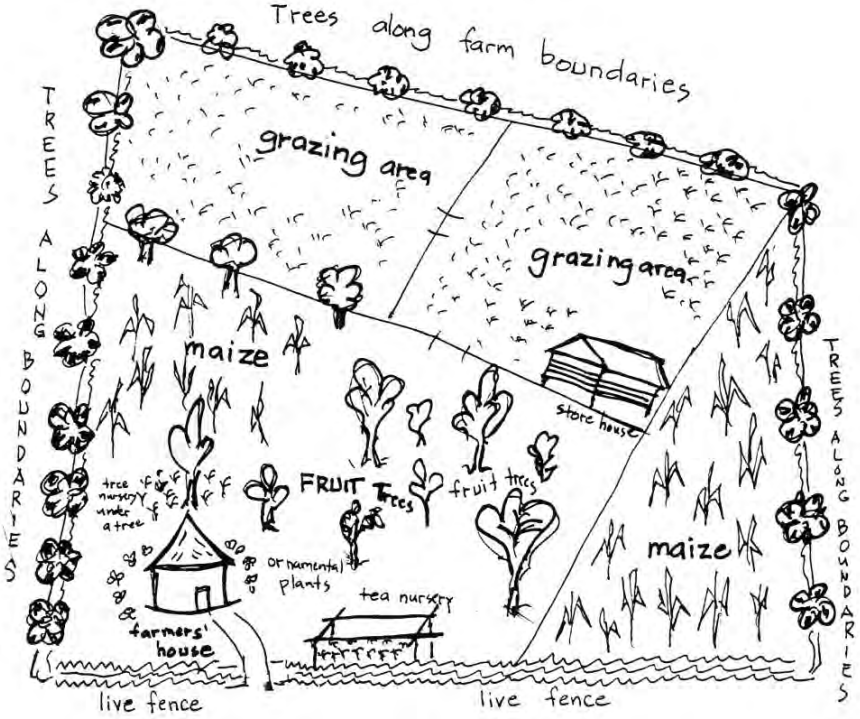
To foster a lively exchange among the participants on everyone's current approaches, task groups worked together to prepare a community forestry project in a fictitious district called Olvana. By performing together, the participants not only shared useful experience, but also discovered the bottlenecks that everyone recognised. The result was a project proposal based on what was considered the commonly shared state-of-the-art at the beginning of the learning event.

Diagnosis and reflection: Confusion

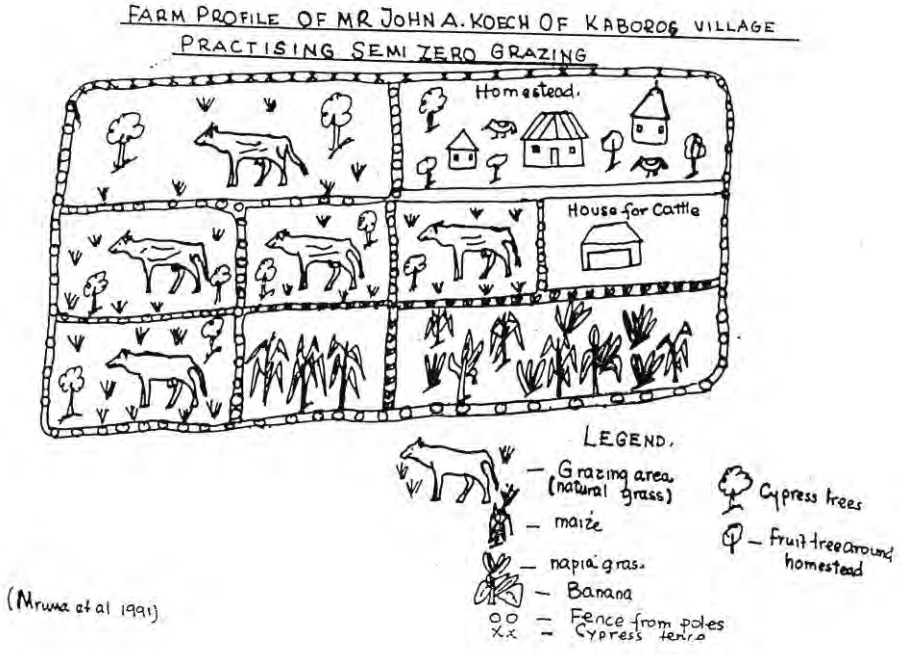
The participants were individually requested to make a sketch map of a farm that was familiar to them, preferably belonging to their father, mother, uncle, or someone familiar. Most people drew their families' or their own farm. When participants started drawing, they were suddenly, virtually, back on their land again, in their country tens of thousands of kilometres away. Once completed, all the drawings were hung on the wall. Then, leaving their professional context to one side, participants inventoried the tree and shrub management activities on these familiar farms. These drawings were systematically discussed, with the participants asking each other for the names of the trees and shrubs on the land, how they were used and by whom.

Figure 5: Sketch maps of farm compounds





Farm Profile of Mr. Johana Cheruitot's farm Kapsogut Village, Cheborge Sub-Location, Litein, Kericho. District (March 1991).



(Mruma et al 1991)

Box 10: Summary of a conversation between Marc Lammerink and Dirk Jan Haitsma

Interview 2, December 5, 2020 / Estoril

Marc still vividly remembers the sketch map of the farm made by a participant from Cameroon. The father, a poor farmer, had done everything to send his son to the forestry college. Then as an engineer, he knew a lot about forestry and said to his father, 'You're doing it wrong; you must do it my way, you have to do it another way. You should plant the tree seedlings one meter apart, then they will grow better, they are easy to clean. Don't just throw all those seedlings at random on your land so that they all stick together.' The father never followed the son's planting advice, however!

The facilitators began to ask: What did your father do in the first year? The forester replied:' He disseminated many seeds on the prepared land, and thus got an abundance of seedlings.' And the second year? 'He gave cuttings to his neighbours.' And the third year? 'He sold seedlings on the market' (…). After the round of systematic interrogation, it became clear that the father had been working on the trees for ten years. It was only after ten years that the trees were far enough apart, with sufficient room to grow. This father was not stupid, it only took 10 years for what the son (forester) had wanted from the beginning. In the meantime, the father had made some extra money to live on. Suddenly the different logics become apparent, between the father who works from his experience in a subsistence economy, and the son from his training in industrial forestry. And then the son blushed with shame.

This example, and all the other drawings, made it clear to the participants that their relatives (all farmers) have knowledge of trees and shrubs, and sometimes know more than the foresters. It also showed that trees have multiple functions for them; a tree with only one function is of little use. These findings are based on their Indigenous knowledge. It was only after gaining this awareness that the participants began to understand that perhaps many more farmers also possess this kind of experience and logic - a logic that enables them to survive on a subsistence level.

Then the contrast emerges between the knowledge and

experiences of the farmers and that of the foresters. The knowledge of foresters appears to focus on large-scale forestry for timber production for rich countries, which yields returns after several years (10 – 40 years). Farmers' knowledge is about how to ensure for their own income all year round and not just after 10 years, when the trees have grown sufficiently. Farmers use everything they need from the new trees (sale of small trees in the market) and old trees and shrubs, but they also know to plan carefully to have a steady source of income from what the land provides. A lot of knowledge and experience has been built up there.

This questioning sometimes leads to an 'aha moment' between the participants. Suddenly they see that the farmers are not stupid and just resistant to change, but that they do understand the land and the yields. Suddenly they see that the disorderliness and the small scale of the farm had an important function. What happens here is that knowledge and experiences suddenly appear in a completely different light and from a different angle. This can be a shocking discovery. It finally makes sense. It is not only a new perception, but also a deep feeling from within (hence the shame). It is in this moment of realisation that the penny drops.

If the penny does not drop, you can teach the participants a lot, but they won't do anything with their new knowledge. When the penny drops, they will almost automatically change their behaviour, and after that they can't turn back. They have to approach things differently than before. If they don't, they deceive themselves, but of course that also happens. They keep falling into the trap of the organisation in which they work. But then at least they act from a much firmer attitude, an attitude from below and within.

The diagnosis also gives them language to describe their experiences (discourse)[42]. They didn't have the concepts before, or these concepts had disappeared or been taken away during education. It also has to do with the gap between the language of compassion and the language of the professional (technical language). Then the participants see that knowledge and

42 Anderson et al., (2021, p. 1) indicates: 'Discourse—the ways … language is used to frame debates, policy, and action—is critical'.

language always serve an interest, that they are based on class knowledge.

The experimentation phase is essential to the learning process, where newly acquired insights are put into practice. Only then will the ideas take root as participants experience what the new insights will provoke in terms of resistance within their organisations, but also the positive results that they can achieve.

This was where the disparity came to the surface, between how participants valued farmers' knowledge in their work practice and their actual experience of that knowledge from a father/mother/relative/neighbour. Using Socratic questioning (Reich 2003), the participants explained the knowledge of their relatives as it had been expressed in the farm compound. By the end, and to their great surprise, the participants were able to list several dozens of different tree and shrub management activities. Examples included selective planting, felling, and harvesting according to marketability and (fruit or fodder) production, the introduction of new species through contact with farmers from other regions, the construction of fences around seedlings, the planting of specific trees to keep birds away from crops, pruning and coppicing to increase production and of course the hedges and shrubs managed and used by women for medicinal practices. Some participants made mention of very successful reproduction techniques practised by local farmers that were completely unknown to the others.

Now participants entered *confusion*: how was it possible that they, forestry extension workers, found so many farmers to be 'ignorant', 'reluctant to plant trees' and 'lacking technical know-how', while at the same time they provided so many examples from their personal experience that proved the contrary? This is where the necessary *unlearning* starts (Shrivastava, 1989). As facilitators we were always looking for this transformational shift, which is needed to cross the threshold (Meyer and Land, 2005).

After this inventory, participants examined several case studies that not only confirmed some of these tree management practices of farmers, but also outlined ways to involve farmers in extension and elementary research through participatory approaches. Gradually an insight was generated that many extension policies might very well be scientifically sound but ignored or opposed the interests and

actual management practices of the farmers. After these 'aha' moments, learning often went very fast…. and farmers' 'reluctance to change' came to be seen in a different light.

Conceptualising the participatory approach

In the third phase of the learning cycle, the participants analysed several case studies that outlined in detail different participatory approaches (Lammerink and Wolffers, 1994). By comparing these, the participants acquired the insight that there is no such thing as a universal framework for a participatory approach. They then developed their own synthesis of the various approaches and applied this again to the fictitious Olvana district (Gelder and Lammerink, 1993b). Here participants noted differences between the approach they had previously developed for Olvana and the newly designed participatory approach.

As participants came to understand that a participatory approach takes specific local conditions as a starting point, they also started to realise the application of a rigid model on how to do things would impede the development process. And, therefore, a high level of openness and creativity was demanded of an extension worker. An extension worker now became a facilitator rather than a teacher. In practice this requires greater skills of the extensionist, as participants quickly realised.

Box 11: Course diary notes: By way of summary of discussions

Dorji, from Bhutan, was present in one of our learning settings. He often sat in silence, listening, and commenting only where essential. After a lively and profound discussion between all participants where thoughts and feelings were aired freely, we sometimes asked Dorji to make a summary of what had been said on the topics at hand. Dorji was the only one capable of synthesising all the different aspects that had been mentioned, even incorporating vivid examples. Afterwards, all participants were always satisfied with his summary and would often become silent…. No doubt, this was due to Dorji's exceptional qualities, as a natural listener and synthesiser, who could very quickly organise a complex discussion into a meaningful pattern.

Of course, even in our Spiral of Learning approach, a good short lecture or synthesis is sometimes important. And without doubt,

the lecture method is a valid technique in the hands of skilled practitioners. Most good teacher-lecturers are usually brilliant synthesisers. They are also able to engross their audience with dramatic and sparkling examples. A great teacher can make a subject exciting and easy to understand. Yet a lecture is at best only a preparation for learning and not learning itself.

In the ensuing sessions, the participants (foresters and extensionists) became acquainted with several participatory tools and techniques that could fit the participatory approach they outlined earlier. The facilitators encouraged them to build their own personal toolkit appropriate to their own unique situation back home, considering culture, resources, needs and capabilities of local people. A distinction was made between tools for participatory intervention, group facilitation and data gathering (gridding, dialogue-interview techniques, transects, ranking, and various forms of diagramming).[43]

Box 12: Characteristics of Methods for data collection.

Some important characteristics:

- Aspiring for maximum community participation
- Relatively simple to implement
- Exercising visual aids for controllability by local people
- Aiming at increasing awareness and self-confidence
- Quick, to prevent frustration and loss of interest
- Seeking at knowing only what is really needed
- Including intensive group sessions to enhance awareness and joint responsibility. (Lammerink 2001)

The course participants practised these tools in the neighbourhood around the course centre. This also triggered the participants to practise other social skills, such as leadership, trust building,

43 There are several reference books and training manuals with clear explanations of the purpose, application and strength and weaknesses of these type of tools and techniques for involving communities in development initiatives and PAR, for example: Theis and Grady (1991), Schonhuth and Kievelitz (1994), Borrini-Feyerabond (1997) and Salas and Tillmann (2010).

communication, decision-making, and even conflict management. Afterwards, we reflected on several aspects to consider when using these diagnostic tools with local people, established a list of ethical issues (do's and don'ts) to consider and identified basic principles of good practice.

Practising: A South-North dialogue

Once participants had the tools to make their participatory approach operational, the group was ready to enter the fourth phase in the learning cycle: practising and experiencing the operational value and gaps of the acquired techniques during a concise fieldwork. The facilitators had found several organisations in the small Dutch village of Voorst (12,000 inhabitants) that were willing to cooperate in a four-day participatory research project.

In preparation for the fieldwork, participants defined the purpose of the exercise as being that it should provide the extension workers from Voorst and the villagers (mostly farmers) themselves with insights into the different forces determining the *past, present and future* of the village. Based on this inventory, to be obtained through participatory techniques, different challenges, and proposals for the future of the community were elaborated with key informants. The results of the whole process were then presented to interested members of the community.

Over the next three days, participants split into small groups and worked with individual farmers, farmers' families, and key persons from the different agricultural organisations and the municipality, and from the local agricultural school, to create a clear picture of the social and economic context of the rural village. Halfway through the process, the information that had been gathered so far was checked during an informal evening meeting with a group of young farmers, where participatory mapping was practised too.

After those three days, the course participants wrote down the results from the discussions, the sketch maps and transects on wall papers and presented these at a final meeting to which all the villagers had been invited. During the presentation, which was attended by about 35 persons, mostly farmers, the villagers made some factual adjustments to the presentations concerning the past and present situation. But when it came to the presentation of the future challenges facing the community, the farmers started a very lively discussion among themselves.

The course participants stated that they had focused the information they collected into three major challenges: milk quota, cow manure quota, and the increasing acidification of soil and water. They concluded: 'It seems that for a reasonable income, farmers need to increase the size of their farms and intensify their production, and, at the same time, take environmental protection measures. For many farmers these forces proved difficult to combine'.[44]

A heated discussion arose around the question of whether consumers were willing to pay a higher price for agricultural products produced in a way that does not pollute the environment. Though the villagers disagreed strongly among themselves on how to solve the issue, they agreed with the course participants that this was the major issue for farming in the village.

Box 13: The context of quota system for milk and dung as part of European Union (EU) policy

Farmers receive a subsidized price for the milk they produce. This price is more or less fixed and at a level far above world market prices. This guarantees farmers a certain income level, but it also limits farmers' possibilities for increasing their income as they are only allowed to produce and sell a fixed amount of milk at this price. The latter is to avoid EU governments having to pay more subsidies than they have budgeted for and to avoid having to stock the surplus milk that EU consumers cannot drink and that governments cannot sell on the world market.

The Netherlands is a very small country with very intensive livestock production. The increasing acidity of surface waters is partly caused by free dispersion of dung. Therefore, the government has assigned farmers gradually decreasing quotas for cow and pig dung that can be freely dispersed over the land. This is forcing farmers to change their cattle feeding patterns to

44 Richard Manning highlights this generally felt contradiction between (individual) farming and Agriculture. He argues that Agriculture is a much bigger and more powerful business that encompasses, apart from farming, agriculture mechanisation industry, processing industry and food industry, all of which multiply the power of farming. The political power of farmers is very small against this much bigger political power with different interests, and which makes the solution of their problems very complex (Manning 2005).

decrease the acidity in the dung, keep a precise record of the amount of dung produced, store the surplus in expensive tanks and pay for the destruction of their surplus by specialized industries.

This quota system was the main policy instrument for the milk sector in the European Union until it was abolished in April 2015 (Lammerink and Prinsen, 1994).

In the end, course participants and villagers agreed that the contribution of outsiders had been challenging. Having a public discussion between the different groups in the village for the first time proved to be a facilitating force. This was a surprise to both parties; the course participants did not expect to be able to facilitate this discussion, and the villagers had not expected that outsiders could arouse such a discussion on the environmental issues that were increasingly dividing the agricultural community.

Box 14: The logic of the food system in the West

Hassan (2016 pp. 12- 13).) summarizes this dominant logic of the food system in the West, which also came to the surface during the past, present, and future fieldwork with milk farmers, as follows:

'The system is characterized by slow, steady increases in demand for food; producers respond by over-producing which in turn results in an overabundance of crops (and milk); food processors buy crops, integrating and consolidating in order to pass on the lowest price to consumers; more and more crops are being grown in megafarms driving more small farms out of business; the price of food (and milk products) in retail stores is falling; small producers are steadily going out of business (…) 'As one critic put it, 'most farmers are becoming producers of raw materials for a giant food manufacturing system'

Developing a Personal Action Plan

Returning to the training centre, participants entered the fifth and final phase of the learning cycle with renewed enthusiasm. The facilitators started with a reflection of the experiences in the village for which we prepared a kind of structured debriefing based on the

sequence of objective, reflective, interpretative, and decisional questions (Little 2019). We encompassed in this debriefing both a description of the events and the personal feelings of the participants (Gibbs et al. 1988). Although it was a short experience, the participants realized that understanding such complex situations and facilitating real bottom-up change takes time, dedication, and long-term commitment. This was a start to move on to the implications that arose from the experience in Voorst.

Their doubts about the effects of a participatory approach and their own capabilities to work with it had been disproved. Now they faced the issue of how to fit the new approach and tools into their own working situation.

Participants started off working through the same research methodology they had applied in the village of Voorst, the main difference being that each participant now worked on his or her individual case. Central elements in this personal action plan were the delineation of a vision based on past and present circumstances. Then the contradictions and challenges, rooted in past and present, for future developments were defined. The analysis of these forces resulted in tangible proposals.

Before devising a final personal action plan, participants were challenged with exercises and cases in which they had to distinguish different aspects of policy and organisational change and to change an operational practice. Subsequently, the personal action plans were developed based on standardised worksheets (Gelder and Lammerink 1994).

Conclusions

At the closing of the course, participants looked back. Through collective dialogue they had gained insights that simply could not have been achieved individually. Besides exchanging valuable personal experiences throughout the course and feeling they had not been alone in the search for more participatory approaches, most participants stressed the fact that they had not only acquired knowledge on participatory approaches, but more importantly, they had also gained increased confidence in their capabilities to 'learn by doing'. Others, even more daringly, added that the course had made them appreciate that it was not so much a lack of institutional means that hampered their work. Far more importantly, they realised that the poor involvement of farmers in extension caused many

difficulties. One group of participants stated this very clearly: "From being seen as ignorant, farmers are now recognised as knowledgeable partners."

ADESO Las Segovias and the training of development researchers

This example is about development research and the training of researchers in the regional research programme for development at ADESO in northern Nicaragua.. The programme consisted of three interrelated training cycles, with periods of praxis[45] in between, after which long-term PAR projects started in the villages and local communities of the Segovias region.

One of the major concerns that led to the establishment of ADESO was that in almost all regional development programmes in the past, the proposed goals and the approaches and results achieved were not part of any long-term development strategy. These programmes aimed at meeting issues of the day and very specific needs. Even worse, despite numerous studies in the region, the environmental and socio-economic conditions of the population, instead of improving, were clearly worsening.

Philosophy and vision of ADESO

According to ADESO, a long-term strategy to transform reality should harmoniously combine economic growth and the conservation of natural resources while also considering the social-cultural aspirations of the population. However, the complexity of the existing situation in the region meant that a deeper analysis of the circumstances and problems was required. Only then would it be possible to find grounded answers with the population.

As a newly established research body, ADESO wanted to promote research that would provide elements for the definition and implementation of such a long-term sustainable development strategy in the region. ADESO was clearly established as a learning organisation: deeply involving its members in the system, able to express their aspirations, build new awareness and develop their capabilities in recognising the common interests at stake for each member's future and the future of the communities in Las Segovias.

45 Praxis is defined here as an idea translated into action; an idea applied in reality rather than in theory. It is a practical application of an area of learning.

In doing so, ADESO attached much importance to using a demand-orientated approach and participation of stakeholders. In addition, ADESO's concern was to contribute to improving research in the Nicaraguan region. The results of research served to increase the quality of political decision-making about development processes. Furthermore, ADESO had a clear gender remit: improving the socio-economic position of women.

Box 15: Initial strategic areas of research of ADESO

- Population and local development
- Management of natural resources and the environment
- Small scale urban and rural business development
- Education. (ADESO 1996)

Early in 1997, ADESO decided to set up learning cycles for researchers with the mentioned vision in mind and specifically tailored to the Association's philosophy. The learning methodology had to follow the same principles as the research methodology that ADESO promoted. After all, it was important to actively promote a participatory practice in the process and to integrate it into the learning programme from start to finish. In fact, the learning process should be set up almost entirely as a participatory process and learning should not be separated from action. The programme should also ensure that attention was paid to educating researchers to make research a learning experience for people at the grassroots. They should recognise the importance of people involved having a critical say in determining the direction of social change. This demanded commitment from the development researchers to share their expertise and listen to the needs of local people (Fals-Borda 1981).

The overarching theme of the full three-cycle learning process was therefore the design of a research methodology in line with ADESO's philosophy. The programme was aimed at supporting and coaching researchers in a type of participatory research that would address the reality of Las Segovias. A multidisciplinary and demand-oriented approach ensuring participation of the grassroots groups would be central, as would be the themes of women and culture. Subsequent research should aim at obtaining information on indicators of economic development, poverty reduction, management of the

environment compliant with regional standards, respect for the interests and specific needs of the subjects participating in the research, and it should promote both generational and gender equality.

The theme of the first cycle of the learning sessions was *Participatory Research for the Sustainable Development of Las Segovias*, with the objectives already described. It aimed at advancing the development of a research model which would be suitable for and applicable to the reality of Las Segovias (ADESO 1996).

The theme of the second workshop was *Methods and techniques of participatory research*. The objective was to deepen experience and knowledge of methods and techniques that fit the designed research methodology. It aimed at appropriate use and enrichment of participatory research methods and techniques (ADESO 1997a).

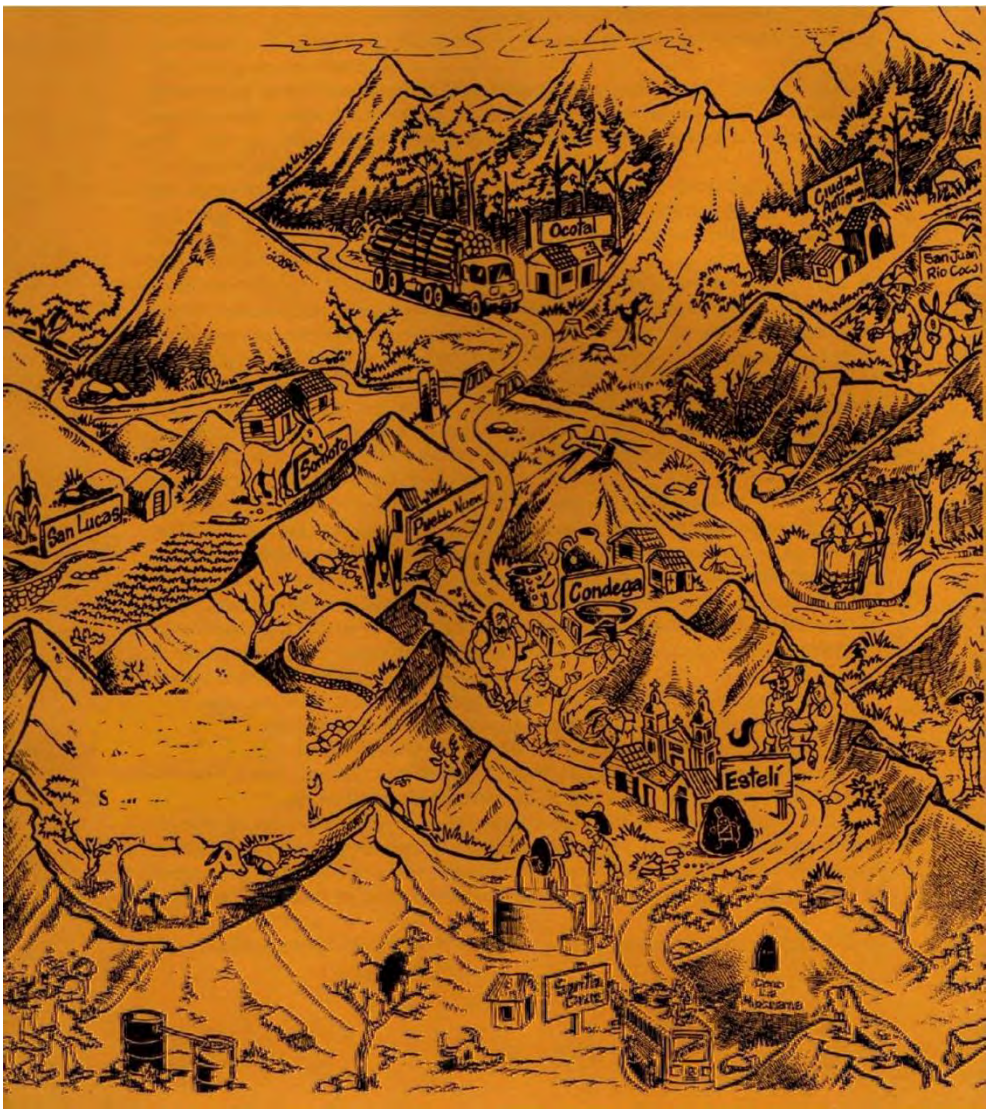
Lastly, the theme of the third workshop was *Feedback of the results from the perspective of Participatory Research*, and the objective was to evaluate the designed research methodologies, methods and techniques, as a basis for future research in the context of ADESO. The aim was to design appropriate ways to get feedback on research results and return the knowledge developed from research to the grassroots and their organisations, in a way that was consistent with the conception of the model of participatory research (ADESO 1997b).

First cycle: Participatory Research for Sustainable Development of Las Segovias

The first cycle was carried out for two weeks at the end of July 1997 in Estelí, the main town of the northern region of Nicaragua. This is the area of Las Segovias, which comprises the departments of Estelí, Madriz, and Nueva Segovia.

The learning setting was intended for researchers selected from teams within ADESO who would implement the first development research agenda. Furthermore, several additional researchers were invited, all members of ADESO, such as university lecturers who wanted to reproduce parts of the course in their own research methodology course for regular students. Members of the board of ADESO also joined in the learning. All participants agreed to partake in all three cycles. To guarantee continuity in principle no new participants would be admitted during implementation. A total of 21 professionals from the fields of education, health, social welfare,

Figure 6: Sketch map of Las Segovias – Northern Nicaragua (Lammerink, 1997, p. 1)



social sciences, and agriculture participated from 18 different regional governmental and non-governmental institutions, higher education institutes, trade unions, social movement organisations and staff of mayors' offices in the region.

Many learning activities took place in these two-week-long workshops. Our role in guiding this process was that of counsellor, supporter, catalyst, and direction-giver of the learning process and sometimes that of devil's advocate. Vertical transfer of knowledge was very limited. Lecturing was kept to a bare minimum. Each participant was his or her own teacher. The workshops were based on

the principle described earlier that learning is much more effective when one learns something by seeing and doing it (learning-by-doing) than when one simply absorbs knowledge and copies ideas (see Box 3).

Specific themes, which did not come to the surface naturally in a workshop, were studied in a study circle. Here, the facilitator or one of the participants directed the learning process by organising a lecture or by providing didactic material to clarify or deepen knowledge about specific themes. For example, several participants organised a lecture on 'gender and development', followed by a debate, because this important aspect had initially been undervalued by the participants.

During the two weeks and in the following cycles we used all kinds of working techniques for learning such as brainstorming sessions with cards, jigsaw puzzles, group discussions, role-play, sociodrama, simulation of hypothetical development research planning, games (see Box 16), theatre, meetings, forums and assemblies, schedules and planning matrices, matrices of limitations and possibilities, strength and weakness analyses, diagrams, sketch maps and 'talking' maps (for example, see Figure 7), models, and other visual techniques (Lammerink 2001), as well as mind mapping (see Box 22) and a write-shop. All of these could be used as instruments for diagnosis, analysis, reflection, or evaluation and feedback.

Box 16: Games as learning techniques

Games as learning techniques are characterized by the creation of a fictional situation, in which the participants engage, act, and react, create and play within the limits set by the rules of the game. Games get a lot of attention. Combining fun with learning improves performance, breaks down barriers and seizes hidden opportunities.

While role play is mainly used to understand the nature of certain real roles (simulated in the game), the roles and rules in educational games simply create an attractive and challenging situation that facilitates learning. In this case, it is not the nature of the role itself that interests us, but the content of the discussions generated by the game.

> Educational games can be derived from round games, children's games, traditional folk games, or they can be based on certain cultural customs and practices, forms of behaviours and procedures commonly known in social settings (a palaver, a courtroom, presidential elections, an auction) or other typical situations. Games can also build on the local culture and become a way of reviving old cultural traditions. (Lammerink 2000)

As much as possible, we made use of working techniques that had already been developed or were at the disposal of the participants in one way or another. This meant we could include rituals, games and behaviours taken from other contexts which the participants also had to deal with, such as the upcoming presidential elections, a court justice, a community counsel, or a user's forum. The games, for example, were mainly aimed at structuring showing, demonstrating, communicating, and analysing a given situation that arose in the process in a playful way in the learning process. The aim was to use working techniques that promoted participation, insight, self-motivation, and creativity of the participants.

Much attention was also paid to the presentation of the results of the discussions, making the participants aware that when everything is sorted out nicely, but the results are presented in a boring, unattractive, and careless way, nobody will give attention ... which was still often the case (see also Box 8). Also, attention was paid to the use of all kinds of techniques that can be used for presentation to large groups of people.

We made use of the reader *Some examples of Participatory Research* [Algunos ejemplos de investigación participativa] (Lammerink and Wolffers 1994) and the book *Learning together, experiences in participatory research* [Aprendiendo juntos, vivencias en investigación participativa] (Lammerink 1995) the last published by ADESO. During the course the need arose for additional literature. This was provided by means of a ready-made reader. During the training sessions, material was discussed on context analysis, participation (views and consequences), experiences of participatory research in the social sciences and agricultural sciences, theoretical aspects of participatory research, gender analysis, aspects of the research

processes and ethics[46], institutional consequences, and methods and techniques of participatory research.

Development of the first cycle

As facilitator I did the final preparations of the cycle with Rodolfo Flores, ADESO's general secretary, so that he became familiar with the common thread ('hilo conductor') and the logical structure of the programme, the structuring of the learning process and the elaboration of the various themes at stake that would come up for discussion (see Box 5). He was a great support and anchor during the implementation of the workshop.

All 21 participants (women and men) were present and active from day one and throughout the full process. They were highly motivated and produced beautiful and useful proposals. Some participants who had participated in the initial discussions at ADESO clearly played a pioneering role in the development of activities, and as a result the course developed positively.

The first cycle followed the Spiral of Learning approach and was divided into three phases: Diagnosis of practical experiences; Theorising on practical experiences and integrating in new forms of action (ADESO 1996).

Specific objectives for the first cycle were:

- To make a diagnosis of the participants' experiences regarding aspects of research for the sustainable development of Las Segovias
- To formulate a research methodology approach, based on the perspective of ADESO in the context of Las Segovias
- To integrate the new methodological insights into the research projects that would be carried out.

The first phase: Diagnosis of practical experiences

From the beginning, we have emphasized promoting an open atmosphere of mutual respect, sincerity, trust, and involvement within the group. The participants also wrote learning rules together

46 To some extent, we discussed ethical issues in PAR and the ways to treat them: informed consent, confidentiality, and anonymity, protecting an individual or community from harm, the role of the researcher, the location of 'power' in PAR, and of course the ownership of research results. Together we established a list of ethical issues (do's and don'ts) to consider.

and compromised on them and set up two committees for logistics and animation.

Box 17: Formation of committees as part of learning

The idea is to establish two or three committees: one for Animation, one for Logistics and eventually one for Reporting.

The **Animation Committee** will oversee:

- Promotion of effective participation by participants
- Stimulation of an atmosphere of friendship and equitable communication between participants
- Support participants' attitude of conscious discipline
- Promotion of all rules agreed upon by participants as "Conditions for Learning".

The **Logistics Committee** will manage operations with the following tasks:

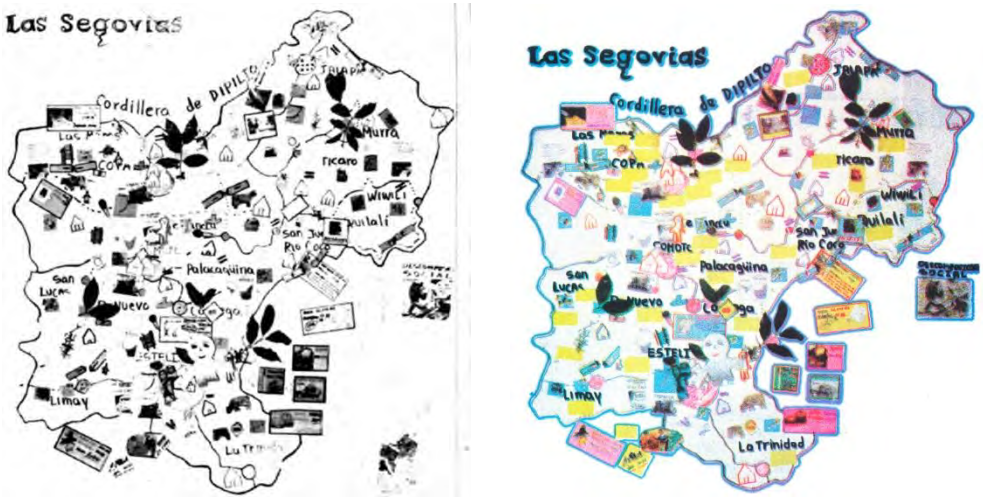
- Monitoring whether the materials and resources are sufficient and available for the participants during the development of the training at the right time and in the right place
- Maintaining close contact with the coordination team to give due consideration to any difficulties and problems that may arise.

New tasks may arise for the committees. In addition, regular rotation between the groups is proposed. After completion of the event, everyone has been part of each of the committees. (Gelder and Lammerink 1997)

We then asked the participants to split up into random small groups, using different coloured pieces of a jigsaw puzzle of concepts. After completing the jigsaw puzzle, each group discussed how they would define the concept that was presented. The concepts that needed to be defined would come up regularly during the training and included methodology, systemisation, research, and participation. We also asked the participants to write down their expectations and discussed both the concepts and the expectations in plenary.

The following two days consisted of a description of the experiences, a critical diagnosis of the main objectives regarding research, and practice with research and the context in which the research would take place (Las Segovias). Lots of brainstorming with cards took place, and participants put together beautiful talking maps [mapas parlantes] based on their collective knowledge about the region (macro level) and rural and urban families (farming households and households in the city). The tape recordings of the explanation and discussion based on the maps that had been produced provided a lot of information about Las Segovias and about how the downward spiral of poverty was taking its toll on all fronts. The result was an analysis of the social, economic, cultural, and political situation of the region and a socio-economic analysis of the rural and urban families.

Figure 7: "Talking" maps of Las Segovias (ADESO 1996)



The diagnosis process also revealed that the teams that had to start research projects did not have much research experience, and that there still was a large gap between the vision of what research should ideally be and their day-to-day practice.

The confrontation between the threefold diagnoses (the practice, the perception, and the context) of the participants' experiences was especially important for reconstructing their practical theory and for determining several common themes for in-depth study. Based on two interim syntheses, the agenda for the second week slowly but surely started to emerge.

Box 18: Perceptions on research by participants

- Research is a means of achieving popular participation and social mobilisation
- Research is an educative process
- Research is done to identify, understand and quantify problems
- Research is done to acquire knowledge to transform reality
- Research is a strategy to formulate projects that allow transformation of reality
- Research strengthens institutional space for grassroots discussion. (ADESO 1996)

The second phase: Theorising based on practical experiences

The syntheses also formed the transition to the second phase, a phase of conceptualising, theorising and jointly designing a methodological research approach consistent with the views within ADESO. The participants studied in groups the different methodological designs for participatory research (Lammerink and Wolffers, 1994, pp. 121-189), analysed which steps are taken and then decided which steps fitted the views as previously formulated.

In this theorising, the facilitators and/or participants also brought in new knowledge elements that could be integrated. During this whole process there was a lot of support, encouragement, and exchange between participants as they discussed the nature of the concepts they were discovering, explaining to others how to approach issues, sometimes one person teaching their knowledge to other participants, challenging each other's reasoning and conclusions, and connecting the newly acquired learning with past experiences. This process of learning provided a different perspective on the systematised experiences and offered space to design a new approach to participatory research in ADESO's context in Las Segovias (see Box 19 on the elections). In this way, the participants created methodological designs, which integrated strong aspects of different previous experiences of participatory research.

Box 19: The presidential elections as a training technique

The 'elections' involved conducting something akin to an electoral campaign (important in the process of Nicaraguan development towards democracy in the nineties). It assured people of the virtues of the various models of research. Each group became the supporter of one model and had to organise pamphlets for the campaign, meetings with their candidate, radio programmes, flyers and electoral alliances. The outcome of this enriching activity, which took place over a period of two sessions, was that a model for participatory research for ADESO was chosen by a majority vote. The model represented an alliance of different approaches to social research, combining the strong parts of each. (Lammerink and Mazariegos, 1988, pp. 26-28; ADESO 1996)

The third phase: Integrating in new forms of action

On the last day, the participants made specific plans for future action in which integrating and applying the methodological research design in the specific funded research projects and work practice of the participants was central. The original description and diagnosis of that work practice from the first phase was the starting point, as the whole exercise was about transforming, changing, or improving that. A Force Field Analysis, in which the participants analysed the reinforcing and counteracting forces, aided the process of making proposals for improving working practices that had a fair chance of success.[47] This involved slowly integrating the old actions and the new actions, adjusting the process, and maintaining improvements.

Box 20: Examples of research projects during first cycle

- Situation of tobacco workers in Estelí: the case of the cigar factories for export

47 Force Field Analysis (FFA) was developed by Kurt Lewin in the 1940s. The idea behind Force Field Analysis is that situations are based on a balance between forces that drive change and others that resist change. For change to occur, the driving forces must be strengthened, or the resistance forces weakened. We developed a Handout for this purpose (Gelder and Lammerink 1993 b).

- Participation of women in decision-making bodies for sustainable development of Las Segovias
- Diagnosis on traditional products at family level of peasants
- Participatory research in vermiculture with small producers to recycle coffee pulp, bovine manure and to feed backyard chickens.
- Impact of rural credit on living conditions of women microentrepreneurs in Estelí.
- Sustainable development alternatives for 13 communities in Department of Madriz
- Study on wild plant species with forage potential known by men/women rural communities
- Dependency-creating institutional development and welfare policies in Las Segovias. (ADESO las Segovias 1996)

After that, the participants experimented with this newly designed methodology of participatory research over a six-month period in small field projects in the region.

Based on the experiences in the first workshop the ADESO board members also drew up a design for a research agenda, more tailored to the real needs of the population.

Their reflection on and detailed analysis of their newly acquired experiences (reflection-on-action)[48] provided not only information about the research design and any necessary improvement, but also about the further learning that the researchers needed in order to be able to conduct participatory research in practice. That was also the starting point for the next workshop in the cycle of three.

48 Reflection-on-action is the retrospective consideration of the practice to uncover the knowledge used in each situation, by analysing and interpreting the information evoked. The reflective practitioner can than speculate on how such a situation can be handled differently and what other knowledge would be helpful (Burns and Bulman 2000). Donald Schön (1983) in his classic book developed critical reflection as a strategy for learning from practice in complex situations based on problem solving skills and some 'artistry'. He referred to complex situations like: 'The swampy lowlands, where situations are confusing messes incapable of technical solution and usually involve problems of greatest human concern' (p. 42).

Second cycle: Methods and techniques of participatory research

The second one-week cycle took part in February 1998, six months after the first cycle (ADESO 1997a). It was intended for those who had taken part in the first cycle to ensure continuity. This time, the main theme was delving into research methods and techniques that coincide with the newly designed methodology of participatory research. Much attention was paid to systematising the experiences gained since the previous cycle and practising the new, often participatory techniques.

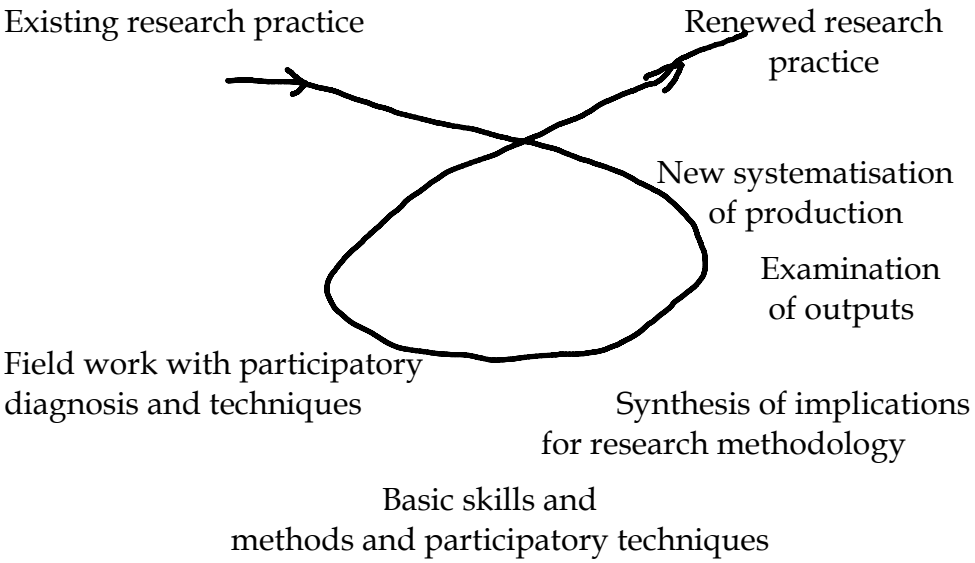
For the second workshop, the general objective was to 'deepen experience and knowledge with methods and techniques that fit with the proposed research methodology'.

Specific objectives for the first workshop were:

- To systematise the participant's research experiences within the framework of the ADESO program
- To deepen the importance and practical implications of the proposed research methodology
- To acquire basic skills to improve the participant's application of adapted research methods and techniques
- To practise new methods and techniques that fit in with the proposed research methodologies of ADESO
- To create material that supplements these research methodologies.

The second spiral is shown as in Figure 8 below.

Figure 8: Second Spiral of Learning in ADESO's Learning Experience (ADESO 1997a)



Again, during the six days we used a multitude of participative learning techniques (see Box 3 and Box 16). This time also a lot of theatre was used to clarify situations and to reflect on them. Field applications of participatory research techniques were tried out nearby the course site, in the relatively new neighbourhood of Estelí, where many new settlers had arrived in recent years.

In addition to the existing literature, the facilitators had prepared several adapted handouts on different methods and techniques, that could be applied within ADESO's proposed research methodology (see Box 21) [49]. We also prepared handouts and exercises on important new skills for a participatory researcher, such as listening, observing, asking questions and reporting (feedback). These were composed in such a way that they could also be used for future learning activities of ADESO and/or the educational institutions in the region.

Development of the second cycle

As facilitator I prepared and conducted the workshop together with Rodolfo Flores, ADESO's Secretary General, and Adolfo Madriz, an experienced facilitator from Managua. An external person was

49 Visual methods and techniques are mainly from Participatory Rural Appraisal (PRA). The others are more familiar in PAR (see many examples in Salas and Tillmann 2010).

contracted to complete at short notice a workshop report. Such a Workshop Report [Memoria] makes it easier for participants to remember and apply newly acquired knowledge and skills (ADESO 1997a). All twenty-two participants (women and men from fourteen organisations, including three members of the Board) were present and motivated.

During the first two days the participants systematised the experiences gained with research since the first cycle. Split into two groups, the participants critically discussed the design and execution of the studies, including the results up to February, reviewing the proposals that had been made six months earlier and the conceptual views expressed at that time. This was done after having thought critically about the importance, function and how of systematisation.[50]

This led to a disturbing synthesis on Wednesday. There was still a huge gap between the vision of what research should ideally be and the practice in the various ongoing studies. There were concerns, doubts, and contradictions regarding the discourse about what the investigative action should be, what it was in practice, and the gap between what was said and what was done! It sparked an interesting discussion to understand the concept behind all of this. Participants acknowledged that up to that point research practice had been strongly influenced by a traditional and academic view of research.

Closer analysis revealed the following elements that characterised this view:

- A vertical and utilitarian relationship between researchers (knowledge holders) and the population, seen as a source of information without decision-making authority about what should be investigated, and the usefulness of the information found

50 Systematization is that critical interpretation of one or several experiences that, based on its ordering and reconstruction, discovers, or explains the logic of the process experienced, the factors that intervened in said process, how they related to each other and why they did so (Jara, 2006, p. 23).
Reflexivity is central to systemization and PAR because if the grassroots and outside intellectuals do not understand the dynamics of their collective practice, the transfer of power and authority, which both methodologies are defending, cannot take place.

- Use of information was one-sided; it was not fed 'back' for analysis to the population where it came from (origin)
- Research was an isolated activity of the development process, used only for gathering information on specific topics
- Arbitrary definition of 'what', 'for what', 'why', 'for whom' and 'how' to be researched by a group of specialists/researchers, who in most cases do not consider the main actors in this process: the population.

  This last reflection was not to underestimate or belittle the wealth of knowledge and experience, that the specialists possess. Rather, it is about not using this knowledge and experience based on the principles of horizontality, equality, mutual respect, and collective construction, so that the knowledge produced is useful, both for the participants in the process and for the researchers.

The next question was how to transcend this gap. How do we deconstruct the traditional view and build a new one from an integral and integrating perspective for the harmonious development of society? We had to develop a conception of research that included some important elements such as horizontal communication, collective production of knowledge, use of existing theory as instrumental in supporting the process but not as absolute truth. This conception should also contribute to the development of a new relational culture based on respect between researchers and research subjects, who are seen as active and responsible actors in their shared change process. This view touched on the ethical discussions we had earlier in the process but only now the penny falls. Moreover, this view must be seen in the context of the process of supporting a broader social and strategic interest shared by all participants and involved institutions: the sustainable and sustained development of the communities in Las Segovias.

Eventually, the participants realised that there were a few proposals that had tried to go further ... but there was still a lot left to be desired! Most researchers still felt insecure about the application of newly learned research techniques, unlike the familiar and still dominant survey and questionnaire techniques. They indicated that they wanted to experiment with different research techniques under laboratory conditions, which was part of the transition to the second

phase, a more general phase of conceptualising, jointly studying and trying out participatory methods and techniques within research.

Box 21: Basket of methods and techniques in participatory research

- Participation in village/community life
- Group walks
- Secondary data review
- Direct observation and participatory observation
- Semi-structured interviewing with individuals, with key-information, with groups.
- Structured interviews, in-depth interviews, oral history
- Group problem census methods
- Focus group discussions and workshops, brainstorm sessions.

Within methods a combination of techniques can be used for discussion, participation and understanding of issues. Most important techniques include:

- Diagramming or conceptual modelling, mapping
- Ranking
- Case histories, case studies
- Mind mapping. (Theis and Grady 1991; Lammerink 2001)

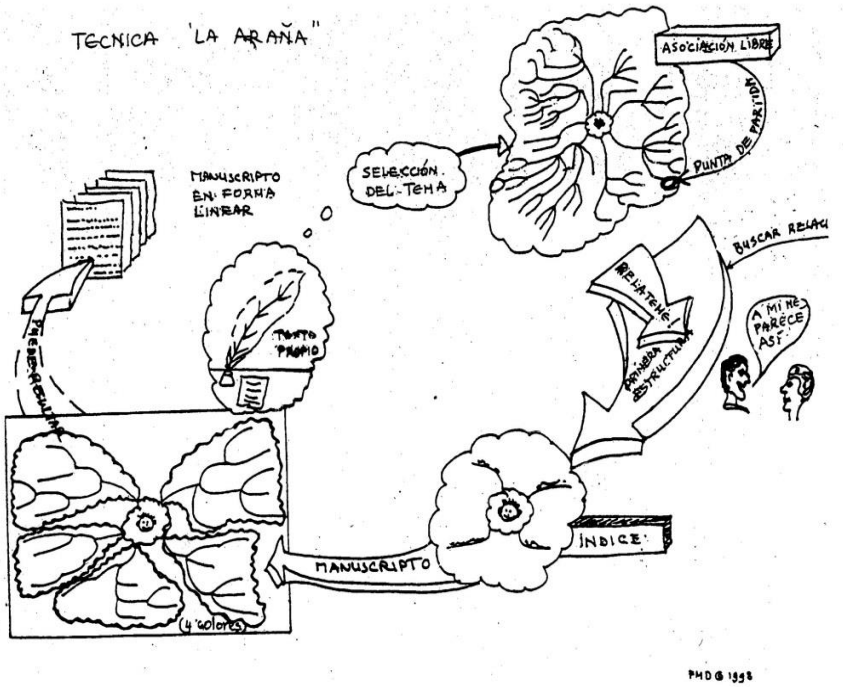
On the Thursday, the participants split into in six groups and after a mind mapping exercise (see Box 22) prepared brief articles that outlined the main themes that had been discussed during the workshop. One article discussed the importance and implication of participatory methods and techniques within the proposed research for the empowerment of the research groups being worked with. This article also emphasized personal and professional commitments to pursue longer-term empowerment processes (Cornwall and Fleming 1995). Another article was about the desired attitude of researchers, including the importance of listening, observing, and questioning skills. Two groups worked on an addition to the methodological

design prepared during the first workshop. All articles were published by ADESO (1997c). All this served to complement the brief descriptions of the methodological principles formulated and disseminated during the previous workshop. Furthermore, based on a list of situations that might arise during participatory research, the participants drew up a 'code of conduct', which also included norms of behaviour in groups and a team contract. There was plenty of time for the different opinions and ideas to come closer.

Box 22: Mind mapping for information organizing or for presenting ideas.

Mind mapping is a visual method of representing complex thoughts, ideas and associations around a central theme or concept. It is an effective means to take notes and brainstorm on topics. A mind map involves writing down a central theme and thinking of new and related ideas which radiate out from the centre. The mind map makes connections and contexts visible. It is represented as a spider diagram used to visually organize information or present ideas or projects. The spider diagram represents words and ideas linked to and arranged radially around a central key word or idea. It is used to generate, visualize, structure, and classify ideas. It can be used as an aid in writing, study, organization, problem solving, and decision making.

Mind mapping was developed in the 1970s by British psychologists Tony Buzan and Peter Russell on the basis of findings from brain research as an effective method for generating ideas by association. Mind maps take into account the way people think, associate and perceive. Depending on the purpose, a mind map can be used for information organizing or for presenting ideas.



(Lammerink 1995)

On the last day, the participants prepared presentations in which they incorporated the articles they had written. This was followed by the evaluation, which consisted of three drawings on the wall: a *garbage can*, into which the participants could throw what was not useful, both in terms of content and process; a *work folder* for those matters that require further elaboration; and finally, a *travel case*, in which the important 'doctrines' could be taken along. Fortunately, the latter filled up the most. During the discussion, the group came up with issues that needed improvement to enhance learning. We also agreed dates for the third workshop, which was scheduled for six months later.

Third cycle: Feedback of results in participatory research

The main theme of the workshop was to delve into methods and techniques of feedback (or as it is so nicely termed in Spanish: *retroalimentación*), which are in line with the vision of participatory research developed in the previous two workshops (ADESO 1997b). Much attention was again paid to the further systematisation of the experiences already gained in the twelve ongoing studies since the second workshop.

The theme of the third workshop was 'Systematising and feeding back the information obtained' and the general objective was 'To evaluate the proposed research methodologies, methods and techniques, as a basis for future research in the context of ADESO'. In this cycle, the researchers elaborated on how to devolve' research results to local people from a PAR perspective.

The specific objectives for the third workshop were:

- Systematising the participants' experiences with research within the framework of the ADESO program
- Deepening into the importance and practical implications of feedback (*retroalimentación*) in the research methodology used
- Designing useful ways 'to devolve' the information back consistently using the chosen methodology
- Creating material that supplements the applied research methodologies
- Evaluating the practical contribution of the research methodology used, as a basis for future studies of ADESO.

Since the second workshop in February, several researchers had continued to apply the newly designed methodologies of participatory research and were all in the final stages of their research. It was now time to look back and assess how useful the applied methodology had proven to be in achieving the goals and to see what improvements or adjustments were needed. The reflection on and the detailed analysis of the acquired experiences (reflection-on-action)[51] also served as the start for the third and final workshop for the researchers in the context of this cycle of three. The learning methodology remained essentially the same (Spiral of Learning). During these six days, we used a variety of participatory learning techniques (see page 62), but the focus was on four workshops in which the researchers developed and experimented with specific feedback mechanisms with the support of theatre makers from the region. This time with their help we used a lot of theatre, puppetry, and other creative forms to clarify and reflect on situations.

51 Donald Schön's (1983) enduring contribution is his identification of two types of reflection: 'reflection-on-action' (after-the-event thinking) and 'reflection-in-action' (thinking while doing). In the sequel (Schön 1987), he also discussed how this vital creativity can be learned and fostered in professionals. However, Schön's analysis ignores critical features of the context of reflection.

Based on the different field studies, the researchers tested materials for field applications for feedback from and enrichment (*retroalimentación*) of the results with other participants. A creative writing workshop (so-called write-shop) was also part of the third workshop, as it had been noted at the beginning that many studies were only published in the form of boring research reports, mainly to satisfy the funder. At the same time, the researchers realised that from ADESO's perspective it was also important to pay attention to other forms of dissemination of the research data, although it was not clear how. Hence the importance of finding new ways to make the results of research transparent to the people directly involved, but also to other professionals or policymakers.

In this respect, Fals-Borda (Fals-Borda and Rahman, 1991, pp. 8-9) emphasises that participatory research communication must be written for different target groups in different "languages": 1) for the grassroots all kinds of means are suitable: comic books, videos, cassettes, radio; 2) for the leaders and the middle class, descriptions and more intellectual approaches are appropriate; 3) for fellow researchers more theoretical explanations are written. Fals-Borda (1991) writes: "production and diffusion of new knowledge. (...) is a central part of the feedback and evaluative objective of PAR (…) systematising new data and knowledge according to the level of political conscience and ability for understanding written, oral, or visual messages by the base groups and public in general" (p. 9).

This means that four levels of communication had to be configured, depending on whether the message and systematized knowledge were aimed at pre-literate, literate, executive or intellectual people. According to Fals-Borda, a good participatory Action Researcher should learn to approach all four levels with the same message in the different styles of written, auditory, or visual communication.

As little material was available within the existing research methodology that addressed the problems of this third workshop, a reader was compiled in advance based on a selection of existing literature, brochures, and adapted handouts. We also prepared exercises and presentations on important new skills for a participatory researcher, such as the use of theatre, other visual techniques, and all kinds of text forms. The researchers wrote various articles during or in response to the workshop, which have since been published by ADESO (1997b). The learning material was compiled in

such a way that it could also be used for future learning activities at ADESO or the educational institutions in the region.

Development of the third cycle

The workshop was prepared and conducted by myself together with Adolfo Madriz, who had been working at ADESO since February to develop plans for future training. He also held several follow-up interviews with the researchers who had participated in the study cycle between May and August. Rodolfo Flores, Secretary General of ADESO, was not involved in the preparation and implementation this time.

Compiling the definitive programme in the days prior to the workshop went smoothly. The approach taken was to align as much as possible with the perceived need in the ADESO programme and to facilitate transfer. During the workshop Adolfo Madriz and myself alternated as many tasks as possible, while I often provided the syntheses for substantive considerations. An external person was engaged to report the workshop. The same participants were present as in the other cycles, and no one was absent. They were strongly motivated and actively participated in the different parts.

On the first day again, we systematised the experiences of research practices gained in the institutions since the second cycle (ADESO 1997b). Divided into two groups, the participants critically discussed the design and execution of the studies, including the results given in the proposals made during the first cycle and the conceptual views expressed during the year. At the same time, the presentation was used to provide clear feedback to the workshop participants. A critical reflection followed on the importance and function of 'feedback' and how to do it, and its relationship with systematisation. The basis for the discussion was the results of a preliminary meeting that had taken place a week earlier. This led to the interesting synthesis on Tuesday that clearly showed the need for better adapted *methods and techniques for feedback* on research outcome and process.

This day was also the transition to the second phase, a more general phase of ideation and of jointly studying and trying out participatory methods and techniques for feedback within research. This was largely based on adapting or designing methods applied in other contexts, such as theatrical forms and puppetry. The showing of a slide series entitled 'One such day in the community of Cantimplora' (1984) [Un día de tantos…], taken from a study in Cantimplora, in the

south of Nicaragua, was helpful. After seeing the creative process that took place there in the early 1980s, a discussion about possible feedback methods could be started.

On Wednesday, five different workshops started, to which various actors and journalists with educational experience from Estelí had been invited. Workshops were organised on the use of puppetry, theatrical forms mainly based on the work of Augusto Boal (forum theatre and image theatre)[52], the use of mass communication media, in particular radio and video, and the possibilities and applications of games for feedback. Each group spent more than a day working on a presentation in which the feedback methods that had been discussed were applied to report back on an aspect of their own research. Theatre, puppets, journalism, piñatas[53], stories, games, memories, magazines: they designed all kinds of devolution methods, which could also trigger discussions to evaluate and enrich the research results found.

On Thursday, presentations and discussions took place about the usability and applicability of each method. In the afternoon, another workshop on 'creative writing' was attended by all participants, in which they practised writing based on a conscious choice of audience for which it was to be written.

On Friday, coordinators instructed the participants to start producing various articles. One group worked on drafting a practical manual on feedback techniques in PAR ('Técnicas de devolución en la IAP'). Each of the other eleven research groups worked on a short article with a vivid and striking description of the experiences gained in the research they had done, using the techniques for creative writing they had worked with in recent days. During the day, the different groups received comments from each other and from the supervisors about the concepts and ideas for improvement to be completed the following week.

---

52 Boal's techniques use theatre as means of promoting social and political change. In the Theatre of the Oppressed, the audience becomes active, such that as spectators they explore, show, analyse and transform the reality in which they are living.

53 Piñata is a game for children that consists of hanging a clay container at a certain distance from the ground, usually full of sweets, to break it with sticks while they are blindfolded. To use the game for feedback the clay container was filled with folded papers with all kinds of research results to be enriched by the people (Vargas and Bustillos 1984).

Once again, ADESO published the articles shortly after the end of the cycle (ADESO 1997c). All of this complemented the brief descriptions of the methodological principles and the various other products produced by previous workshops. It also supplemented ADESO's arsenal with original materials from researchers in the region. This was followed by an evaluation of the entire training and the applied methodology and, of course, a festive awarding of diplomas.

Concluding remarks on ADESO's learning settings

The learning methodology used was based on the same principles of the Spiral of Learning. As described, we saw the social reality, knowledge, and experience of the participants as important sources of learning. Through the active participation of participants in concrete situations and through a systematic and critical reflection on those experiences (reflection-on-action)[54], new knowledge was constructed, and skills and attitudes were formed. A remark by one of the participants, a university lecturer, was typical: "I didn't know I was capable of doing that."

As a facilitator, I was pleasantly surprised by the strong teamwork, high commitment, common sense, and leadership within the teams as they created new realities. This was also the case during the planning of the three cycles, where (pre-established) agendas were used flexibly until they reached consensus on the next steps.

In fact, the role of the learners changed from being focused on their own research perspectives to a pragmatic dialogue about a common future. In the same vein, the vision on research changed significantly during the process and became a common process. In the beginning, the division was clear between conventional researchers trained in the capital Managua, who typically saw the research as a job, and practitioners at local sites in northern Nicaragua. The latter were highly motivated to find better answers at the grassroots to create conditions to improve the development process but were often hampered by their activism and lack of research experience. Gradually, they started structuring a new type of research together

54 Schön's (1983) contribution on 'reflection-on-action' ignores critical features of the context of reflection. A more recent publication, for example, is Bulman and Schutz (2013) who develop learning of reflective practice for health practitioners, but still ignore broader social critique. According to Fook (2007) critical reflection implies attention to discourse and social and political analysis. Such critical reflection can enable transformative social action and change. In FMD, we embraced this latter approach.

and matured during the associated engagement process. This implies that ethics (engagement) can become another catalyst for learning and education.

Also essential was the process of dialogue (*concertación*) that took place: many of the researchers had been active in the Nicaraguan revolution and still had the old revolutionary dreams. During the discussions and practice, their views became more pragmatic, sober, and down to earth, and at the same time they began to dream of a common future for the region. Then they started to think about policy changes to make the dreams possible. This, in turn, was integrated into their research. This process has also reshaped ADESO's strategy and demand-driven agenda-setting process. The involvement of the secretariat and board members in the learning helped in the institutional strengthening of ADESO as a learning organisation. Most importantly, board members and researchers realized that it takes time, commitment, and longer-term participation to understand complex situations in the region and enable true bottom-up change. The process approach to learning supported the ability to dream about the future, which was judged to be a positive experience. In addition, as a local consultant, one of the involved facilitators also started to support the training process in other areas, making the whole ADESO process more coherent.

It was also of great importance that the participants learned, conceptually and experientially, that they needed to rely more than they had previously done on the reality, knowledge, and experiences of the people of the grassroots for whom and with whom future research would be carried out, even if they had a technical background. During the process, the participants also gained experience of working in multidisciplinary teams, which facilitated the understanding and discussion of multidisciplinary approaches. In addition, they gradually became familiar with new forms of research.

ADESO's principles also had implications for the working and learning methods applied during the programme. By integrating participatory methods into the learning process, participants have gained experience with many methods and techniques that can be directly applied in participatory research. The practice sessions stimulated the participants to gain experience with research and research that was *not about* people, but *for and by* people.

Our task as facilitators was to structure the learning process through assignments and support, but also to create the conditions and environment in which participants were increasingly able to find answers themselves to the questions and the problems they might encounter during research. Moreover, as a team, we were able to structure the discussions without resolving them, allowing for a dialogue between different political views (*concertación*) – especially important in the late 1990s in north Nicaragua. Our role as facilitators was to keep people together. In this flexible process, knowledge construction and professional development were not limited to what the facilitator or existing professional literature provided. The participants themselves organised the creation and absorption of knowledge based on their social environment. Participants were jointly responsible for leading their own professional development process and thus also received guidelines for a process of lifelong learning[55], and professional innovation.

In short, using the Spiral of Learning, we guided the participants in a gradual process towards the design of an approach to participatory research tuned to local Segovian conditions, as analysed, and described by those same participants.

Seminar for the Master's Programme of Development Studies at ISCTE, Portugal

From 2002 until my retirement in 2017, I also implemented the Spiral of Learning approach at the ISCTE of the University of Lisbon in a short seminar that was part of the master's Programme of Development Studies for mid-career professionals from the social sciences, pedagogy, and economics. I developed a workshop of five sessions, each lasting four hours.

Apparently "in the land of the blind, the one-eyed man is king": the students valued the seminar highly and experienced it as special. They commented that during this short learning experience, their overall active participation exposed them more deeply and for longer to the task in hand. This undoubtedly promoted critical thinking. During the workshop, the old-fashioned university setting gradually

55 Lifelong Learning is the continuous, voluntary, and self-motivated quest for knowledge for either personal or professional reasons. It is important for one's competitiveness and employability, but it also enhances social inclusion, active citizenship, and personal development.

turned into a real social environment, where meaningful learning was more likely to take place. The responsibility for me as a facilitator was to outline, facilitate and maintain the logical sequence of the phases and connections between them, to use some form of validation and maintain the students' self-motivation through fun. Of course, when necessary, I gave a lecture where students could get a sense of my own experiences with participatory approaches.

The seminar became a cornerstone of the master's programme. Each year, this resulted in a greater effort by the students to learn, build more positive relationships with classmates, and improve their psychological health. The workshops improved their learning motivation and consolidated learning experiences. When learners really enjoy themselves, they innovate, they take risks, and they trust each other because they are really committed to what they are doing and it's fun. Basically, they start to feel responsible for their own learning to learn (Rokach 2016).

Unfortunately, the seminar remained too much of an island in the overall master's programme. When I asked students about it, they often said: "Most other courses and seminars are taught by expert professors who read from their books or have a nice PowerPoint presentation with some questions for clarification at the end. There is still no culture of questions and dialogue, even though we are mid-career professionals". [56]

Concluding remarks on the Spiral of Learning approach

Now, it is almost thirty years since we developed the social forestry approach and linked it with a process approach to learning (Spiral of Learning). It is interesting to see what is still valid from this way of learning. After all the Spiral of Learning approach seems very similar

56 A recent study by Noben el al (2020) shows that most teaching behaviours in higher education are considered sufficient in classroom climate, efficient organization, and instruction. Without a safe and stimulating classroom climate, efficient organisation of lesson, and clear instructions, it is of course difficult to implement active teaching approaches successfully. However, more advanced learning behaviours, such as intensive and active teaching and teaching of learning strategies, were observed less frequently.

to concepts such as Discovery Learning, Action Learning or Experiential Learning.

International participants in the FRD program emphasized in their mid-term and final evaluations, which took the form of personal letters to their families and colleagues at work, that the learning they had applied had resulted in (a) improved performance, retention and transfer of content at stake; (b) expanded skills to clarify visions and mental models, and to better understand complexity; (d) deep internalization of newly acquired attitudes, values and behaviour patterns; (e) clear opportunities to integrate the new approaches into their professional work; and (f) planned actions in the community and work context.

During the learning process in the two examples explained, participants said that they gained confidence and self-esteem. This removed one of the biggest stumbling blocks to learning even in a language that was not their mother tongue.[57] It often resulted in a sense of satisfaction, and this was an extra motivation from within towards continuous self-development, in which we as facilitators were only catalysts. They learned to learn, which they said had been often neglected in their teaching in schools and universities in the past. They changed from doing something because they had to comply with course expectations to doing something they enjoyed doing, and that pleasure reinforced the habit of learning. They found this learning approach to be a more engaging way to learn. Focusing on what they were good at also motivated them to overcome their weaknesses in other areas. They learned to become more creative in solving problems, to develop a more creative mindset, a can-do attitude and a felt need to commit to action. In the learning process, they also learned new skills and abilities such as working in small groups, presentation skills, leadership and experiencing things for themselves.

Along with higher achievement, we as facilitators could also appreciate a narrowing of the gap between high and low performing participants, improved social skills and collaboration, increased curiosity, improved workshop climate, reduced 'discipline' problems, improved skills for conflict resolution and more empathy and care for others! All this will certainly enhance lifelong learning.

---

57 As Peter Drucker (1995), organisational psychologist, states: "No self-confidence is one of the greatest barriers for learning"

Moreover, after experiencing these learning programs, the participants reflected on what they had achieved. In addition to sharing valuable personal experiences during the workshop, they realized the importance of knowing that they were not the only ones looking for more process-oriented approaches. Most participants also emphasized that they had not only gained knowledge about participatory approaches, but, most importantly, gained more confidence in their ability to learn by doing. One specifically mentioned her "personal empowerment" and a greater sense of self-direction. Others, more boldly, added that the learning environment made them realize that it is not so much the lack of institutional resources that hinders their work in the field with the local population. A much more important problem is their lack of trust in the population and vice versa and thus the low participation of the local population in development work. In other words, the local population is not going to contribute with their life experience, time, and social amenity if their knowledge and skills are not respected as building blocks for their own development initiatives.

Many aspects mentioned in the evaluations during and after the programmes could have also come from Discovery Learning, Action Learning, Cooperative Learning, or Experiential Learning. Yet, the Spiral of Learning Approach surpassed some of the shortcomings of these approaches.

This approach to learning is not politically neutral and therefore helps to better understand the context of social injustice. This was the case in the example of Social Forestry, but also in the set-up of development research in northern Nicaragua. It often led to social transformation and equitable development because the underlying power issues were an inseparable and integral part of learning processes.

The Spiral of Learning approach places social change at the centre of learning. It adds an important ingredient to hands-on learning in PAR. It adds an awareness of the value of local knowledge and the experiences of the people with whom professionals in the field will work, while at the same time prompting awareness of their own fundamental biases, prejudices, attitudes, and core values in relation to this knowledge and experience. This makes the power differences between, for example, farmers and foresters visible and makes it possible to turn the relationships around. It also helps a local

population to better understand structural oppression beyond the case at stake.

In practice, development work has many uncertainties, as it has to do with people, their culture, their history, their socio-economic and political situation, and their different interests. These uncertainty factors are not a problem to overcome, but an important resource to respect and enhance, as it is local knowledge that finds its meaning within a cultural framework.

Creating situations and methodologies with the possibility to reflect on one's own ideas, to unlearn critical but often unconscious attitudes and beliefs and to open the mind to new ideas and perspectives turned out to be an important result of the Spiral of Learning approach. As was mentioned by participants in the ELI course: "From the beginning seen as ignorant, farmers and local dwellers are now recognised as knowledgeable partners". Without a doubt, their commitment to supporting local initiatives is a prerequisite for adopting participatory approaches and Action Research in the future. By testing and experimenting with these new approaches (sometimes 'under the radar'... to avoid hindrance by hierarchy), they also learned to become more tactical and strategic in their work.

Later, interviewing people online, receiving anecdotal reports, and verbal and email communication with former participants over the course of the years has strengthened the conclusion that these learning programmes had a transformative effect, leading to a significant change in the perception of the participants and, in a sense, a transfer of power. Participants mentioned the integrative result as the previously hidden links with farmers, men, and women had been exposed, and they indicated that the learning had an irreversible effect. It was not easily forgotten or could only be ignored or unlearned with great effort. The personal action plan made the lessons applicable, relevant, and doable for their own organisations. As a result, the learning has had a trickle-down effect on the organisations and the back-home situation. In this way the Spiral of Learning ultimately leads to 'empowerment' of the local population and to empowerment of the professionals vis-à-vis the organisations from which they work.

The most important starting point and goal was therefore equality and the insight that this was not obvious but had to be acquired, which has consequences for cultural patterns.

From a socio-political perspective, it is essential to value and strengthen the local initiatives of male and female residents/farmers in local production and land use systems. It is also important from a very pragmatic necessity: in general, farmers know their own environment through experience and constant experimentation. They are therefore an important source of locally proven and relevant knowledge. Indeed, to maintain political and social awareness and activity, professional development work must be rooted in the public and political, but also in the private and personal.

Today, more importantly, due to the magnitude of environmental and climate change challenges, a successful and sustainable development strategy requires that local people themselves, not just policymakers and government officials, be recognised as those responsible for managing their natural resources and as stewards of the natural environment (Lammerink and Prinsen, 1994, p. 29).

During the years, we have developed a powerful learning approach that made participants, such as forest rangers, rural development experts or social researchers, aware of the importance of seeing local initiatives. More importantly, we focused on developing alternative approaches that are still necessary to initiate and implement new production initiatives based on this knowledge, in which local dwellers are the building blocks.

Nevertheless, an important realization during these years has also been how strongly professionals are influenced or in a sense indoctrinated by the ideology of development. Professionals are too often the problem. There is a need to call for self-reflexivity as a bedrock principle in the world of professionals in sustainable development programmes. In other words, there should be a constant reminder to reverse the relationship, i.e., to watch, to observe, to sit down and listen, to learn without interrupting, to keep quiet and not to rush.

Of course, I realise that this approach assumes that people are usually nice to each other … not angels but pretty decent (as opposed to selfish, extrinsically motivated, and naturally bellicose), and so participants in the programmes are good in principle and should be trusted to do good so that we can trust the participants, just as the participants can trust the people they might work with in the future.

In my experience, the Spiral of Learning approach strengthens the belief in the power and creativity of people, which will empower

development professionals to keep themselves people-oriented, promote knowledge exchange, resilience, and self-reliance. However, I am aware of the wise words of Orlando Fals-Borda: 'You sow the seed, but it has its own dynamic'.[58]

58 Orlando Fals-Borda in an interview: 'One sows the seed, and it takes its own dynamics, falls on good soil, falls on bad soil, falls on infertile soil, grows or does not grow according to those circumstances or according to the contexts and that goes beyond the forces of any person'. [uno siembra la semilla y ella toma su propia dinámica, cae en Buena tierra, cae en mala tierra, cae en tierra infértil, crece o no crece según esas circunstancias o según los contextos y esto va mas allá de las fuerzas de cualquier persona]' (Herrera Farfán and López Guzmán 2012, p. 42).

Bibliography

ADESO "las Segovias" 1996, *Workshop 1 of the Specialization Course Participatory Experiences for Social Development*. [I Taller del Curso de Especialización Vivencias Participativas para el Desarrollo Social]. Estelí, Nicaragua, ADESO.

ADESO "las Segovias" 1997a, *Participatory Experiences for Local Development - Specialization Course - II Workshop on Participatory Techniques*. [Vivencias Participativas para el Desarrollo Local – Curso de Especialización – II Taller Técnicas Participativas]. Estelí, Nicaragua, ADESO.

ADESO "las Segovias" 1997b, *Participatory Experiences for Local Development - Specialization Course- III Workshop on the Return of Information from Participatory Action Research*. [Vivencias Participativas para el Desarrollo Local – Curso de Especialización – III Taller La Devolución de la Información desde la Investigación Acción Participativa]. Estelí, Nicaragua, ADESO.

ADESO 1997c, *Contributions to the Methodological Debate*. [Aportes para el Debate Metodológico]. Estelí, Nicaragua, ADESO.

Alforja 1983, *Cantimplora, a seed planted in good soil ... Nicaraguan experience of peasant historical-cultural retrieval*. [Cantimplora, una semilla plantada en Buena tierra… Experiencia de recuperación histórico-cultural campesina nicaragüense]. San José, Costa Rica.

Anderson, CR, Bruil, J, Chappell, MJ, Kiss, C and Pimbert MP 2021, *Agroecology now!: Transformations towards more just and sustainable food systems* (p. 199). Springer Nature. On-line at doi.org/10.1007/978-3-030-61315-0_9.

Argyris, C and Schön, D 1978, *Organizational Learning: A Theory of Action Perspective*. Reading, Massachusetts: Addison-Wesley Publishing Co.

Armstrong, SJ and Mahmud, A 2008, Experiential learning and the acquisition of managerial tacit knowledge. *Academy of Management Learning and Education*, *7*(2), pp. 189-208.

Baloche, L and Brody, CM 2017, Cooperative learning: Exploring challenges, crafting innovations. *Journal of Education for Teaching*, *43*(3), pp. 274-283. On-line at https://doi.org/10.1080/02607476.2017.1319513.

Banks, S Armstrong, A, Carter, K, Graham, H, Hayward, P, Henry, A, Holland, T, Holmes, C, Lee, A, McNulty, A and Moore, N 2013, Everyday ethics in community-based participatory research. *Contemporary Social Science*, *8*(3), pp.263-277. On-line at https://doi.org/10.1080/21582041.2013.769618

Basseches M 2005, The development of dialectical thinking as an approach to integration. *Integral review*, *1*(1), pp. 47-63.

Boal A 1980, *Theatre of the Oppressed, volume 2 - exercises for actors and non-actors [Teatro del oprimido, tomo 2 – ejercicios para actores y no actores]* Editorial Nueva Imagen México

Bolton, G 2010, *Reflective practice: Writing and professional development*. Sage Publications.

Borrini-Feyerabend, G (ed) 1997, *Beyond Fences: Seeking Social Sustainability in Conservation, Volume 2*. Gland, Switzerland, IUCN.

Borrini, G and Buchan, D 1997, Beyond fences: seeking social sustainability in conservation. Vol. 2: A resource book. Gland, Switzerland, IUCN.

Broadbridge, E, Jonas, U and Warren, C (eds) 2011, *The school for life: NFS Grundtvig on education for the people* (Vol. 1). Aarhus Universitetsforlag.

Brunschwig, J, Lloyd, GER and Pellegrin, P (eds) 2003, *A Guide to Greek Thought: Major Figures and Trends*. Harvard University Press.

Bulman, C and Schutz, S (eds) 2013, *Reflective practice in nursing*. John Wiley and Sons.

Burns, S and Bulman, C 2000, *Reflective practice in nursing: The growth of the reflective practitioner*. Second Edition. Blackwell.

Cappellano, LC 2013, *Mural tribute to Paulo Freire*. [Painel Paulo Freire]. Campinas, Brasil. Available on: https://commons.wikimedia.org/wiki/File:Painel.Paulo.Freire.JPG#/media/Archivo:Painel.Paulo.Freire.JPG [Accessed 17th July 2022].

Cartwright, S 2002, Double-loop learning: A concept and process for leadership educators. *Journal of Leadership Education*, *1*(1), pp. 68-71. On-line at http://doi.org/10.12806/V1/I1/TF1

Chambers, R 1997, *Whose reality counts* (Vol. 25). London: Intermediate technology publications.

Chambers, R, Pacey, A and Thrupp, LA (eds) 1989, *Farmer first: Farmer innovation and agricultural research*. London, UK, Intermediate Technology Publications.

Cornwall, A and Fleming, S 1995, Context and complexity: Anthropological reflections of PRA. *PLA NOTES*, pp. 8-12. Available on: https://www.iied.org/pla-24-critical-reflections-practice.

Dewey, J 1933, *How We Think. A Restatement of the Relation of Reflective Thinking to the Educative Process*. Boston, M.A., DC Heath and Co Publishers.

Dore, EW and Molyneux, M 2000, *Hidden Histories of Gender and the State In Latin America*. Durham, North Carolina, United States, Duke University Press.

Drucker, PF 1995, *Managing in a Time of Great Change*. 6th ed. New York, Truman Talley Books /Dutton.

Fals-Borda, O 1980, Science and the common people. In: Dubell, F, Erasmie, T and de Vries, J (eds) *Research for the people, research by the people – Selected Papers from the International Forum on Participatory Research in Ljubljana, Yugoslavia.* Linköping, Sweden, Linköping University, pp. 13-41.

Fals-Borda, O 1982, Participatory research and rural social change. *Journal of Rural Cooperation*, *10*(1), pp. 25-40. Available at: https://edepot.wur.nl/425683 (Accessed: 18 of July 2022)

Fals-Borda, O 1992, Science and the people: new reflections. [La ciencia y el pueblo: nuevas reflexiones]. In: Salazar, MC (ed) *Participatory Action Research - beginnings and developments*. [La Investigación Acción participativa – inicios y desarrollos]. Madrid, Spain, Editorial Popular, pp. 65-85.

Fals-Borda, O and Rahman, MA (eds) 1991, *Action and knowledge: Breaking the monopoly with participatory action research*. London, UK, Intermediate Technology Publications Ltd.

Finlay, L 2008, *Reflecting on reflective practice*. Practice-based Professional Learning Paper 52, The Open University. Available at: http://oro.open.ac.uk/68945/1/Finlay-%282008%29-Reflecting-on-reflective-practice-PBPL-paper-52.pdf [Last accessed on 20th July 2021].

Fook, J and Gardner, F 2007, *EBOOK: Practising Critical Reflection: A Resource Handbook*. UK, McGraw-Hill Education.

Foucault, M, 1975, *Surveiller et punir: Naissance de la prison*. Paris, Gallimard. Translated as Discipline and Punish: The Birth of the Prison. Alan Sheridan (trans.), New York, Pantheon, 1977.

Freire, P, 1970, The adult literacy process as cultural action for freedom. *Harvard educational review*, *40*(2), pp.205-225. On-line at https://doi.org/10.17763/haer.40.2.q7n227021n148p26

Freire, P, 1972, *Pedagogy of the oppressed*. Harmondsworth. UK: Penguin, 19721.

Freire, P, 1977, *Letters to Guinea-Bissau - Notes from an ongoing pedagogical experience*. [Cartas a Guinea-Bissau - Apuntes de una experiencia pedagógica en proceso]. México, Siglo XXI Editores.

Freire, P, 1998, Reprint: Cultural action for freedom. *Harvard Educational Review*, *68*(4), pp.476-522. On-line at https://doi.org/10.17763/haer.68.4.656ku47213445042

Freire, P, 2008, The "Banking" Concept of Education. In: Bartholomae, D. and Petrosky, T, eds, *Ways of reading: an anthology for writers*. (8 th ed) Boston, Bedford/St. Martins, pp. 242 – 254.

Fronek, P (Interviewer), 2012, *Critical Reflection: In conversation with Jan Fook* [Podcast 22]. 6th September. http://www.podsocs.com/podcast/critical-reflection/ [Last accessed on 19th July 2021].

Galeano, E 1971, *Open Veins of Latin America: Five Centuries of the Pillage of a Continent.* [Las venas abiertas de América Latina]. México, Siglo XXI Editores.

Gaventa, J and Cornwall, A 2006, Challenging the boundaries of the possible: Participation, knowledge and power. *IDS bulletin*, *37*(6), pp. 122-128. On-line at https://doi.org/10.1111/j.1759-5436.2006.tb00329.x.

Gelder, BV and Lammerink, MP 1993a. *The Spiral Model of Learning and Training Methodology*, Apeldoorn, The Netherlands, FMD Consultants.

Gelder, BV and Lammerink, MP 1993b, *Handouts for Forestry for Rural Development Course*. Apeldoorn, The Netherlands, FMD Consultants.

Gelder, BV and O'Keefe, P 1995. *The new forester*. London, UK, Intermediate Technology Publications Ltd.

Gibbs, G 2013, Learning by Doing: a guide to teaching and learning methods. *Oxford, Oxford Centre for Staff and Learning Development (OCSLD).* Available at: https://shop.brookes.ac.uk/product-catalogue/oxford-centre-for-staff-learning-development/books-publications/ebooks/learning-by-doing-a-guide-to-teaching-and-learning-methods-by-graham-gibbs-ebook [Last accessed on 25th September 2021].

Gibbs, G, Farmer, B and Eastcott, D 1988, *Learning by Doing. A Guide to Teaching and Learning Methods*. Birmingham, Far Eastern University, Birmingham Polytechnic. Available at: https://thoughtsmostlyaboutlearning.files.wordpress.com/2015/12/learning-by-doing-graham-gibbs.pdf [Accessed 17th July 2022].

Gibson, R 1999, Paulo Freire and pedagogy for social justice. *Theory & Research in Social Education*, *27*(2), pp. 129-159. On-line at https://doi.org/10.1080/00933104.1999.10505876

Groenendijk, EMC 2009a, Experience-based learning in the geo-information sciences: 15 years of nuts game. *Österreichische Zeitschrift für Vermessung und Geoinformation*, *79*(1), pp. 120-128.

Groenendijk, EMC, 2009b, Experience-based learning and e-learning: A perfect com- bination. The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Science, Vol. XXXVIII-6/W7. Hannover, Germany, ISPRS, pp. 36-41.

Gunder Frank, A 1967, *Capitalism and Underdevelopment in Latin America: historical studies of Chile and Brazil*. New York, Monthly Review Press.

Gutiérrez, G 1982, *The historical strength of the poor*. [La fuerza histórica de los pobres]. Salamanca, Ed. Sígueme.

Halebsky, S and Harris, RL, (eds) 1995, *Capital, power and inequality in Latin America.* New York, Routledg1e.

Hassan, Z 2016, *The global food system: A brief guide to the conflicting logics of food*. Paradigm Shakers Book, Amazon Kindle Edition, Zaid Hassan.

Heard, E 2022, Ethical challenges in participatory action research: Experiences and insights from an arts-based study in the pacific. *Qualitative Research*, p.14687941211072797. On-line at https://journals.sagepub.com/doi/10.1177/14687941211072797

Huizer, G 1973, *Peasant rebellion in Latin America: The origins, forms of expression, and potential of Latin American peasant unrest*. London, Pelican Latin American library, Penguin Books Ltd.

Jara, HO 1981, *Popular Education: the educational dimension of political action. [Educación popular: la dimensión educativa de la acción política].* Ceaspa/ Alforja, Panamá.

Jara, HO 1994, *To systematize experiences*. [Para sistematizar experiencias]. San José, Costa Rica, Alforja.

Jara, HO 2010, Popular education and social change in Latin America. *Community Development Journal*, *45*(3), pp. 287-296. On-line at https://doi.org/10.1093/cdj/bsq022.

Jara, HO 2012, *The systematization of experiences, practice, and theory for other possible worlds*. [La Sistematización de experiencias, práctica y teoría para otros mundos posibles]. San José, Costa Rica, Alforja.

Jara, HO 2020. *Latin American Popular Education History and ethical, political, and pedagogical keys*. [La Educación Popular Latinoamericana Historia y claves éticas, políticas y pedagógicas]. First Colombian edition. Medellín, Colombia, Ediciones Pluriverso Editorial.

Jara, HO (coordinator), 2021, *Paulo Freire is alive! Latin American and Caribbean Campaign in Defense of Paulo Freire's Legacy*. Systematization

of ten experiences. [¡Paulo Freire vive! Campaña latinoamericana y caribeña en defensa del legado de Paulo Freire. Sistematización de diez experiencias]. Consejo de Educación Popular de América Latina y el Caribe (CEAAL), San José, Costa Rica; Guadalajara, México; Brasilia, Brasil.

Johnson, DW and Johnson, RT, 2009, An educational psychology success story: Social interdependence theory and cooperative learning. *Educational researcher*, *38*(5), pp. 365-379.

Johnson, DW and Johnson, RT 2017, Cooperative Learning. In: Gobierno de Aragon: *I Congreso Internacional Innovación Educación*, Zaragoza, España, 22-23 Septiembre 2017. Zaragoza, pp. 1-12.

Johnson, DW and Johnson, RT 2018, Cooperative learning: The foundation for active learning. In: Brito, S (ed*) Active Learning- Beyond the future*. London, IntechOpen. Online at: http://dx.doi.org/10.5772/intechopen.81086.

Kagan, S and Kagan, M 2009, *Kagan Cooperative Learning*. San Clemente, California, A Kagan Publishing.

Kolb, AY and Kolb, DA 2005, Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of management learning & education*, *4*(2), pp.193-212.

Kolb, DA 1984, *Experiential Learning: Experience as the source of learning and development,* Prentice-Hall, Englewood Cliffs, New York.

Lammerink, MP 1993, *Participatory action research with small rice-farmers, brick-makers, and fisher-folk -Experiences from Latin America and The Netherlands*. [Participatief actieonderzoek met rijstboeren, steenbakkers en vissersvolk – Ervaringen uit Latijns-Amerika en Nederland]. Den Haag, Dr. Gradus Hendrik Stichting. Online at https://www.academia.edu/2584101/Participatief_actieonderzoek_met_rijstboeren_steenbakkers_en_vissersvolk_ervaringen_uit_Latijns_Amerika_en_Nederland.

Lammerink, MP 1995, *Learning together, experiences in participatory research*. [Aprendiendo juntos, vivencias en investigación participativa]. Managua, Nicaragua, Editorial Vanguardia. Online at https://www.academia.edu/2584106/Aprendiendo_juntos_Vivencias_en_investigaci%C3%B3n_participativa [Last accessed on 25th October 2021].

Lammerink, MP 1996, Learning about people's participation and Action Research. In: Carr, T, ed, *Broadening perspectives in Action Research*. Brisbane, Australia, ALARPM, pp.125-127. Online at https://www.academia.edu/43319661/Learning_about_peoples_participation_and_action_research.

Lammerink, MP 1997, R*esearch for the sustainable development of the Segovias*. [Onderzoek voor de duurzame ontwikkeling van de Segovias]. Haarlem, The Netherlands, FMD, *Mission Report 13*.

Lammerink, MP 2000, *Games for Learning*. Haarlem, Netherlands, FMD. Online at https://www.fmd.nl/wp-content/uploads/2021/12/GAMES-FOR-LEARNING_2020_-folder-with-figures-7.pdf [Last accessed on 6th July 2022].

Lammerink, MP 2001, *Spiral of Learning process* – Handouts for Workshops. Haarlem, The Netherlands, FMD Consultants.

Lammerink, MP and Bolt, E 2002, *Supporting Community Management: A manual for training in community management in the water and sanitation sector*. Occasional Papers Series (34), Delft/Haarlem, Netherlands, IRC/FMD. Online at https://www.ircwash.org/resources/supporting-community-management-manual-training-community-management-water-and-sanitation [Last accessed on 5th October 2021].

Lammerink, MP and de Jong, D (eds) 1999, Community Water Management. *PLA Notes*. Special Theme Section on Community Water Management, (35), London, IIED, 23 – 85. Online at https://pubs.iied.org/6154iied [Last accessed on 6th October 2021].

Lammerink, MP and de Zeeuw, H 1994, *Training for Trainers – Manual for extension workers*. Wageningen, The Netherlands, International Agricultural Centre.

Lammerink, MP and Mazariegos, A 1988, *Popular Education Methodology for Social Workers - An Experience in Nicaragua*. [Metodología de Educación Popular para Trabajadores Sociales – Una Experiencia en Nicaragua]. Cuadernos de Dinámica Habitacional (CDH). Ensayos y Documentos 5, México, COPEVI, 1-28. Online at https://www.academia.edu/43310302/Metodologia_de_Educacion_Popular_para_trabajadores_sociales_Una_experiencia_en_Nicaragua [Last accessed on 6th July 2022].

Lammerink, MP and Prinsen, G 1994, Participatory tools for enhancing local initiatives. *Forests, Trees and People Newsletter*, (23), February 1994, 29-33. Online at https://www.academia.edu/43290240/Participatory_tools_for_enhancing_local_initiatives [Last accessed on 7th July 2022].

Lammerink, MP and Wolffers, I, (eds) 1994, *Selection of some examples of Participatory Research*. The Hague, DGIS. Also available in French, Spanish and Vietnamese language. Online at https://www.academia.edu/43481703/Some_selected_examples_of_participatory_research [Last accessed on 25th October 2021].

Leach, G and Mearns, R 1988, *Beyond the Wood fuel Crisis: people, land and trees in Africa*. London, Earthscan Publications Ltd.

Lewin, K 1946, Action Research and Minority Problems. *Journal of Social Issues*, 2, 34-46. Online at http://dx.doi.org/10.1111/j.1540-4560.1946.tb02295.x.

Lewin, K 1948, *Resolving Social conflicts, Selected Papers on Group Dynamics (1935-1946)*. New York, Harper.

Little, F 2019, Training of Trainers - Facilitative approaches. Elst, Netherlands, Little and de Geer.

Manning, R 2004, *Against the grain – How Agriculture has hijacked Civilization*. New York, North Point Press.

Merriam Webster Dictionary, 2002. On-line at https://www.merriam-webster.com/dictionary/frame%20of%20reference. [Accessed 2 November 2021].

Meyer, JH and Land, R 2005, Threshold concepts and troublesome knowledge (2): Epistemological considerations and a conceptual framework for teaching and learning. *Higher education*, *49*(3), pp.373-388. On-line at https://doi.org/10.1007/s10734-004-6779-5.

Morris, TH 2020, Experiential learning–a systematic review and revision of Kolb's model. *Interactive Learning Environments*, *28*(8), pp.1064-1077.On-line at https://doi.org/10.1080/10494820.2019.1570279.

National Co-ordinating Centre for Public Engagement and Centre for Social Justice and Community Action, Durham University 2012, *Community-based participatory research – A guide to ethical principles and practices.* Durham, UK. On-line at https://www.publicengagement.ac.uk/sites/default/files/publication/cbpr_ethics_guide_web_november_2012.pdf [Last accessed: 15th March 2022].

Noben, I, Deinum, JF and Hofman, WA 2022, Quality of teaching in higher education: reviewing teaching behaviour through classroom observations. *International Journal for Academic Development*, *27*(1), pp.31-44. https://doi.org/10.1080/1360144X.2020.1830776.

Núñez, HC 1985, *Educate to transform, transform to educate. [Educar para transformar, transformar para educar]*. IMDEC, Guadalajara, México.

One such day in the community of Cantimplora, 1984, [Un día de tantos en la comunidad Cantimplora]. [Slight series] San José, Costa Rica, Alforja.

Ory Herrera Farfán, NA & López Guzmán, L (eds) 2012, *Science, commitment, and social change*. Texts by Orlando Fals-Borda. [Ciencia,

compromiso y cambio social. Textos de Orlando Fals-Borda]. Buenos Aires, El Colectivo – Lanzas y Letras.

Pedler M 2016, Reginald Revans: The Pioneer of Action Learning. In: Szabla, D, Pasmore, W, Barnes, M and Gipson, A (eds) *The Palgrave Handbook of Organizational Change Thinkers*. London, UK, Palgrave Macmillan pp. 1-19. On-line at https://doi.org/10.1007/978-3-319-49820-1_20-1 [Accessed 17th July 2022].

Rambaldi, G, Chambers, R, McCall, M and Fox, J 2006, Practical ethics for PGIS practitioners, facilitators, technology intermediaries and researchers. *Participatory learning and action*, *54*(1), Mapping for change: practice, technologies and communication. 54(1), pp.106-113. London, UK, IIED. Available on: https://pubs.iied.org/g02155.

RECOFT, 2020, *Social forestry and climate change in the ASEAN region: Situational analysis 2020.* Bangkok, Thailand, RECOFT, ASEAN Working Group on Social Forestry. Serial number: 379. ISBN 978-616-8089-28-6.

Reich, R 2003, The Socratic method: What it is and how to use it in the classroom. *Speaking of Teaching*, *13*(1), pp.1-4. Stanford, USA, Center for Teaching and Learning (CTL), Stanford University. Reprinted with permission in: https://tomprof.stanford.edu/posting/810 [Accessed: 15th November 2021].

Report of the World Commission on Environment and Development 1987, *Our Common Future*.[Brundtland Report]. Oxford, New York, Oxford University Press.

Revans, RW and Pedler, M (eds) 2011, *ABC of Action Learning*. Farnham, Gower Publishing.

Robbins, P 1991, *How to plan and implement Peer Coaching Program*. Alexandria, Association for Supervision and Curriculum Development.

Rokach, A 2016, The impact professors have on college students. *International Journal of Studies in Nursing*, *1*(1), p. 9. Published by July Press. On-line at http://dx.doi.org/10.20849/ijsn.v1i1.80.

Romme, AGL and Van Witteloostuijn, A 1999, Circular organizing and triple loop learning. *Journal of Organizational Change Management*. Vol. 12, No. 5, 439-453. On-line at https://doi.org/10.1108/09534819910289110.

Rosanvallon, P 2020, The century of populism: history, theory, criticism. [Le siècle du populisme: histoire, théorie, critique]. Paris, Seuil.

Salas, MA and Tillmann, HJ 2010, *Participatory Action Research: Embracing the knowledge perspective within field research*. Regional Center for Social

Science and Sustainable Development, Faculty of Social Sciences, Chiang Mai University. ISBN: 978-974-672-488-3 On-line at www.rcsd.soc.cmu.ac.th [Last accessed on 15th January 2022].

Santos, Boaventura Sousa (Quinta Feira, 8 de Outubro 2020) Europe, USA and China. [A Europa, os EUA e a China]. Jornal Publico. ANO XXXI, 8. On-line at: https://www.publico.pt/2020/10/08/opiniao/noticia/europa-eua-china-1934051 [Accessed 18th July 2022].

Schein, EH, 2002, The anxiety of learning. Interview by Diane L. Coutu. *Harvard Business Review*, *80*(3), pp.100-6.On-line at https://hbr.org/2002/03/the-anxiety-of-learning [Accessed 15th October 2021].

Schön, DA 1983, *The reflective practitioner: How professionals think in action*. London, Maurice Temple Smith.

Schön, DA 1987, *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. Jossey-Bass.

Schönhuth, M and Kievelitz, U 1994, *Participatory learning approaches: rapid rural appraisal, participatory appraisal. An introductory guide*. vol. no. 248. Rossdorf, Germany, TZ-Verlagsgesellschaft.

Schouten, T 2000, *The Seventh Video on Community Water Supply Management*. [Video] Delft, The Netherlands, IRC. https://www.youtube.com/watch?v=lep6-mwKMkE [Accessed 19th October 2021].

Shrivastava, O 1989, Participatory training: some philosophical and methodological dimensions. *Adult Education and Development*, (32), Bonn, Germany, DVV International, 3-21.

Statements of American Anthropological Association. https://ethics.americananthro.org/category/statement/ [Accessed 19th January 2022].

Theis, J and Grady, HM 1991, *Participatory rapid appraisal for community development – A training manual based on experience in the Middle East and North Africa*. London, United Kingdom, IIED.

Tolman, CW, Cherry, F, van Hezewijk, R & Lubek, I 1996, *Problems of theoretical psychology*. North York, Ontario, Captus Press.

Torres Carrillo, A 2010, Generating Knowledge in Popular Education: From participatory research to the systematization of experiences. *International Journal of Action Research*, *6*(2-3), pp. 196-222.

Veldhuizen, LV, Waters-Bayer, A and Zeeuw, HD 1997. *Developing technology with farmers*. London, Zed Books Ltd. Online at https://edepot.wur.nl/429476 [Accessed: 18 of July 2022].

Vargas, L and Bustillos, G 1984, *Participatory techniques for Popular Education*. [Técnicas participativas para la educación popular]. San José, Costa Rica, Alforja.

Vargas, L and Bustillos, G 1988, *Participatory techniques for Popular Education – Volume II*. [Técnicas participativas para la educación popular – Tomo II]. 2th ed, San José, Costa Rica, Alforja.

Zuber-Skerritt, O 1993, Research and development in management and higher education. *Occasional Papers Series (2),* Brisbane, Australia, University of Queensland, Tertiary Education Institute.

Action Learning, Action Research Association

The Action Learning, Action Research Association Ltd (ALAR Association, also known as ALARA) is a global network of programs, institutions, professionals, and people interested in using Action Learning and Action Research to generate collaborative learning, training, research and action to transform workplaces, schools, colleges, universities, communities, voluntary organisations, governments and businesses.

ALAR Association's vision is to create a more equitable, just, joyful, productive, peaceful and sustainable society by promoting local and global change through the wide use of Action Learning and Action Research by individuals, groups and organisations.

ALAR Association provides information and networking for researchers and practitioners, a peer-reviewed journal and other publications, like this *Action Research Practitioner Papers*, webinars, conferences and world congresses. It also supports professional development of practitioners and research activities. You can find out more about ALAR Association at https://www.alarassociation.org/ or about the *Action Learning and Action Research Journal* at https://alarj.alarassociation.org/.

Your notes