CHAPTER 3

PARTICIPATORY ACTION RESEARCH DESIGN

3.1 INTRODUCTION

This study qualifies as Action Research (AR) in the most widely used sense of the term, and specifically as Participatory Action Research (PAR). Kember (2000:23-24) indicates that a project should jointly fulfil three conditions to be considered an action research, and he says

> *Firstly, it takes as its subject-matter a social practice, regarding it as a form of strategic action susceptible of improvement; secondly, the project proceeds through a spiral of cycles of planning, acting, observing and reflecting, with each of these activities being systematically and self-critically implemented and interrelated; thirdly, the project involves those responsible for the practice in each of the moments of the activity.*

Following Kember's indication, my study embraces the three required conditions above. My field of specialisation is teacher education, and more specifically, the teaching practices of primary school teachers. During the study I always negotiate the teachers' involvement in the different phases of the cycles of this PAR process.

The reason for selecting AR arises from the fact that it is an empowering design for investigation, change and improvement at work place level (Cohen, Manion & Morrison, 2000:226; McNiff & Whitehead, 2006:7; McMillan & Schumacher, 2006:414; Henning, Van Rensburg, & Smith,, 2004:47); and the appropriated design for areas such as methods of facilitating learning, learning strategies, continuing professional development of teachers (Cohen et al., 2000: 226). Moreover, AR is suitable for practitioners in general without specific scientific knowledge (McNiff & Whitehead, 2006:7). Moreover, I selected AR since it improves the practitioners' practice, the understanding of the practice performed and the situation in which the practice is carried out, and at the same time AR involves the

practitioners "in all phases of planning, acting, observation and reflecting" (Carr & Kemmis, 1986:165). My perception is that the PRs and I are the ones who are affected by the issues being studied and we can learn more from one another in full involvement and participative approach. In developing AR I am explicitly showing my beliefs with respect to both my position as a research within the research process and the process of generating knowledge (Macniff & Whitehead, 2006). Accordingly, my ontological assumption is that in this study (a) I am committed to doing what I think to be better and respecting what the PRs think in relation to their points of view; (b) I want to understand what I do as a TCPD facilitator and research-mentor and what the PRs do as owners of their process of CPD; and (c) I can influence the PRs and they can also influence me throughout this study. From this stance the PRs and I are the object of this study and our practice is under scrutiny. The knowledge generated from this study will be a result of our negotiation as practitioners, since the teachers are reflective practitioners and the PRs and I are involved in a study "that seeks the development of theoretically informed practices" (McTaggart: 1997:30).

In the 1930s and 1940s, with John Collier and Kurt Lewin respectively, AR was associated with social change and social justice. Years later, in the1950s, AR was taken up in education, specifically by the teaching profession in spite of its decline during the late 1950s in America. By that time, Steenhouse (1975) had advocated AR in Britain and Stephen Kemmis – with a participatory focus – in Australia. According to McNiff and Whitehead (2006:36) the term 'action research' first appeared in Martin Luther King's speech in 1961. From there, the work of Whitehead (1976) shows the linkage of AR with the improvement of learning; John Elliot (1991) developed an AR interpretive approach and Jack Whitehead developed a self-study perspective regarding teachers being responsible for their own practice.

In 1940 Lewin was named the father of AR. From this date to the current stage of research, a variety of approaches to AR have been conceived in the context of the shift of epistemological perspectives from positivist to interpretive ones. AR is one of the research paradigms used in the social sciences and particularly in educational settings. As McNiff and Whitehead (2006:7) state, AR has become increasingly popular around the world as a form of professional learning. Kember (2000:20) refers to AR as a "research philosophy" and says,

"It is regarded as neither the best nor the only viable approach". In the same vein, Zuber-Skerritt (1996:3) indicates that AR is recognised as an appropriate research paradigm for development in areas such as education, professional management and organisation. Accordingly, in recent decades, action research has been established as research paradigm.

My personal view is that AR is a research paradigm. My assumption is based on the following definition of paradigm: "A paradigm is a conceptual system containing basic assumptions of how the word operates" (Baronov, 2004:77). In this sense each person evolves an individual view to understand and interpret the world by creating her/his own criteria of significance of what is under investigation.

As a research paradigm, different types of AR can be distinguished according to the central aim of the study in which it is applied. Zuber-Skerritt (1996:4) describes three types of AR as Table 3.1 shows. Zuber-Skerritt (1996:4-5) connects the practitioner's role with the type of AR. In Technical AR the practitioners work in accordance with what is planned by the researcher; in Practical AR the practitioners are encouraged to take decisions and reflect on what they do; and in emancipatory AR the practitioners are in a position to change the system or the conditions.

An array of types of action research is outlined in the following table:

Types of Action Research	**Aims**	**Facilitator's Role**	**Relationship Between Facilitator and Participants**
1. Technical	Effectiveness/ efficiency of educational practice Professional development	Outside 'expert'	Co-option (of practitioners who greatly depend on facilitator)
2. Practical	As (1) above Practitioners' understanding Transformation of Their consciousness	Socratic role, encouraging participation and self-reflection	Cooperation (process consultancy)

Types of Action Research	Aims	Facilitator's Role	Relationship Between Facilitator and Participants
3. Emancipatory	As (2) above Participants' emancipation from the dictates of tradition, self-deception, coercion	Process moderator (responsibility shared equally by participants)	Collaboration Collective autonomy Collective reflection Open discussion Co-design of targets, plans
	Their critique of bureaucracy systematisation	Promoter of critical conscientiousness Agent and product of the research	Co-responsibility on answering to questions as *what, who, where and when*
	Transformation of the organisation and of the educational system		Co-responsibility on the conclusions and results
4. Synchronic	Participants' confidence on their work		
	Participants' awareness of their biases		
5. Participatory	Involvement of all stakeholders in the search of a solution	Internal promoter Friendly outsider	Negotiation Pre-emptive discussion
	Improvement of practices	Democratic facilitator	Co-responsibility on action and observation
	Critical analysis of the situation in which the participants work	Consciousness Raiser "Cultural broker"	Shared concern of the problem and goals
	Development of high levels of motivation	Scholar and activist	Participation and collaboration Non-hierarchical relationship
	Empowerment to act in innovative ways	Facilitator and provider of resources	Engaged relationship
	Development of communities within the usual routines	Change agent	Equal collaboration Reciprocal relationship

Types of Action Research	Aims	Facilitator's Role	Relationship Between Facilitator and Participants
	Involvement of all stakeholders in the search of a solution		
	Professional Development	Internal promoter	**Collaboration**
6. Asset-based AR	Involvement of all stakeholders using their assets		**Collaboration**
7. Collaborative	Improvement of their own actions		

Table 3.1: Types of action research and their main characteristics (adapted from Zuber-Skerritt, 1996:4)

From the above types of AR I have chosen participatory action research (PAR) to promote teachers' continuing professional development (TCPD) and improve my own practice. My choice first took into consideration a workable definition of AR as

> *a participatory, democratic process concerned with developing practical knowing in the pursuit of worthwhile human purposes, grounded in a participatory worldview (...) It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities.*
>
> (Reason & Bradbury, 2001:1)

Early in this chapter I described how this study could be situated in an AR paradigm. Thus, having indicated the types of AR in Table 3.1, I selected PAR as the appropriate type owing to its explicit participative nature and socially-engaged approach to generate knowledge.

Participatory AR is a stem of the endeavour to bring the research to lay individuals "through opinion makers such as Oprah Winfrey, Larry King and Ted Koppel" and the last kind of critical ethnographer comprises activists who performed social movements (Foyle & Valenzuela, 2005:220). The activities carried out in that framework in an education field McTaggart (cited by Foyle & Valenzuela, 2005) designated them as PAR. In this type of AR, there is an emphasis on authentic and democratic participation (Mouton & Babbie, 2001), as a result of a participant driven research since it focus on the PR's interest, concerns and willingness to participate in the different steps of the project. Therefore the participants involved in a PAR should initiate, benefit, be represented, legitimate and be accountable as elements to guide successful PAR (Kaupapa Mâori, quoted by Denzin & Lincoln, 2005; De Vos, 2005). In applying these criteria effectively throughout the research process, "empowering knowledge is created" (Denzin & Lincoln, 2005:35). In the present study I took into consideration those criteria and I tried to involve the six PRs in all processes of the development of the case studies.

The distinction between PAR and the other types of AR relies on the degree to which the main characteristics are taken into consideration rather than on the kind of those characteristics (Wadsworth, 1998), particularly to what participative principle is concerned. Participation and collaboration between the researcher and the participants through all phases of the research are "the most distinctive feature of PAR, which informs and influences all the other characteristics of this paradigm" (Mouton & Babbie, 2001). In this study I encouraged the PRs to reflect critically on their practice as learning facilitators and me as promoter or facilitator of TCPD and research mentor. These reflections assisted us in finding out issues to be improved and in designing innovative learning tasks within the learning objectives specified for Grade 1 and 2. This PAR reflected upon and examined how classroom practice could be a potential component for research and self-directed professional development. Another distinctiveness which guided the selection of PAR on promoting TCPD is that it involves all individuals affected by the issue being studied in the search for the appropriate solution (Mills, 2007). In substantiating this feature, my study involved all learning facilitators allocated to Grade 1 at Unidade 18 Primary School in 2007.

Moreover, PAR is identified as a research that "engages people from the academy and workplace in an entirely different relationship" (McTaggart, 1997:29). In this instance the distinctions between academic and workers aimed at stressing their common tasks as practitioners and the role they play in their respective workplace (McTaggart, 1997). The researcher is simultaneously scholar and change agent. In this PAR my intention was to encourage the PRs to take responsibility for their own CPD. To do this I used my experience as lecturer of instructional analysis, as promoter of TCPD and of principles of AR.

Apart from organising AR into types, as already mentioned earlier in this chapter, Zuber-Skerritt (1996:44) organises the *CRASP model of action research for professional development* as a summary of the referred theoretical framework and says that action research is:

- *Critical* (and self critical) collaborative enquiry by
- *Reflective* practitioners being
- *Accountable* and making the results of their enquiry public
- *Self-evaluating* their practice and engaged in
- *Participatory* problem-solving and continuing professional development.

(Zuber-Skerritt, 1996:85)

The elements indicated in this model characterise the activities in my study. Throughout the planning of my work and during the observation sessions the *Critical* (and self-critical) principle was used to collaboratively improve the learning and the planning of learning opportunities. During meetings and learningshops the practitioners discussed in groups and pair the various concepts to be clarified and the learning tasks to be resolved by the learner. In this study comments and suggestions from colleagues and critical friends were incorporated in all cycles of the action research.

The *Reflective* element is also referred to by Rudolph, Taylor and Foldy (2001). These authors understand this element as an important issue when working in a group and the

nature of reflective practitioners. They argue that reflection yield a "variety of perspectives on the situation and future options that can give way for changes to help break through established procedures" (405).

With respect to this principle, the practitioners in this study were *Reflective* from the early phases of the study. They reflected on their current practices to find out innovative solutions for the problems they faced. McNiff et al. (2003:47) corroborate this principle and say that practitioners should, among others 'pitfalls', reflect on their current practices in order to identify aspects to be improved. In this way they form images of the way forward. At the end of the group-work, the learningshop and action research cycles there was an *Accountable* attitude, since the teachers presented their work to their colleagues within the context of planning of learning opportunities.

With respect to the *Self-evaluating* element of AR, my study comprises individual and mutual observations. Individual observation during the learning opportunities gave way for self-evaluation. In this regard McNiff et al. (2003:47) argue that practitioners should monitor what they do and evaluate the new action.

This study can be qualified as a participatory AR. Thus all plans and actions were carried out in a *participatory* perspective, aiming at problem-solving and continuing professional development. Fullan (2001:108) corroborates this component and associates it with accountability and states: "It is … helpful to express what you value in the form of standards of practice and expectations of accountability, but only if coupled to capacity building and problem solving opportunities". In this study the practitioners were engaged in every stage of the action research cycles.

From the diversity of the AR family, I selected PAR as I intended to facilitate improvement of the practices of primary school teachers. As Stringer (2004:33) suggests

> *[PAR] brings people together in a dialogue and in a productive relationship that creates a sense of community through the sharing of perspectives, the*

> *negotiation of meaning, and the development of collaboratively produced activities, programs and projects.*

Accordingly, I have the view that PAR is the process that teachers can use to promote innovative practices towards their professional development, dealing with pragmatic issues of their day-to-day professional work.

The nature of AR can also be identified looking at its major characteristics. Kember (2000:24) advocates that seven characteristics basically describe AR, stating that "action research is concerned with social practice, aimed towards improvement, a cyclical process, pursued by systematic enquiry, a reflective process, participative, determined by participants. Based on Kember's description, I propose the following, namely that action research is:

- Concerned with social practice – specifically teaching
- Aims towards innovation
- A cyclical process
- Pursued by systematic enquiry
- A scholarly reflection
- Inclusive
- Participative
- Responsible/responsive
- Empathetic
- Determined by practitioners

(adapted from Kember, 2000:24)

Action research is concerned with social practice

Education is a social practice. Accordingly my study is about continuing professional development in an educational setting – the facilitation of the learning process in primary schools. The primary school teachers involved participated in this study working in their own work-place as suggested by Henning et al. (2004:47) and in the school's classroom with the

learners they were responsible for – thus, in an authentic context. The teachers were concerned with both their own professional development and with the learners' achievement, which corroborates Mills (2007:8) who states that "action research is socially responsive and takes place in a context". Therefore, to have accessibility to the learning facilitators at their context, I provided to the school principal my credential from my work place and the ethical clearance certificate obtained from the Faculty of Education (Appendix A).

Action research aims towards innovation

The aim of this study is to facilitate the improvement of practices of primary school teachers towards innovative professional development. This aim corroborates Stringer (2004:4) who states that participants work in social situations in order to improve their own social or educational practices. In this vein Mills (2007:8) argues that AR provides opportunities for participants to improve the lives of learners and to learn more about learning, teaching and policy-making matters. McNiff and Whitehead (2006:1) state that the main reasons for carrying out AR are the improvement of learning in order to improve educational practices and the advancement of knowledge and theory related to "how things can be done and why".

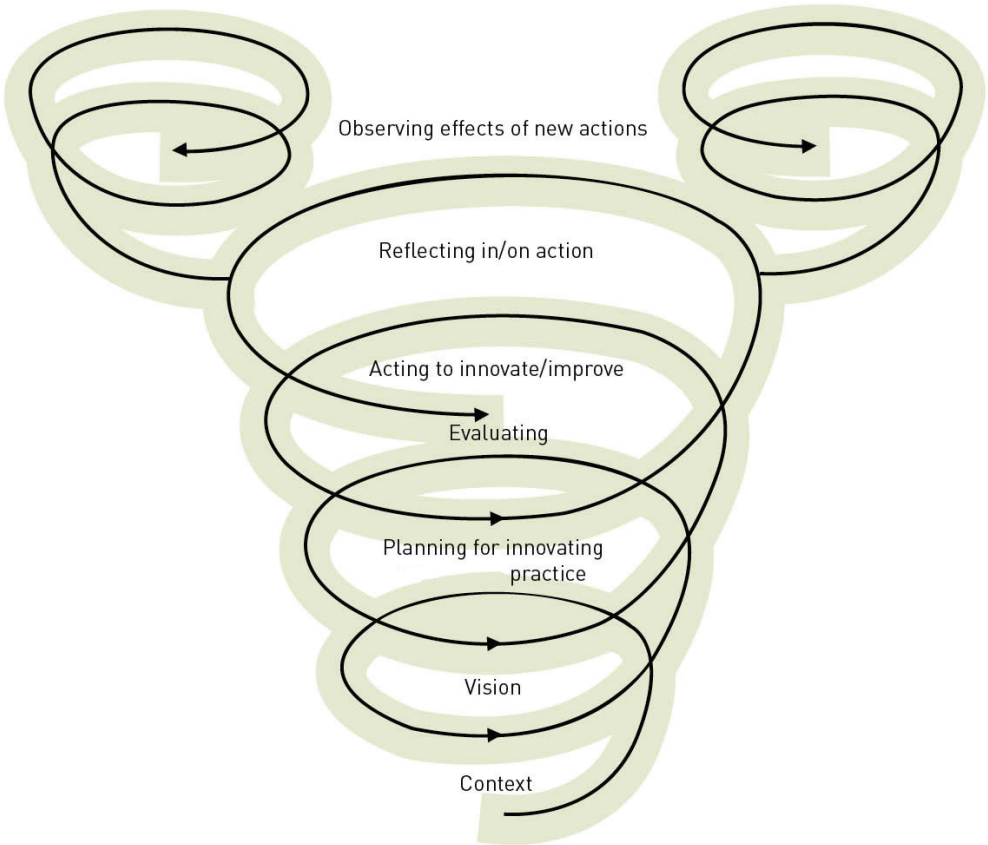
The innovative aspect of my study is the teachers' responsibility for their own professional development. In this context I am a researcher-mentor and the teachers are practitioner-researchers. As a researcher-mentor I systematically reflected and promoted reflection on the question "How do I…?" I did this in an innovative manner by respectively conducting and performing TCPD in the environment where the teachers were working. The mentorship process and the practitioner-researchers' activities within this study are described in Section 3.4. The improvement attained by the practitioner-researchers and me as a researcher-mentor in this PAR characterise the basis of innovative TCPD as documented in Chapter 4. The learning facilitators as practitioner-researchers improved their understanding of learning, the facilitation of learning and their classes and I improved my knowledge concerning the teachers' culture of facilitating learning and its relation with TCPD.

Action research is a cyclical process

Action research is performed through a cyclical process. Each cycle includes four distinct and

simultaneously interrelated steps, such as *Reflecting, Planning, Acting,* and *Observing* as shown in Figure 3.1. In theory the action research cycles are distinct and each one has its specific objectives. Also, the steps in the process are distinct, as in each step specific activities are undertaken in order to attain specific objectives. However, in practice the steps are interrelated, performing an ongoing process till the objectives of the cycle have been attained. Moreover, each step includes a large part of the issues raised during the previous steps and the researcher can simultaneously perform activities related to more than one step. The following figure is a visual representation of a typical action research spiral as we find in the work of scholars such as Kember (2000:26), depicting sub-spirals and different cycles, each with its iterative steps (Du Toit, 2008 as adapted from McNiff and Zuber-Skerritt).

Figure 3.1: Schematic representation of the action research process



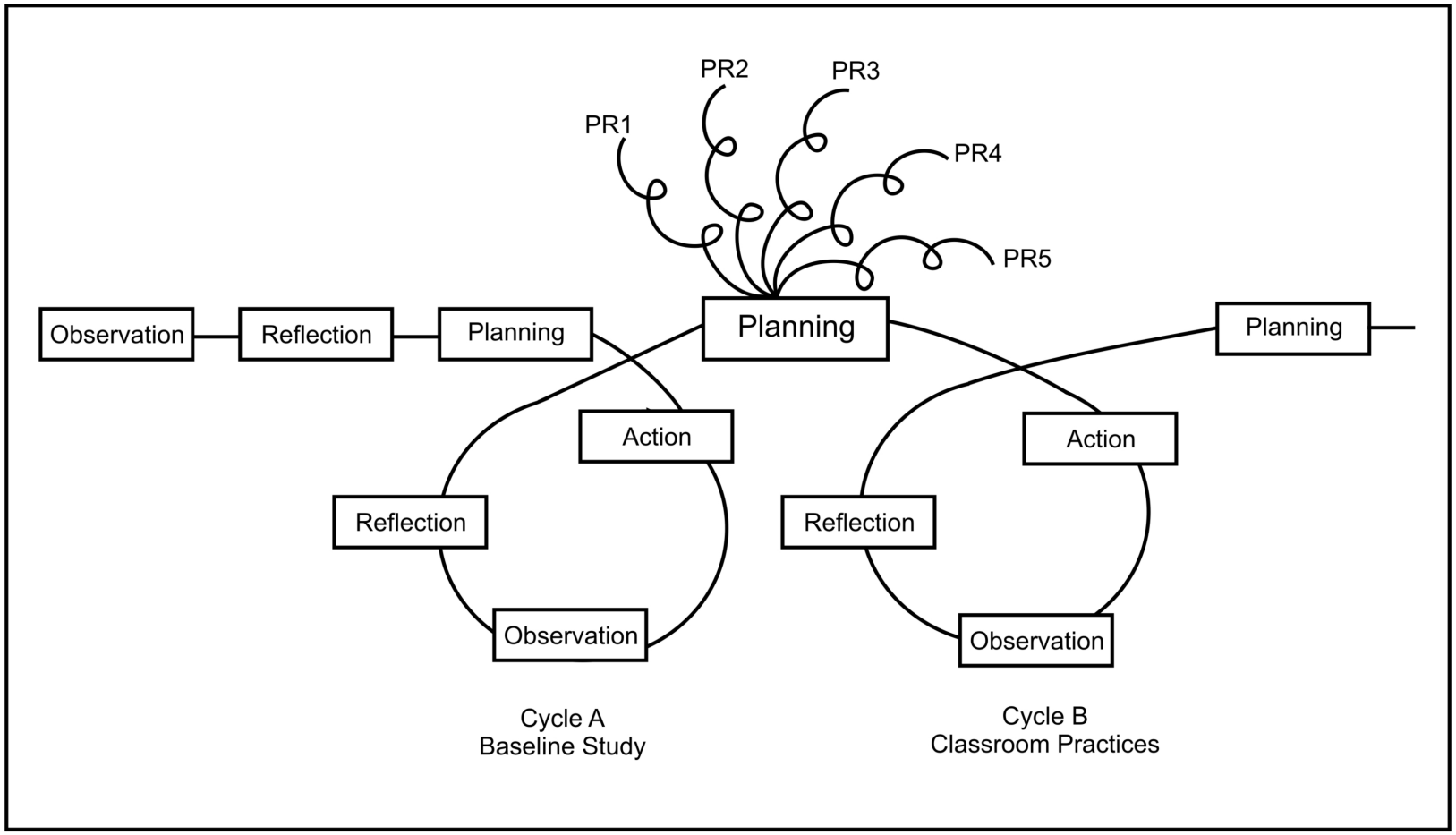
During the *Reflecting* step, the researcher carefully reflects on her educational practices and identifies her/his own problems or concerns for which she/he intends to do things better in order to solve the situation. This reflection leads to *Planning*. Planning consists of selecting the most effective activities and strategies to be put into place for the solution of the problem or concern identified in the previous phase. This step culminates in a plan of action. The designed plan is put into practice during the *Acting* phase and evaluated in the *Observing* step through evaluation and self-evaluation. A researcher can carry out as many cycles as she/he needs to solve the situation in a satisfactory way. Therefore, if the problem still remains, a new improved cycle will be implemented till the solution of the problem has been found. Kember (2000:125-6) relates AR cycles to the change in current plans and the improvement in the next cycle. The cyclical process is one of the main characteristics in an AR research study, as the practitioner-researchers perform their study throughout the cycle till they have solved the problem or concern (Stringer, 2004:10). AR is "an ongoing process since the planned result raises new questions and then it is time to begin again" (McNiff & Whitehead, 2006:9).

My study intends to investigate the provision of opportunities for reflection on educational practices and the required way forward in order to both identify the problems and try to find effective solutions. The teachers identify problems in day-to-day educational practices and I identify problems by mentoring teachers to carry out innovative practices. The cyclical nature of AR is in accordance with my study. As a researcher-mentor, I first promoted R*eflection* on how things are going in the class as a self-evaluation activity. Secondly, I discussed with practitioner-researchers what else they could do in order to improve their practices in terms of individual learning, innovative strategies of facilitating learning, curriculum and classroom management, individual learner achievement and so on. Thirdly, the practitioner-researchers and I performed the *Planning* phase; we discussed one of the problems encountered and planned the "how", i.e. the ways to innovate and do things better as part of the *Action* step. Then, the *Observing* step took place.

On pursuing the *Observing* phase of my AR, I used observation sheets and the teachers used self-assessment sheets to observe the planned learning opportunities. This was the Cycle A of

the PAR cycles. Following this cycle, the practitioner-researchers and I performed one or more cycles since one problem and its solution led to further "hows" or options for actions. Figure 3.2 indicates the cyclical process performed in this study. It is drawn by hand (not done professionally like the other figures) to indicate that AR is not a smooth process. The visual representation of synchronic PAR cycles in this study can be summarised as depicted in the following figure:

Figure 3.2 Synchronic cyclical action research process followed



Synchronic Cyclical action research process followed

Action research is pursued by systematic enquiry

My systematic enquiry started with a literature review and classroom observation. The steps followed during the cycles are systematic and pursue a similar rigour as any other kind of research method. McNiff and Whitehead (2006:1) refer to this characteristic, saying that "action research aims to be a disciplined, systematic process". In turn, Kember (2000:27/8) points out that observation and evaluation are systematic activities to be undertaken, made known and analysed. The systematic characteristic in this PAR study consists of collective and individual meetings, classroom observation, administration of the questionnaire, learningshops, planning and observation of learning opportunities, reflection and the planning of a new cycle performed by teachers and myself. Each cycle produces the information for the following cycle. The activities performed throughout this PAR are detailed in Chapter 4.

Appendix B provides the questionnaire administered in this study.

Action research as scholarly reflection

Reflection allows participants to think about the problems they face, going through what is actually happening, raising questions and identifying the main objectives to be achieved (Stringer, 2004:46). In my study the practitioner-researchers and I have been involved in a set of sessions to analyse the learning environment in their classes and the possible solution for the problems met in their own practices at classroom level. These sessions were followed by sessions in which were selected the subject, the problem statement and the research questions that guided their action plans for the improvement of their facilitation and the learners' achievement. I resonate with Mills (2007:8) who argues that action research supports teachers in analysing their daily work.

At the very beginning of this study I carried out an extensive literature review on TCPD and related fields and pursued a better understanding of TCPD approaches, instructional design models and facilitating learning methodologies in primary education. I tried to find the adequate way to work with the PRs as part of my scholarly reflection. I also carried out three learningshops and compiled hand-outs to support the PR in learning about AR, instructional design and assessment.

Throughout the planning and reflection phases one of the main activities was doing an exercise that I called *looking back.* It consisted of a reflective study and investigation of the methodologies that practitioner-researchers have been using in a specific subject. For this purpose, the PRs had to do the following:

- Describe their routines in the classroom in terms of what they do to promote learning and what kind of activities the class is usually assigned to do in order to participate in an active way in their learning process.

- Reflect on their learning and monitor their TCPD by trying to find answers to the following questions:

    - How do I facilitate learning and how do I monitor my professional growth?
    - How do I innovate my facilitation of learning and how do I improve my understanding concerning classroom management, syllabus/course management and individual learner's achievement?
    - How can I contribute to my own professional development through my learning and innovative practice?
    - How can I improve my understanding and knowledge of the learning process?

The answers to these questions led PRs to the problem statement and contributed to thinking about learning facilitation and the ways in which to improve classroom practice in an innovative way.

Action research is inclusive

In this PAR study all six teachers assigned to Grade 1 in 2007 in the selected school were involved in classroom observation and the learningshops. In this way I avoided working with a part of the total number of teachers in the school and discriminating between teachers who participated and those who did not. Thus, during the baseline data collection, all teachers assigned to Grades 1 and 2 at the targeted school were approached to complete the

questionnaires. These criteria intended to "involve all relevant groups and individuals whose lives are affected by the issue investigated" (Stringer, 2004:42).

Action research is participative

Action research has been identified as participative since in general a group of individuals facing the same problem jointly carry out the investigation (Kember, 2000:28). Kember continues saying that it is also acceptable that AR can be an individual investigation or reflection on someone's practice in order to find a solution for an individual problem; equally AR can be used when individual teachers carry out a cyclical and reflective approach to introduce a certain innovation in their own classes. With respect to the two characteristics that AR can comprise, the PAR performed in my study encompasses both group and individual investigation in the following way:

- My study encompasses five PRs and me, aiming to explore an intervention to improve the practice of primary school teachers.
- The PRs and I acted as a group in order to identify a general topic to be investigated and the possible outcomes to be achieved.
- Each PRs had an own project to introduce the planned innovation regarding the professional development and to solve problems in class.

With respect to the participative nature of AR, McTaggart (1996) argues this issue by discussing the difference between Emancipatory AR and PAR and says that the difference lies in their aspirations. He argues that in Emancipatory AR the aspiration is oriented towards the achievement of the ideal state to be achieved and the critical question is, "Are we emancipated yet?", whereas PAR "works on criticising the current conditions, has a more or less immediate effect and attempts at concrete improvements. Its critical question is, "Are things better than they were?" McTaggart (1996:245).

All PRs participated in every stage of the study related to the classroom practices. Their engagement can be summarised in four steps, namely, building trust and empathy, gathering data from the learningshops, designing the projects and writing the final report.

Step 1: Building trust and empathy

At the outset of the study I informed the PRs about my research topic and the research questions which direct the study. This procedure allowed them to build a certain level of comfort as they thought in the beginning that I would be inspecting them or investigating what they were doing in the classroom. In addition I informed them that I would start with unstructured classroom observation as a way to gain trust from each PR gradually and that later on I would carry out a semi-structured one. The specific topic to be observed during the semi-structured classroom observation was selected by the PR and agreed upon by me after a brief discussion.

Step 2: Gathering data from the learningshop

At the end of the learningshop the PRs were asked to write down their impressions and what they had learned during the sessions. The notes that they had written increased the data that I had already gathered from the learningshop. These data were important for me in order to adjust the research design adequately according to the specific situation of the school and PR.

Step 3: Designing the projects

This study focuses on classroom practices of primary school teachers in the context of TCPD. I provided and explained this topic to the five PRs. Five of them selected Portuguese and one PR Portuguese and Mathematics as the problematic subjects. Then each one identified the more specific sub-topics in Portuguese and in Portuguese and Mathematics. After sharing my research questions with my PR, they formulated their own research question(s) to guide their professional development in the context of this study. The part in common between the five research questions is that they all aimed at the TCPD.

Step 4: Writing the final report

The final report related to the classroom practices had jointly been produced by the PRs and me. All PRs participated in a session to outline the final report. Consequently, the report contains extracts from individual PR reports.

In relation to the participative character of AR, Zuber-Skerritt (1996:4) says: “Action research is research into practice, by practitioners, for practitioners ….. In action research all

actors involved in the research project are equal participants and must be involved in every stage of the research".

The study was carried out at Unidade 18 Primary School in a suburban area of Maputo-Cidade, the Capital of Mozambique. Unidade 18 Primary School has a long history of carrying out pilot programmes for primary education. Earlier on its name was "Escola de Aplicação e Ensaios" (School of Application and Piloting). This school is one of the biggest schools of Maputo in terms of having a large intake in Grade 1 and with respect to learners' attendance. It is located in the more accessible suburban surrounding Maputo-Cidade. In 2007 the school had six teachers in Grade 1 and seven in Grade 2. Since reading and writing skills are crucial in Mozambican primary education and in overall academic life, I opted to include all teachers who were in Grade 1 as PRs in order to follow their TCPD. In addition, this school was recommended to me by the Pedagogical Education Sector of Maputo-Cidade due to the location and the positive school environment with respect to teachers' receptiveness. The school principal and his deputy for pedagogical matters were supportive and played an important role in encouraging PRs to participate actively in this study.

The process of the PRs participation in this PAR study started in January 2007 with a meeting with the principal of the Unidade 18 Primary School. The aim of the meeting was to present my plans about performing a study in his school, the objectives and the procedures throughout the study. After this meeting I invited six primary school teachers assigned to facilitate learning in Grade 1 during the academic year of 2007 to participate in this study. Following the PR agreement, letters of informed consent were sent to the Directorate of Education Maputo-Cidade and then to PRs in order to obtain informed consent. These letters were adapted from McNiff and Whitehead (2006:87-88).

One point to pay attention to is that from 2007 up to 2010 – as the study developed – the number of teachers and the grades in which they were facilitating learning changed as follows:

- Academic year of 2007: 6 teachers in Grade 1

- Academic year of 2008: 2 teachers in Grade 1
  3 teachers in Grade 2
- Academic year of 2009: 2 teachers in Grade 1
  3 teachers in Grade 2
- Academic year of 2010: 2 teachers in Grade 1
  3 teachers in Grade 2

Action research is concerned with responsibility

This PAR study encouraged each PR to become more responsible for her/his continuing professional development. First of all there was the awareness of issues that were not going well and the PRs and I took up the responsibility to acquire more knowledge in order to solve the problems found. It was a kind of co-responsiveness between each PR and me. Following the problem statement, we presented possible solutions that were tried out in the class until better actions were found. This corroborates what Henning et al. (2004:21) say

> *Action researchers accept the responsibility of ensuring that their lives are in order before they make judgements about other people. This means honestly critiquing their practice, recognising what is good and building on strengths, as well as understanding what needs attention and taking action to improve it.*

Action research is concerned with empathy

When the practitioners have a good relationship the trust that exists among them positively influences the research progress (Stringer, 2004:40). In this regard, as a researcher- mentor, I attempted keeping up an empathetic relationship with the PRs and I accepted them as they were, with respect to their qualifications and professional occupation at school level throughout the study. This criterion also was one of the aspects that had a positive impact on the research progress during the three years of classroom observation, the learningshops and the meetings.

Action research is determined by the practitioners

The PRs are primary school teachers appointed to facilitate learning in Grades 1 and 2 as indicated in Section 1.1. In 2008 three of them continued with their learners in Grade 2 while the other two had received new classes for Grade 1.

In this PAR study the topics were decided by each teacher individually. Each of them chose a certain strategies of facilitating learning to be introduced in different subjects, such as Mathematics and Portuguese. These subjects covered most of the time that was allocated to the grades referred to above and had been a matter of concern for the teachers. The outline of my study was agreed upon by the participants in terms of the intended learning outcomes and the period to work with the PR in their classrooms. In Table 3.2 the selected topics and outcomes are specified.

Topic	**Outcomes**	
	Practitioner-researcher outcomes	**Mentor-researcher outcomes**
Reading and writing of vowels and syllables	List the real learner difficulties Identify what the learners need to learn	Take note of the learners' difficulties Identify what the learners need to learn Take note of the learner difficulties
Reading and writing of vowels and syllables Writing the numbers 3, 4 and 7	Plan learning opportunities Incorporating innovative exercises to solve the learner difficulties Facilitate learning List the achievement attained List the remaining teacher or learner difficulties	Assist the planning of learning opportunities incorporating exercises to solve the learner difficulties Take note of the improvement made and/or the correction to be introduced. Take note of the outcomes to be introduced in TCPD intervention

Table 3.2: Topics and outcomes identified

The process described in the table above form together the action research philosophy.

The entire process of the practitioners' involvement in determining the topic and the outcomes in this PAR study is documented in section 3.4.

The reason why AR is seen as the most appropriate design for the improvement of education derives from its principles and characteristics. In the context of this study I adopted the term *characteristics* since it is the most appropriate term for the process performed by the participants.

3.2 ACTION RESEARCH PHILOSOPHY

As discussed by Carr (2006) the form of *a priori* theoretical knowledge is what is usually understood as philosophy, and the theoretical rationale is referred to as methodology. From this understanding it is worth mentioning that firstly, the methodology selected by a researcher derives from a specific research philosophy recognised to be applicable to her/his worldview or value choices better. Secondly, the research philosophy serves to improve the selected research methods, to avoid inappropriate use of methodologies and methods (Crossan, n.d.). Therefore AR researchers, as other researchers do, base their methodology on a particular philosophy.

The philosophical issues concerning mixed methods have been a matter of extensive debate with different positions; for example, one asserts that the paradigms have vast differences and cannot be mixed; another position argues that the difference among paradigms does not obstruct the combination since each paradigm is independent; a further stance defends the difference among paradigms; however, there is no incompatibility on combining them (Tashakkori & Teddlie, 2010). This stance is usually taken by AR researchers.

In doing research, qualitative and quantitative paradigms are the two approaches that researchers currently use, either exclusively or jointly, to find out the answer(s) to question(s) regarding the reality and to create knowledge. The option for one or other paradigm is mostly influenced by the purpose of the research (Henning et al., 2004). Moreover, the option also relies on the "epistemological position" (Henning et al., 2004:1). The difference between a qualitative paradigm and the quantitative paradigm has to do with the "quest for understanding and for in-depth inquiry". A qualitative paradigm focuses on the qualities of

entities, events, and processes and a quantitative paradigm emphasises statistical data and focuses on variables and the cause-effect between them (Denzin & Lincoln, 2005). In a quantitative paradigm "people must respond by choosing a predetermined set of scaled responses" (Henning et al., 2004:1), whereas in a qualitative paradigm "studies usually aim for depth rather than 'quantity of understanding' (Henning et al., 2004:3). In this respect, AR philosophy is intended to offer a methodology that can combine quantitative and qualitative paradigms, although it mainly uses a qualitative paradigm.

Philosophical Assumptions and Characteristics	**Quantitative Paradigm (positivist)**	**Qualitative Paradigm (Anti-positivistic/interpretive)**
Ontological	Reality is objectively determined	Reality is subjective and multiple, as seen by participants in the study
Epistemological	Epistemological roots in positivism Researcher distinguish herself or himself and the subject being studied	Epistemological roots in phenomenology Researcher attempts to reduce distance between herself or himself and that being studied
Purpose	To test predictive and cause-effect hypothesis	To examine behaviours, qualities, characteristics, or properties of a phenomenon for better understanding an explanation
Methodological	The researcher uses deductive logic.	Researcher uses inductive logic. Researcher uses a wide range of methods and techniques
Data collection	Data are gathered systematically	Date determined by information and observation
Component of analysis	The component of analysis is a set of variables which form a whole	The component of analysis is holistic and concentrate on relationship between elements, the ways people interact and the context
Research instruments	Questionnaires	The researcher is the main instrument and makes meaning of from her/his engagement in the project
Types of data	Quantitative data	Qualitative data

Table 3.3: Differences between quantitative and qualitative paradigm (adapted from Cresswell, 2007 and Fouché & Delport, 2005).

The AR philosophy embedded in this study is that the study objects comprise teachers' educational practices, the way in which they understand their practices and the realistic conditions in which they are working (Carr & Kemmis, 1986:180). For this reason the PRs

were invited and encouraged to select a topic that was related to their day-to-day educational practice.

In the same way I as facilitator had the professional development intervention as practice, and I had to understand that practice and the realistic and authentic conditions I had to work in.

When integrated with all the theoretical perspectives that are discussed in this study, and other that might be relevant in an adult professional learning context it becomes clear that the multi-dimensional nature of the intervention, it becomes evident that the AR philosophy adopted for this study should reflect that. The AR philosophy therefore includes a self-regulated, visionary, transformative, emancipatory, holistic stance.

My action research philosophy also includes innovative thinking and constructing new meaning. My constructing of new meaning is based on the epistemological point of view that action research is a constructivist approach to professional learning. Based on this I have constructed a new action research model. For the purpose of executing this PAR study, I followed a 'Synchronic Cyclical Action Research Model' (Du Toit, 2006) as depicted in the Figure 3.2. In this model I am the researcher-mentor and my participants are practitioner-researchers, since they and I are co-researchers and participate in all stages of the process. Each practitioner-researcher is part of a unique case study and designed her/his action research projects cycles from one of the planning phases of my study. These projects' designs encompassed a slow process of discussion on possible innovative areas and topics, planning, classroom observation, learningshops, readings and schedule negotiation. The synchronic cyclical action research model integrates the practitioner-researchers' projects.

3.3 RESEARCH DESIGN

In Chapter 1 I refer to the purpose of this study which is designed to support primary school teachers in taking responsibility for their CPD and to improve my own practice. Therefore

the data gathered in this PAR study are used to explore an intervention for TCPD. Because of the qualitative nature of my study it is based on an interpretive framework that leads to an understanding of the phenomena and events in its social context (Henning et al., 2004:20). In qualitative research researchers collect data in real settings, interpret phenomena interacting with the participants in order to describe and analyse "actions, beliefs, thoughts and perceptions" (McMillan & Shumacher, 2006:23) whereas the positivist research paradigm emphasises objectivity and numerical and statistical data. Accordingly, this study adopts an interpretive paradigm to understand the teachers' practices and to improve both the teachers' responsibility for their own professional development in their classroom context and my own practice.

3.3.1 The Action Research Model

This study intends to be a specific space for teachers' participation. It gives them ample opportunity to reflect on their practices as well as to take responsibility for their own continuing professional development. For this purpose I designed a model of action research that I called a *Synchronic Action Research Model*. The model encompasses the AR cycles described by Kember (2000:28) as a basis to organise the whole study and comprises the AR cycles carried out by the practitioner-researchers and me from the early phase of the study.

The *Reflecting* step plays an important role in this PAR in providing the potential areas for innovative practices to my PR and me. Thus, by reflecting on what our practices and routines are, we find out which are the topics to focus on, the outcomes to be attained, the problems affecting TCPD and the ways forward in terms of appropriate strategies for facilitating learning and a feasible intervention for TCPD. Consequently, to sustain the *Reflecting* step in my PAR, I apply the six statements of the "Credo for reflective practice" described by Osterman and Kottkamp cited by Mills (2007:10) in the following way, namely:

- *Everyone needs professional growth opportunities* – the study provided to my PRs and me a set of opportunities to deal with different ways of understanding and analysing classroom practices towards TCPD.

- *All professionals want to improve* – the teachers' participation was voluntary and followed the subject topics in which they wanted to innovate their practices.

- *All professionals can learn* – the teachers participated in learningshops as a training method on the specific issues of their participation in this PAR study.

- *All professionals are capable of assuming responsibility for their own professional growth and development* – the practitioner-researchers decided on their own problem statement or concern and the time to start the project's design and implementation.

- *People need and want information about their own performance* – the teachers participated in self- and mutual evaluation sessions.

- *Collaboration enriches professional development* – the practitioner-researchers participated in plenary group sessions and in small group meetings.

All these statements above about reflective practice are embodied in my study.

3.3.2 Data Collection Plan

The sample of this study comprises two groups of teachers. The first group includes the respondents to the questionnaire and the second one the practitioner-researchers who participated in the action research cycles.

In order to select respondents for the questionnaire 1 028 teachers were taken from three geographical Zones of Mozambique, namely North, Central and South among a population of 19 609 teachers teaching in Grades 1 and 2 in the academic year of 2007. The intention was to identify an available as well as a feasible sample in terms of geographical location as McMillan and Schumacher (2006:125) suggest since it would have been a time-consuming and very expensive task to travel throughout the entire country. Therefore, I have chosen a convenience sample.

The practitioner-researchers were identified in one school in a suburban area of Maputo-Cidade where the classroom observation was carried. In this school all teachers facilitating learning in Grade 1 in the academic year of 2007 were involved in the action research. Each teacher's practice was an individual case study.

Taking into account that the questionnaire was "newly-constructed", it was piloted in a similar group of teachers before the real administration of the questionnaires in the study took place as proposed by Delport (2005:171-2). This pilot test aimed to ascertain the reliability of the questionnaire.

Qualitative data are used for a deeper understanding of the events in my PAR study and to obtain insight into the practitioner-researchers' practices, whereas quantitative data are essentially utilised to get baseline data about teachers' academic profiles and their experiences with professional development. For data collection through questionnaires quantitative forms of data analysis are used. In Chapter 4 the action research process is presented in detail.

Mozambique's administrative division encompasses 11 provinces, including Maputo-Cidade, the capital, which has the status of a province. In order to obtain the population size, i.e. the number of teachers in Grades 1 and 2, I asked the provincial directorates of education by fax or telephone call. In the cases of Maputo Province and Maputo-Cidade the number of teachers was provided by the district directorates. The reason why I had to ask information from provinces and districts is the lack of statistical data with respect to teachers appointed to each grade at the Directorate of Planning at the Ministry of Education. The data available in the statistics document refer to the total number of teachers in primary or secondary education. In addition the districts had to ask to each primary school the number of teachers allocated to Grade 1 and 2. Consequently the process was slow, taking 5 months, more precisely, from March to August 2007. This process delayed the sampling and the schedule of the study.

I personally delivered the questionnaires to the schools. This strategy allowed the teachers to complete them according to their availability. Grades 1 and 2 teachers follow almost the same timetable in the country – classes begin at 10:30 and end at 13:30. For this reason it was impossible to meet all of them at school, due to the distance from one school to another. Meeting a group of teachers in a certain school without disturbing classes meant to be late at the following school. For that reason the majority of the questionnaires were delivered with supportive participation of the principals or head teachers. The time to complete the questionnaire was negotiated with the head teachers and varied from four to six days.

To deliver the questionnaires by hand I faced the limitation indicated by Delport (2005:168), therefore, the study incorporated no more than two districts. Once the questionnaires were delivered I started going back to schools to collect them. Because some teachers completed the questionnaire on time, I returned to schools three days after the distribution, even before the planned date, mainly to appreciate the teachers' effort.

The questionnaire was administrated under the written permission of provincial and district directors. In this regard, to access the sample, a consent process was conducted to the provincial and district directorate, principals and to respondents participating in this study. Table 3.4 specifies the composition of the sample.

Zone	Provinces	Population	Sample
Northern Zone	Cabo Delgado	2 806	146
	Nampula	6 153	336
Central Zone	Zambézia	4 996	270
	Sofala	2 454	117
South Zone	Maputo	1 597	76
	Maputo-Cidade	1 603	83
Total		19 609	1 028

Table 3.4: Geographical distribution of the sample

In Maputo-Cidade, the schools and teachers involved in the pilot study were not part of the final sample of this study.

The criteria that were used to decide about the teachers to be selected at school level in each of these provinces were the following:

- Teachers who were teaching in Grade 1 or 2;
- Teachers who had participated on at least one in-service teacher education programme from 2004 to 2007.

3.4 ACTION RESEARCH CYCLES

My PAR includes a set of in and out of classroom activities, namely learningshops, questionnaires, classroom observation, planning of learning opportunities, learning opportunities, and collective and individual discussions. After the learningshops the cyclical processes basically consisted of observation, problem statement, planning, action, observation and reflection. The cyclical process stopped when the practitioners had achieved their purpose.

This PAR study used qualitative and quantitative research methods to collect data as already mentioned in Section 3.3. In this triangulation, mainly qualitative data, sustained by quantitative data, were collected. Before starting the data collection at schools I acquired a credential from the Dean of the Faculty of Education to certify who I was.

To begin with I carried out collective and individual meetings with the five PRs in order to present my research proposal and invite them to join me in this study. Attempting to realise what Eisner (1991:214) named “truly informed consent” and Fullan (1991) calls “shared understanding”, I had another meeting with the practitioners with the intention of assuring their free commitment and their clear understanding of the study. I organised this meeting before the start of the study activities which they and I would have to perform such as facilitating learning and the observation of it, planning of learning opportunities, participation in learningshops and designing projects for action research in their classes. At this stage of

my PAR, the PRs gave only their oral agreement since written permission from the Directorate of Education of Maputo-Cidade had to be presented to the school principal.

The oral agreement from the PRs was followed by written permission from the Directorate of Education of Maputo-Cidade (Appendix C), the informed consideration of the Directorate of Distrito Urbano n^{o}. 2 and a letter to the school principal (Appendix D). Besides these procedures I sent a letter to each PR to obtain her/his consent which culminated in written consent from the PR. Appendix E provides an example of the letters sent to PRs. This is accounted for within the ethical clearance certificate obtained from the Faculty of Education (Appendix A).

3.5 A MIXED-METHODS APPROACH

This is an exploratory study and a mixed-methods approach comprising qualitative and quantitative research methods was used to gather data, "recognising that all methods have their limitations as well as their strengths" (Johnson & Turner, 2003:299). A mixed-methods approach applies a variety of research methods and seeks to reduce the limitation of exclusively using one method (Patton, 2002:307). The use of mixed-methods allows the triangulation of data collected through different methods. This approach is adequate for this study since AR is implemented in a specific situation/setting and mainly gathers qualitative data through classroom observation. Qualitative data are gathered through classroom observations and descriptions of the main events. Observation sheets were used for classroom observation. Semi-structured questionnaires (Cohen et al., 2000:247) with open-ended questions (Cohen et al., 2000:287) I intended to capture numerical data and more expanded and specific information about TCPD. The questionnaire also gave me the possibility to gather data about the teachers' background in terms of personal information. I also intended to get clarity on teachers' thinking and beliefs about teaching, learning and TCPD in order to build baseline data. The questionnaires provided significant quantitative and qualitative preliminary data.

On gathering data I approached each practitioner-researcher's practice as single case. Given the nature of the study, which is designed to comprehend TCPD in the context of classroom practices, it basically follows a qualitative approach. However, within the context of my PAR, I also gathered quantitative and qualitative data through a questionnaire aiming at understanding the trend on TCPD and building a baseline analysis. The respondents are teachers facilitating learning in Grades 1 and 2. In Table 3.6 the research methods used in this study to collect data are specified.

Research Questions	**Methods**						
	Literature review	**Text anal**	**Policy doc**	**Learn shops**	**Pilot study**	**Question-naire**	**Classroom observat-ion**
How can teachers in 1st and 2nd grades be supported to improve their practices by taking responsibility for their own professional development?	√	√	√	√	√	√	√
How do Grade 1 and 2 teachers take responsibility for monitoring their own professional development?	√		√	√	√	√	√
What kind of intervention could be developed to support teachers to take responsibility for monitoring their own professional development?	√		√	√	√	√	√
How can elementary principles of action research, instructional design and assessment support teachers to monitor their own professional development?	√	√		√	√	√	√

Table 3.5: Relationship between research question and methods of data collection

I approached each data collection method used in this study in two ways. First of all, the method is used as a method, properly so called, to allow me to collect the data I needed in order to answer the research questions in the study. Secondly, I use the method as a main topic for the activities to be performed throughout the cycles. Consequently, the method or the topic can be applied in one or more cycles or even in more than one step of the cycles. I

often carried out activities within each of the steps in the cycle (*Reflecting, Planning, Acting* and *Observing*). However, sometimes I introduced two parallel or simultaneous steps, as "the four steps will all be present, but there will often be overlaps between them and a shifting back and forth" (Kember, 2000:27). At the end of the activities carried out within the cycles I performed reflection on both the process and the data collected. The cycles closed with a joint discussion with the PR, except in the cycle related to the literature review.

3.5.1 Literature Review

Although I had done a preliminary literature review in the first phase of the study, I continued reading about my topic while doing action research to support the problem being investigated. The literature consulted includes official documents such as the following:

- National Education Policy and Strategies for Implementation
- Strategic Plan of the Ministry of Education and Culture
- Law of the National System of Education
- National Strategy for Teacher Education (initial teacher education and teacher professional development)
- Syllabus for Teacher Education: Pedagogy and Action Research.

The documents analysed comprise official texts of educational institutions and pieces of materials (McMillan & Schumacher, 2006:356) for primary education, initial teacher education and teacher professional development for this level. This includes syllabi and textbooks, teachers' guides, lesson plans to find out to what extent teachers' responsibility on their CPD is documented. The purpose of this strategy to study documents and to collect artefacts was to gather descriptive data (McMillan & Schumacher, 2006:358) associated with teachers practice.

3.5.2 Classroom Observation

The systematic enquiry involving the PRs started with classroom observations in May 2007 after the meetings for informed consent. Classroom observation is the main method used in this study since it provides data from 'live' situations (Cohen et al., 2000:305; McMillan & Schumacher, 2006:358). As an external/outsider person for the normal classes, I carried out unstructured and semi-structured observations in the beginning. Later on the structured observations were carried out from 2008 up to 2009.

At the beginning of each academic year I had to meet the school principal, the pedagogical deputy and each PR to reconfirm my intention that I wanted to continue working with them in my PAR. What is important to note in this PAR study is that classroom observation took three years in the schools. During this period classroom observation was time-consuming. First of all, in 2007, a period of five months was used mainly to build trust and empathy between each PR and me. Secondly, the PRs were responsible for one class and they normally had to run their classes without external observation apart from performing their projects in the context of my study. In addition there were a significant number of assessment days during the trimester and two and three weeks of school holidays at the end of the trimester and semester respectively. In the third place, five months later, the month of September was a period dedicated to the final assessment in primary education and not recommended for external activities. In the end I had to inform my intention to observe classes in advance.

3.5.2.1 Unstructured and semi-structured classroom observation

Unstructured classroom observation

I carried out unstructured and semi-structured classroom observation for 3 months. Due to the time constrains of the PRs, I observed three learning opportunities (lessons) from each of the five PRs in this period. All PRs facilitated learning in the same shift, from 10:30 up to 13:30, and they used to come ten to five minutes before the beginning of their classes and left precisely when their shift ended. The PRs and I agreed in advance on the day and the learning

opportunity to be observed. Unstructured classroom observations helped me to reflect on the learning opportunities and they gave me information about the questions raised in my study (Cohen et al., 2000:305). But besides this more scientific gain, these observations encouraged me to go on with the purpose of my study, namely supporting teachers to monitor their professional development. In these learning opportunities the PRs facilitated learning according to the structures learnt at teacher education institutions and the rules provided at school level.

At the outset of the unstructured classroom observation, the PRs thought that I would present rigid critiques on their methods of facilitating learning as I was coming from the university with experience in primary education. This PR anxiety ended when they heard my first comment at the end of each classroom observation, showing that I, essentially, listened to and discussed with the PRs what they thought about their role during the learning opportunity and what could be potential innovative areas for their CPD. Therefore, from this stage on, the comments on the learning opportunities were no longer a cause of anxiety for PRs.

Semi-structured classroom observation

Having observed four learning opportunities from each PR during unstructured classroom observation, PRs and I began to select parts of the learning opportunities to be observed. For this purpose I asked them to prepare a list of topics or issues that could be areas for innovative practices and conducted individual meetings. In these meetings the PRs' list and my own list were discussed, planned and scheduled for a period of two weeks. The learning material related to the topic or issues was discussed. The preferable topics were Portuguese and Mathematics.

The following table shows the outcomes of these observations.

Classroom observation	Times	Topic	Outcomes
Unstructured	4x6 PR	None	PRs feel comfortable with my presence in the classroom PRs gain trust regarding me and my activities I understand PR routines and monitoring of their learners' learning I am aware of potential areas for TCPD
Semi-structured	4x6 PR	Monitoring of PR learning	PR demonstrate their responsibility on their own CPD Teachers identify problems and topics for their CPD PRs select activities to solve problems PRs identify topics for their CPD
		Reading and writing	PRs identify specific problems in reading and writing syllables PRs and I identify specific skills they have to develop in order to solve problems in reading and writing syllables PRs and I prepare specific tasks to solve problems in reading and writing syllables PRs and I prepare reflections on the outcomes attained
		Mathematics	PRs identify specific problems in reading and writing numbers PRs and I identify specific skills they have to develop in order to solve problems in reading and writing numbers PRs and I prepare specific tasks to solve problems in reading and writing numbers PRs and I prepare reflections on the outcomes attained

Table 3.6: Outcomes of unstructured and semi-structured classroom observation

3.5.2.2 Structured classroom observation

From May 2008, following the learningshop on Action Research, April/June 2009, classroom observations began to follow standardised patterns and observation sheets were introduced. Appendix D provides the observation sheets. In an attempt to increase data collected from different perspectives, I used sheets for PRs self-assessment (Appendix E) and sheets for my observation. The content and feasibility of the observation sheets were previously discussed and adapted to the context of this PAR study. The purpose of structured observation was to gather information regarding the facilitating of learning and the learning processes in Grades

1 and 2 towards the PRs' CPD in a systematic way. During the learning opportunities I monitored what teachers and learners did and recorded episodes of practice such as supportive intervention and the routines at classroom level to build a picture of the learning process. As a result of the structured observation each teacher carried out self-evaluation and listed topics for innovative practices.

"All teachers are by definition curriculum developers in that they select, sequence, organize, plan, deliver, and evaluate their students' learning experience" (Díaz-Maggioli, 2004:9). However, in this primary school like in any other, curriculum development is not flexible and teachers have little autonomy in what they do in their classrooms. Teachers mainly follow a school schedule planned for all the teachers in the same grade.

3.5.3 Learningshop

I use the term 'learningshop' (Copley, 2009) instead of workshop. The replacement of learningshop for workshop deals with the importance given to the processes that each one implies. While the workshop stresses the work carried out by the participants in order to create and/or develop knowledge, attitudes and pedagogical skills, learningshop stresses the learning achieved by the participants. Learningshop was used as a method to engage the five primary school teachers to participate in this PAR study. Collaboration among participants is one of the characteristics of AR in order to make "for risks, authentic research with multiple perspectives and voices" (Cohn & Kirkpatrick, 2001:149).

The learningshop, apart from giving learning opportunities, helped to improve the collaboration among the teachers, since working in groups was the main technique used. The teachers participated in three learningshops, namely on action research as a tool for professional development, instructional analysis to promote learning and assessment and learner achievement.

3.5.4 Case Study

For the purpose of this study, I adopted the use of case study due to two main reasons. The first one is related to the interpretive qualitative design of this participatory action research (PAR) study. In exploring an intervention to improve the practices of primary school teachers, the study reports the activities performed throughout the PAR cycles as an effort to understand the situation in its uniqueness as particular context and the interactions there (Patton, 1985:1). The second reasons is concerned with my attempt to promoting self-directed professional development (SDPD) among the practitioner-researchers (PRs).

I regard case study as the most appropriate way to conduct the self-directed professional (SDPD) embedded in this PAR study, since "case studies are anchored in real life and can provide rich detailed accounts of phenomena. The case study permits an in-depth examination of factors that explain present status and that influence change over time" (Ary, Jacobs, Razavieh & Sorensen, 2006:457). During this study, the practitioner-researchers (PRs) and I were engaged in authentic classroom planning and practices and learningshop situations aimed at providing both better understanding of classroom practices and opportunities to learn from those practices.

Various authors refer to case study as a way to do qualitative research. Henning et al. (2004:41) and McMillan and Schumacher (2006) refer to it as a format for research design; Berg (2001:225) states that case study is a method; Merriam and Associates (2002:8) and Creswell advocate that it is an approach; Hancock and Algozzine use both terms saying that it can be named as design or as approach. Cohen et al. (2007) consider case study as one of the styles of educational research. In turn, Stake (2005) simply regards case study as a common way to do qualitative research. He goes on by saying that

> *Case study is not a methodological choice but a choice of what is to be studied. If case study research is more humane or in some ways transcendent, it is because the researchers are so, not because of the methods. By whatever methods, we choose to study the case we could study it analytically or holistically, entirely by*

> *repeated measures or hermeneutically, organically or culturally, and by mixed methods – but we concentrate, at least for the time being, on the case.*
>
> (Stake, 2005:443)

Although the referred authors use different classifications to refer to case study, all of them agree that case study is a way to understand a problem or an issue using a case as particular illustration.

From the previous assumptions I take the view that case study is an approach which involves different methods or sources of information. "Case studies may employ multiple methods of data collection and do not rely on a single technique. Testing, interviewing, observation, review of documents and artefacts, and other methods may be used" (Ary et al., 2006:458).

A case study approach is used to obtain an in-depth understanding of an event, situation or phenomenon. Therefore, I regarded each PR as a single case to be investigated. As a researcher-mentor (RM), I had the opportunity to observe each teacher involved as PR and to describe the process of self-directed professional development. Henning et al. (2004:41) refers to case study as design "employed to gain an in-depth understanding of the situation and meaning for those involved".

In reference to the involvement referred to Henning et al. (2004), this study allowed me, as a RM, to holistically follow the PRs. In other words, I took part in the teaching practice of the teachers I described and also learned from it. As Zuber-Skerritt (1992:104) states, "learning is not a partial functioning, such as cognition or perception, but it involves the integrated functioning of the total organism, such as thinking, feeling, perceiving and behaving". With respect to the PRs, they had been involved as teachers and as researchers. They were involved in every stages of the study, either in planning or in the production of the material used in remedial tasks context. They were also involved in the production of the tools applied, such as the observation sheets and the questionnaires administrated in the evaluation step of the teacher continuing professional development (TCPD) component.

The meaning of the self-directed professional development (SDPD) component embedded in this study was captured from my dual role. First of all, I was acting as a RM by encouraging and supporting teachers to do research in order to improve learners' learning. In addition, I tried to promote TCPD through participatory action research (PAR).

I chose case study as the appropriate approach due to the following characteristics:

- It is concerned with a rich and vivid description of events relevant to the case.
- It provides chronological narratives of events relevant to the case.
- It blends a description of events with the analysis of them.
- It focuses on an individual actor or groups of actors, and seeks to understand their perceptions of events.
- It highlights specific events that are relevant to the case.
- The researcher is integrally involved in the case.
- An attempt is made to portray the richness of the case in writing up the report.

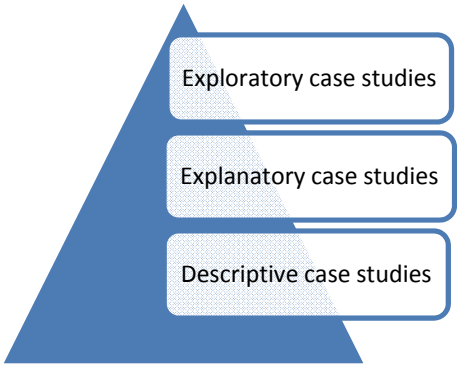
(Hitchcok and Hughes, in Cohen et al., 2007:253)

These characteristics are suitable not only to the case study approach I have adopted to follow the SDPD of my PRs, but also to the action research (AR) paradigm guiding this study. Since each PR is involved in his/her SDPD, I regarded each one as a single case. Figure 3.3 is a visual representation of the relationship among AR as a paradigm, case study as an approach and the SDPD as the stage of professionalism to be achieved by the PRs.

Figure 3.3: Visual representation of the relationship among action research, case study and self-directed professional development

According to several authors (Yin, 1994; Stake, 1995; Winston, 1997) there are different types of case studies, depending on the researcher's purposes and number of people comprising the cases. These comprise intrinsic, instrumental and collective case study. Another distinction of types of case study refers to the variety of designs that can apply case study. Following this understanding, case study can be exploratory, explanatory and descriptive (Winston, 1997). These three approaches are represented in Figure 2.4.

Figure 3.4: Case study design types



In the next table types of case studies are outlined.

	Types of Case Studies	Focus	Purpose	Theoretical Foundation
Research approach	Exploratory case study	The case	To prelude to large social scientific research To pilot other studies or research questions To support more comprehensive research To examine new or little understood phenomena	Theory building
	Explanatory case study	Causal studies Complex studies of organisations or communities	To examine a plurality of influences	Theory building Testing theories
	Descriptive case study			Theory building
Research purpose	Intrinsic case study	The case has an intrinsic interest	To understand a particular case	
	Instrumental case study	The case has a secondary interest A set of case studies Particular and general interest	To provide insight into an issue or to redraw a generalisation To support and to facilitate the understanding of something else To combine various research purposes	Theory building
	Collective case study	A set of similar or dissimilar case studies	To understand a larger collection of cases	Theory building

Table 3.7: Case study design types

Like other research approaches, case study has strengths and weakness to be taken in consideration. Cohen, Manion and Morison (2007:256) explain these in the following way:

Strengths

- The results are more easily understood by a wide audience (including non-academics) as they are frequently written in everyday, non-professional language.
- They are immediately intelligible; they speak for themselves.
- They catch unique features that may otherwise be lost in large scale data (e.g. survey); these unique features might hold the key to understanding the situation.
- They are strong on reality.
- They provide insights into other, similar situations and cases, thereby assisting interpretation of other similar cases.
- They can be undertaken by a single researcher without needing a full research team.
- They can embrace and build in unanticipated events and uncontrolled variables.

Weaknesses

- The results may not be generalised except where other readers/researchers see their application.
- They are not easily cross-checked; hence they may be selective, biased, personal and subjective.
- They are prone to problems of observer bias, despite attempts made to address reflexivity.

The previous mentioned strengths of the case study approach, mainly regarding the possibility to provide insights into other similar cases and the strong capacity to observe the reality being studied are considered in this study. I take into consideration the current teacher education models in Mozambique and the similarities among the learning environment in primary schools. Each case study of this PAR study is a "social unit" or, in other words, a "unit of analysis" (Merriam, S. B. & Associates, 2002:8). I approach each PR as a single phenomenon.

3.6 QUESTIONNAIRE

As mentioned in Section 3.5 the questionnaire was one of the data collection methods used in this study. The questionnaire was designed to determine what opportunities for professional development teachers have had and their opinion about the professional development programmes in which they had participated in, especially about the extent to which such programmes have been useful. The questionnaire also covered issues related to both academic and professional qualifications, teachers' roles, the planning of learning opportunities, learning facilitation, instruction, assessment and monitoring of learning.

The study applied semi-structured questionnaires (Cohen et al., 2000:247-8) with open-ended questions (Cohen et al., 2000:287). The questionnaire also gave me the chance to gather data about the teachers' background in terms of personal information. I also intended to get clarity on teachers' thinking and beliefs about teaching, learning and TCPD in order to build baseline data.

3.6.1 Designing the Questionnaire

The questionnaire used in this study was developed by me. My starting point was to do a literature review related to empirical studies, mainly about professional development and action research. Having developed a theoretical basis I improved my knowledge that I had acquired throughout my experience as a primary school teacher, writer of textbooks and teachers' guides, pedagogical supervisor, facilitator of teacher professional development programmes and as lecturer of instructional design. The first version of the questionnaire was written in English and after that translated into Portuguese, given that my respondents are Portuguese speakers. On translating the questions I noticed that the questions did not use the terms that the teachers use when they refer to their activities at school level. Therefore the English version was rewritten in order to incorporate the real vocabulary used by teachers.

The questionnaire was revised by the supervisor and by statisticians from STATOMET, Department of Statistics, University of Pretoria, in order to ensure the relevance of the questions, to design the appropriate layout, to define the sample size and the codification of the variables (V). Apart from questions on the respondents' background, open-ended questions, multiple choice and ordinal questions were included. Table 3.8 describes the intended purpose of each question.

After concluding the first Portuguese version of my questionnaire, I discussed it with two colleagues from the Ministry of Education and Culture and two experienced primary school teachers. I also asked comments on concepts and questions included in the questionnaire.

The questionnaire includes questions about biographical data of the respondents as introduction and background information. Biographical data also served as a basis for the completion of the questionnaire. This information was collected through closed form in an attempt to individualise the questionnaire. As I did so, each respondent answered about her/his age and experience. This procedure allowed each teacher to be regarded as an individual. However, in order to analyse the data more accurately, biographical information from each of the Variables 4 to 8 was gathered in groups.

	Question/item	What the Questions/items Intended to Determine
1	Respondent number	To identify each respondent and to determine the number of respondents
2	What is the name of your school?	To identify the each school of the sample and to determine the number of schools involved
3	In which school do you teach?	To identify the provinces participating in the study
4	What is your gender?	To identify the gender of the participants
5	What is your age?	To identify the age of the respondents
6	What is the highest level of academic education you have achieved?	To determine the priority given to Grades 1 and 2 in terms of the academic level of the teachers allocated
7	What is the highest level of professional qualification you have achieved?	To determine the priority given to Grades 1 and 2 in terms of the qualifications of the teachers allocated
8	How many years of teaching experience do you have?	To determine if experienced teachers are allocated to Grades 1 and 2

	Question/item	What the Questions/items Intended to Determine
9	How many shifts are you currently teaching per day at each school?	To determine the Grade 1 and 2 teachers' overload
10	How many hours, on average, do you spend on lesson planning per week?	To determine the minimum and maximum time used for planning of learning opportunities (lessons)
11	How many formal short-in-service education programmes have you attended from 2004 to 2007?	To determine whether Grades 1 and 2 teachers attended short in-service education programmes since the implementation of the new curriculum.
12	Indicate the two most valuable topics that have been focused on in the in-service education programmes that you have attended	To determine whether the focused topics have been interesting and useful
13	To what extent do you think that these programmes in general were useful in improving your professional learning? *(Mark 1 answer only)*	To determine whether the in-service education programmes have improved teachers' professional learning
14	Indicate two areas in which you made improvements after paticipating in in the in-service education programmes	To assess the previous response
15	What do you think should be the emphasis of in-service education programmes? *(Mark 1 answer only)*	To determine the preferable focus
16	Consider the statements below. Indicate the 1st, 2nd, and 3rd in order of importance for you as aims of an in-service education programme *(Indicate 3 priorities only)*	To determine what teachers consider important
17	Consider the statements below. Indicate the 1st, 2nd, and 3rd in order of importance what should be typical of an in-service education programme *(Indicate 3 priorities only)*	To determine what characteristics teachers consider as a priority
18	Consider the examples below. Indicate the 1st, 2nd and 3rd in order of preference of an in-service education programme you prefer *(Indicate 3 priorities only)*	To determine the type of in-service education preferred
19	Consider the examples below. Indicate the 1st, 2nd and 3rd in order of importance the factors that an in-service education programme should be sensitive to (*Indicate 3 priorities only)*	To determine what factors are considered priorities
20	Indicate your preference in terms of the duration of in-service education programme (*You may mark one or more answers)*	To determine the medium duration of in-service education programmes

	Question/item	What the Questions/items Intended to Determine
	may mark one or more answers)	
22	How do you think should continuing professional development be recognised? *(Mark one answer only)*	To determine the types of acknowledging continuing professional development
23	Consider the following teacher roles Indicate your opinion about these roles	To determine the importance given to teacher roles
24	Consider each statement below and indicate your opinion about the issues to consider when planning lessons	To determine what issues prioritise when planning learning opportunities (lessons)
25	How often do you assess individual learners in terms of learning achieved? *(Mark 1 answer only)*	To determine the way in which teachers assess individual learners
26	How often do you analyse individual learner achievement? (*Mark 1 answer only.*	To determine whether individual learners' achievement is analysed
27	What do you use the information of the analysis for? *(Mark 1 answer only.*	To determine the usefulness of analysing individual learners' achievement
28	How often do you provide instruction to prevent early underachievement? (*Mark 1 answer only)*	To determine whether teachers pay attention to underachieving learners
29	How often do you write a report about potentially under-achieving learners? *(Mark one answer only)*	To determine whether teachers have updated information about underachieving learners
30	What suggestions do you have to improve the acknowledgment of teachers' continuing professional development from educational sectors?	To determine the preferred procedures to acknowledge continuing professional development

Table 3.8: Intention of the questions/items

3.6.2 Piloting the Questionnaire

It is of crucial importance to test a self-developed questionnaire before it is being administrated in the main study (Delport, 2005:171-2). The pilot study was carried out with the head teacher's permission. Therefore, before piloting the questionnaire, I had informed in advance the teachers and their head teacher about the nature of the research and the pilot study's objectives. The aims of the pilot study were to test the questionnaire in order to get feedback on the following aspects (Cohen et al., 2000:239; McMillan & Schumacher, 2006:202):

- Time needed to complete the questionnaire

- Understanding of language in terms of concepts and terminology
- Understanding the questions.

The respondents were also asked to write their comments on the entire questionnaire.

The pilot study involved 20 volunteer-teachers in Maputo-Cidade and the Province of Maputo, including teachers with similar profiles as the teachers from the schools that participated in this PAR study. The schools were selected taking into consideration the time and cost constraints in going to the schools to deliver and collect the completed questionnaires. The respondents had chosen when and where to complete the questionnaires.

The pilot study was preceded by meeting with colleagues and experienced primary school teachers to ask comments on concepts and questions included in the questionnaire. These meeting were particularly helpful with respect to questions about assessment. My colleagues and experienced teachers said that the questionnaire incorporates relevant questions about teachers and learning facilitation. Another comment was that the questionnaire was embedded in professional components of the teaching profession. This aspect had posed uncertainty in one of the critical friends who doubted whether teachers would seriously complete the questionnaire. Before piloting the questionnaires I sent letters to the principals of each school and to the respondents asking permission for their participation in the pilot study. I had informed the school principal in advance about the nature of the study and the pilot study objectives.

To carry out the pilot study I delivered the questionnaires by hand to schools. This strategy allowed me to approach each respondent and to inform them about the conditions under which they would be completing the questionnaire. They completed the questionnaire according to their availability.

3.6.3 Administration of the Questionnaire

The questionnaire was administrated with the written permission of provincial and district directorates. For this purpose I had sent the directors letters to obtain informed consent. The letters to school principals and to all teachers involved in the study were delivered along with the questionnaire when they were approached to take part in this study.

In an attempt to find teachers who had participated in at least one TCPD programme, I started the administration of the questionnaire in the last academic trimester.

To complete the questionnaires, the respondents were free to choose when and where to do that. Other aspects taken into consideration were the academic calendar for the learner assessment, the final examination and the political events at provincial, district and school level. The following table reflects the questions asked and the purpose of each from the administered questionnaire.

3.7 LIMITATIONS OF THE STUDY

This PAR study has three major limitations. The first one has to do with the sample for the baseline data collection in the selected provinces. There were constraints to reach teachers from a diversity of schools in urban, suburban, rural and deep rural areas to complete the questionnaire. This situation was caused by limited time and financial limitations. Therefore the respondents were identified according to the proximity of the schools to the capital of the province, and consequently teachers from deep rural areas were not included. To allow as many teachers as possible to complete the questionnaire, both the distribution and the collection of the questionnaires took longer in suburban than in urban areas.

The second constraint is related to time management during the completion of the questionnaire, the learningshop and classroom observation in the selected school. 'Learningshop' in the context of this study refers to workshops on professional development

offered by me and another specialist. In this respect, to complete the questionnaires, the tight primary school calendars and the overfull timetables for lesson planning and other pedagogical and political activities running at school or at ZIP or even district levels were serious obstacles. Therefore the limitation of time was taken into account and the teachers freely chose when to complete the questionnaire. In relation to learningshop and classroom observation, owing to the previous limitations, the practitioner-researchers had little time to spend on the research and this fact, on the one hand, restricted the time to visit the practitioner-researchers in their classes, as much as action research implies, and other hand, delayed the learningshop schedule.

At the outset of this study the fact that I was from the university was also a limitation. The teachers thought that I was observing class in order to note down what they did in the classroom regarding the implementation of the syllabus and the learning tasks recommended in the textbook for further report to the Ministry of Education and other education sectors. Therefore only one teacher out of the six approached teachers promptly accepted to take part in this study and the remaining teachers said that they would have to think about it. In order to have more teachers I held more individual and collective meetings. After some sessions the teachers comprehended the nature of the study and were willing to participate.

3.8 VALIDITY AND TRUSTWORTHINESS

The debate on the nature and use of validity in qualitative research are not consensual among authors and researchers in educational and social research. The term validity is attributed to the degree which an instrument measure what is expected to measure (Pietersen & Kobus, 2007). In this sense, it seems that at the outset this criterion of measurement of instrument is applicable to the present study as a whole, since I worked in an interpretive or qualitative paradigm which privileges an understanding of the social life of the participants. Taking a more practical view, Kvale (1989) as quoted by Reason and Bradbury (2001:447), stresses the fact that there is a significant endeavour on fitting the features of AR into “a traditional discourse about validity whose concerns have little to do with those of action research.

However, there is a common sense that the rigour in action research can be increased by combining quantitative instruments with qualitative ones (Boarda, 2001; Feldman, 2007). Moreover, the repetition of the cycles between reflection and action can yield and increase the validity of the findings (Heron & Reason, 2001) since throughout the cycles the researcher and participants share ideas, monitor the project, discuss and built consensus and improve the project.

In order to address validity, Cohen et al. (2007:133) refer to it as a requirement for both quantitative and qualitative research". Validity is concerned with the appropriateness of the instruments used to gather data. Therefore, it is viewed as "the degree to which the interpretations have *mutual meanings* between the participants and the researcher" (McMillan & Schumacher, 2006:324). In this respect, I sent letters requesting the participation of the teachers and individual agreement. The letters present the nature, the objectives and the contents of the study. With respect to the PRs, I explained in detail the action research study. In addition, my supervisor and official statisticians from the University of Pretoria assisted me on refining the questions. Then, the new version of the questionnaire was discussed with experienced primary school teachers and pedagogical technicians from the Ministry of Education and Culture. To enhance validity of the questionnaires, I carried out a pilot study and the results were used on improvement of the questions. Pietersen & Kobus (2007) state that the use of validity in the human science appears to be challenging due the significant inference with quantitative research.

Another term also related to the measurement of instruments in research settings is termed as reliability. In quantitative research, reliability and validity are concerned with the research instruments and form essential part of this research paradigm (Nieuwenhuis, 2007). Validity refers to accurateness of the research instruments while reliability refers to the degree of its replicability. Therefore, in research setting is common the use of quantitative and qualitative instruments – triangulation – in order to increase validity and reliability (Nieuwenhuis, 2007). I followed the reliability criterion by piloting the questionnaire. Although the number of respondents was comprised by only twenty learning facilitators the findings of pilot study offered an estimation of its reliability (McMillan, & Schumacher, 2010). After the

modification of questions and terminology suggested by the respondents I felt that the questionnaire seemed to cover other probable learning facilitators.

To replace the controversial use of the terms validity and reliability (Winter, 2000), Denzin and Lincoln (2005) suggest terms like credibility, transferability, dependability, and confirmability. This understanding is consistent with Lincoln and Guba (1985) who regard criteria like credibility, confirmability and dependability closed to the validity one. Credibility matches the extent of what the researcher achieve what her/he proposed to do; in turn, confirmability and dependability have to do with audit. Besides, Lincoln and Guba (1985:316) propose the concept of trustworthiness arguing that "there can be no validity without reliability" since the occurrence of validity ensure the existence of reliability.

In recent years, as far as 2001, Reason and Bradbury (2001:447), pointing out to the importance of issues of validity in AR, refer to questions that the researcher individually and in relation to PRs should ask, namely: "am I doing good work? and are we doing good work?" towards a "more reflexively practical questions about the work of action research". This can be demonstrated through an effective participation of the PRs in all steps of the research project. In this PAR, the "practical questions" were observed in the course of the cycles and during the feedback of the PRs and the research-mentor evaluation. Table 4.55 and Table 4.56, respectively show the question rose. It was also taken into consideration in working with critical friends, as shown in Table 4.57 regarding the summary of the activities performed in this PAR. The critical friends include my colleagues from the Department of Teacher Education and Curriculum Studies at the Eduardo Mondlane University, Pedagogical University, pedagogical technician from the Ministry of Education, a school principal and experienced teachers.

As presented by McNiff & Whitehead (2006), to describe, explain and theorise on the effect that a given action is in a specific context is the aim of AR. In having this in mind, internal validity discussed by Cohen (2007), can be applicable to AR. In action research validity and trustworthiness refer to the process of setting up the reasons why the findings are credible and trustworthy (McNiff & Whitehead, 2005:91). The reasons why the findings of my study

are credible and trustworthy rely mainly on two aspects. First of all, on the topic: in this study the intention was to explore instead of apply an intervention for TCPD in a new approach in Mozambique. The second aspect refers to the fact that the evidences from the PAR cycles, with regard to self-monitoring by teachers of CPD, will generate findings that can be useful for my own practice, for the teachers involved, for the MEC and other teacher professional development providers and for researchers in this field. The third aspect is that the findings generated through the research questions in this study show the adaptability of self-directed professional development stated by Clark (1992:78-83) in the Mozambican context.

3.9 ETHICAL CONSIDERATIONS

This study followed the Ethical Code of the Faculty of Education of the University of Pretoria. An application for ethical approval of this study was submitted to and approved by the Research Ethics Committee of the Faculty (Appendix C). A copy of the research data gathered during this study is archived at the Department of Humanities Education.

This study also followed the ethical considerations described by Zuber-Skerritt (1996:16), Winter (1996:16-17) McNiff et al. (2003:49-52) and McNiff & Whitehead (2005:34-36) summarised in the following subsections.

Negotiating access

A letter was sent in advance to all provincial and district directorates, to school principals and teachers involved and written permission to do the research was obtained. All participants and respondents had been informed about the purpose of their involvement, what they were expected to do and their right to withdraw from the study if they did not want to continue. Information about the use of the findings from this PAR study was provided to all respondents and participants.

Protection of my participants

The questionnaire is anonymous and confidential. The final report ensures the confidentiality of the respondents as well as of schools. All participants and respondents received the ethic statements. With respect to the data obtained from the PAR cycles, permission for both using and reporting the information and pictures was obtained.

Protecting myself from subjectivity

Due to my experience with educational issues such as the TCPD programmes and other capacity-building initiatives and with the learning process itself in Mozambique, I had to avoid bias. Therefore, I asked comments and suggestions from critical friends and colleagues during different phases of this study.

Further ethical considerations

Being from the university and my 'outsider' position as a researcher were issues that were taken into consideration. For exploring the intervention by the active participation of the target group, only their available time during school hours was used. Therefore the calendar of the learningshops and all activities carried out in the context of this study were carefully presented and discussed in advance with school principals and later on negotiated with the involved teachers.

3.10 CONCLUSION

This chapter offers the participatory action research design by discussing the research philosophy, the methods used, the research process and the limitations of the study. Further, I paid attention to validity and trustworthiness and ethical considerations.

In an attempt to justify the study, I have provided an AR a research paradigm (Zuber-Skerrit, 1996), its characteristics and different types of AR. In discussing AR characteristics I tried to place the study within the understanding of Kember (2000) and Henning et al. (2004), McNiff and Whitehead (2006) and Mills (2007) among others.

The description of the methods used throughout the baseline analysis and the classroom practices privileged individual classroom practices (Hopkins, 1994; Fullan, 2001) and the placement of TCPD in the hands of the teachers themselves (Hargreaves & Fullan, 1991) by means of a self-directed professional development (Clark, 1992). The description of the empirical study is provided in Chapter 4.