CHAPTER 4

EMPIRICAL STUDY

4.1 INTRODUCTION

The purpose of this chapter is to provide the main results and findings obtained through the study. In this chapter I present the results and findings of the empirical research in the progression of my aim to explore an intervention for improving the practice of primary school teachers operating at school level within the context of their daily pedagogical and classroom practice.

Following the methodology indicated in Chapter 3, the study comprises two comprehensive Participatory Action Research (PAR) cycles performed from 2007 to 2010. The reasons why this study has been performed through four academic years is the cyclical, participative, inclusive and reflective nature of action research (AR) (Kember, 2000) and the requirement to fit the study into the context of the practitioner-researcher's schedule. First of all there was a need to carry out along with the PRs a set of un-structured classroom observations, meetings, learningshops and planning sessions aiming at creating a sound relationship and a common understanding about the study among the school principal, the PRs and me. In addition, since one of the basic characteristics of AR is to be determined by practitioners, I pursued both the structure of the annual calendar for primary schools, Zone of Pedagogical Influence and, with particular attention, the calendar in the school where the study took place. While doing so, I took into consideration the period of the year in which planning and short-term professional development is usually carried out; the weeks of the trimester where classroom observation and administration of questionnaires are feasible, without disturbing normal classroom practices and the individual schedule of each practitioner-researcher (PR) and respondents at school with his/her class.

My recount starts with information regarding the PRs and the respondents. This part is followed by an overview of the PAR cycles. The subsequent parts of the chapter document and discuss the results and findings of the empirical research. The account is

sustained by a representation of the cycles that demonstrates relevant events in Table 4.57. Furthermore, statistical data and/or visual representation illustrate the data in pertinent cases.

4.2 THE PRACTITIONER-RESEARCHERS AND THE RESPONDENTS

The practitioner-researchers of this PAR study were five primary school teachers facilitating learning in Grades 1 and 2 from 2007 and 2010 as stated in Chapter 3. This number of teachers refers to the total number of teachers, 3 female and 2 male, allocated to Grades 1 and 2 during the academic year of 2007 at the Unidade 18 Primary School. At the outset of this study, the PRs had similar academic and professional qualifications. They entered teacher education colleges holding a junior secondary education certificate and attended the 10+2 model of teacher education. After the conclusion of teacher education, they continued their studies and had already completed the senior secondary education. Moreover, they had different experiences with respect to years of facilitating learning in primary education. Table 4.1 illustrates the characteristics of the PRs.

Practitioner-researcher	Sex	Age	Academic qualification	Professional qualification	Years of experience	Number of INSEP attended
1	F	31-40	Sen Sec Ed	IMAP	3-5	1-5
2	M	31-40	Sen Sec Ed	IMAP	>10	>5
3	F	31-40	Sen Sec Ed	IMAP	>10	>5
4	M	41-50	Sen Sec Ed	IMAP	>10	>5
5	F	31-40	Sen Sec Ed	IMAP	>10	>5

Table 4.1: Characteristics of the practitioner-researchers

Legend

F = Female; M = Male; Sen Sec Ed = Senior Secondary Education; IMAP = *Instituto do Magistério Primário*

As many as 1 028 teachers facilitating learning in Grades 1 and 2 responded to the questionnaire. The respondents were identified in 135 urban and suburban schools from

the following provinces: Cabo Delgado, Nampula, Zambézia, Sofala, Maputo and Maputo-Cidade.

4.3 OVERVIEW OF THE PARTICIPATORY ACTION RESEARCH PROCESS

This section provides an overview of the 2 comprehensive cycles of the Participatory Action Research (PAR) undertook in this study. The cycles are identified as Cycle A and B and the central activity in which I was engaged is used to name the cycle. Each cycle combines minor cycles including the 5 case studies that I had developed with the PRs. The two comprehensive cycles could be explained as follows:

Cycle A mainly comprises the activities performed in order to obtain a baseline analysis before the commencement of the classroom activities aiming at improving the PR practices. This includes findings from un-, semi-structured classroom observation, learningshops, questionnaires, policy document analysis and other methods used to collect data and data from classroom practices My recount in this cycle includes the general context in which the study took place, the process of administering the questionnaires and the information obtained from the cycle as a whole and from the questionnaires as a particular method of data collection.

Cycle B is the main part of the empirical study carried out with the PRs. The cycle consists of the recount of biographical information about the PRs and the respondents and I have experienced and learnt about innovative practices that can lead to self-directed professional development. Each PR forms one case study. So, in 2007 the study comprised five case studies. The case studies include the project design, planning of learning opportunities, structured classroom observation, reflection aiming at raising concern on innovative classroom practices and the scaffolding derived from it. To me scaffolding consisted of reflection, literature review, text analysis, analysis of policy documents and asking critiques from colleagues and teachers. This forms part of the discussion with the PRs and the results of the discussion were incorporated in the next planning and classroom practices as a means of scaffolding.

From 2008 to 2010 only five teachers continued participating in the study. The one who opted out was attending a higher education course at Eduardo Mondlane University. Her participation became unfeasible for two reasons. The first is that her timetable at the university coincided with the period of normal classes for Grades 1 and 2 at the school in the morning shift. Therefore she was appointed a new grade and shift in the afternoon. The second reason is that to me it was impracticable to conciliate mornings and afternoon classroom observation with my duties in my workplace. Cycle B also comprised evaluation of the teacher continuing professional development (TCPD) carried out throughout this PAR study.

I approached each cycle with particular attention to the literature review and critiques from primary school teachers and colleagues whose task is concerned with primary education to get a better understanding of what I was doing. Accordingly, I got critiques on the first version of the questionnaire, the pilot study and from the collected data.

The systematic enquiry in this PAR study was characterised by a great empathy for the teachers as respondents and as PRs. I have approached them to engage in the project and appreciated the time they needed to participate in the study. I started with classroom observation in April 2007 and ended in March 2010 with the assessment and evaluation in the context of quality assurance and evaluation of the TCPD.

The activities carried out in each academic year are represented by the respective year and the sequence of activities are organised according its order in the study. However, the activities did not take place in a linear and orderly manner from one step to the next, since during the period, in which a certain activity took place, some overlap and move back occurred within a particular cycle due to the less tidy of the steps in the AR cyclical process. For example, some classroom observation sessions occurred along with the pilot study and the administration of the questionnaires. Throughout the cycles the PRs and I collected data and reflected on the process of the PRs and my own CPD in this PAR study. In Table 4.57 the summary of these PAR cycles comprising the activities performed, the purpose, the outcomes and relevant participants involved within the respective comprehensive cycle (A & B) is organised according to the academic year are specified.

4.4 FINDINGS OF THE CYCLE A OF OVERARCHING ACTION RESEARCH PROCESS

The Cycle A encompasses the main results and findings of the unstructured and semi-structured classroom observation, the analysis of policy documents, the pilot study of the research questionnaire and the baseline of this study which consists of the results and findings of the questionnaires.

The context

The methods adopted in Cycle A of this study confined me to two similar and at the same time different contexts to work in. The first context was the primary school in which classroom observation took place, the Unidade 18 Primary School, and the second one encompasses the 134 schools from the six provinces where I administrated the questionnaires. These contexts were similar as both were primary schools. However, they were different since at Unidade 18 Primary School, I spent three years working with the PRs, the principal and pedagogical deputy, while at the other schools I just went to deliver and collect the research questionnaires and I did not develop extended working relationships with the teachers and the school principals and pedagogical deputies.

Unidade 18 Primary School is located approximately 1 kilometre from the Maputo International Airport, at the airport village, in a suburb of Maputo City.

I started Cycle A with classroom observation in April 2007. As an external person to the normal classes, to begin with I carried out unstructured observation and later on the structured ones. Moreover, unstructured classroom observation allowed me to be familiarised with the PR and the class and vice-versa. In these sessions the teachers followed their usual plans and the comments on the learning opportunities were not a concern. This stage involved the five teachers facilitating learning in Grade 1 classes in 2007 at the Unidade 18 Primary School in Maputo City. The purpose of including all teachers at school level was to avoid discriminating against or another teacher from the same grade. However, in 2008 one of them left the project since she was attending a higher education course in the same period. This number of teachers allowed a

collaborative, critical and self-critical study in relation to the problems and concerns regarding their own practice (Zuber-Skerritt, 1996:3; Cohen et al., 2000: 229).

At the school there were no sufficient desks for the learners and the majority were seated on the cement floor. In one of the classrooms there were many damaged desks in the back.

The learning environment changed significantly from 2007, my first year of fieldwork at the Unidade 18 Primary School, to 2008. In 2007, although there were not enough desks for learners, chairs and desks for the teachers, all classes had at least a room and a blackboard. In 2008 the school faced complex changes. The school was being renovated and most of the learners were housed under trees since the damaged roof, windows and doors were removed. To make things worse, there were insufficient blackboards to be used out of the classroom. In addition, due to the shortage of places to allocate to each class, the teachers used to work in pairs with the respective class under the same tree during the next academic trimesters. After the renovation all classrooms had desks and chairs.

The following sub-sections summarise the activities and the findings of Cycle A of this PAR study.

4.4.1 Unstructured Observation

Planning

The planning for unstructured classroom observation consisted of the arrangement with the five teachers in order to establish a feasible schedule for my observation. We agreed on two procedures. Firstly, the PRs would facilitate learning following the usual planning used at school level. Secondly, I would be focusing on a particular part of the learning opportunity, as I would be observing the entire teaching practice during three months. This duration had not been established in advance. It was motivated by the empathy felt at this stage.

Action

During unstructured classroom observation I observed the teacher-learner interaction. I did not use any kind of observation sheet. I used only a notepad to register my observation and comments. At the end of each classroom observation the teachers were always expecting critiques from me saying what aspects of the learning opportunity were right or wrong. I promoted a discussion on what they thought what could be the potential areas for innovation in both their continuing professional development and improvement of the learners' learning. This activity was particularly useful for providing a wide idea of teachers' responsibility regarding their own professional development.

Observation

At the outset of classroom observation there were feelings of uncertainty with respect to what I would do with my notes from the observed learning opportunities. The teachers thought that I would critique them severely and report them to the various sectors which are responsible for school management and inspection. Therefore I realised that the PR concern was to select the topic to be observed with great care. In doing so, in some cases, they changed the subject, the topic or the timetable and frequently asked my opinion concerning the learning opportunity. However, I propagated a discussion on what they thought about what should be improved. Classroom observation at this stage allowed me to be the PR and the class to be familiarised with my presence in the classroom. The PRs followed their usual plans and began not to worry about my comments. The following extracts of the conversation with the PR illustrate what occurred during the period dedicated to unstructured classroom observation.

Since classroom observation also means an intrusion into the activities going on in class, I could not observe all the learning opportunities of each teacher on one day. Another constraint was that I could not observe all five PRs on the same day, as all of them were allocated to the morning classes from 10:35 up to13:35. The PRs always complained in relation to the time they had for their classes as a result of the large amount of content selected for Grade 1. My role in this discussion was to encourage them to feel comfortable when working with learners and try to ignore my presence in class.

I found that the PRs gradually began feeling comfortable during classroom observation. I also found that the main problems with learners' learning were justified by the class size, the textbooks, the academic calendar and the prescribed learning units sequence indicating the days and time for each topic. Driven by these weaknesses raised by the PRs, another finding was the lack of remedial activities. PRs continually complained about the lack of time to carry out learning tasks aiming at individual learner support apart from the prescribed content. In additions I found that there was no learning material apart from the textbook. The PRs used to copy the learning tasks indicated in the textbook on the blackboard in order to solve the tasks step by step and jointly with the class. Having solved a set of tasks, the PRs then indicated the tasks that the learners would individually execute.

The PRs often do not follow the timetable and the prescribed learning tasks for a specific day of the trimester due to inspection control. They could be in trouble if the inspection found different topics or learning tasks than those prescribed in both the timetable and the learning unit. Another finding is that the PRs did not have teacher guides that steer the learning opportunities.

An important aspect to note is that during this stage of the study all PRs demonstrated a high level of cooperation in the data collection process.

Reflection

Unstructured classroom observation helped me to reflect in two directions. On the one hand I reflected on the TCPD model that could support teachers towards improved and innovative classroom practices. I thought that it was urgent to adopt a new model for PD programmes or activities at school level in order to complement the pedagogical skills provided by teacher education institutions. Such essentially school-based PD, probably led by the school principal or her/his deputy, could be the first form of TCPD. Then, the organisations and education sectors which are currently providing TCPD programmes can play a supportive role. On the other hand, I reflected on the draft of the questions raised in my questionnaire on reflecting on the observed learning opportunities and the time and human resources to be involved in TCPD.

4.4.2 Semi-structured Observation

Planning

After my reflection on the learning opportunities from the five PRs during unstructured classroom observation I decided to introduce semi-structured observation and I proposed to them to pay attention to specific issues or learning tasks they wanted to improve or innovate. The topics selected were mostly related to subjects like Portuguese and Mathematics, as in that period of the academic year the main concern in Grade 1 was methods of facilitating learning of initial writing and reading skills, concept writing and reading numbers. Other topics included learners' participation and the need PRs feel to eliminate the use of responses in chorus. The next table presents the topic selected.

Practitioner-researchers	Portuguese	Mathematics	Other
PR1	Writing and reading skills – capital and small letters	Concretisation of calculation	
PR2	Writing and reading skills – capital and small letters; handwriting and printed letters		Collective responses
PR3	Writing and reading skills – capital and small letters; handwriting and printed letters		
PR4	Improvement of learner participation in calculation, mental calculation; verifying pre-requisites, concretisation of calculation		Improvement of learner participation
PR5	Writing and reading skills		

Table 4.2: Topic selected for semi-structured classroom observation

Having selected the topics, each PR and I planned the course of the learning opportunity to be observed. In an attempt to overcome the shortage of learning materials I provided examples of learning materials and pieces of paper that could be used by the PR to produce the needed learning material for the planned and subsequent learning opportunities. The observation sheets to be used were also jointly identified.

Action

Classroom observation focused on the topics selected by the PR and on the observation sheets jointly prepared. I took notes related to PRs' procedures on approaching the selected topics and learning materials. The learning material which we jointly prepared was the unique one used during the class since the school did not have any kind of means that could allow the PR to reproduce specific learning material for the planned learning objectives.

Observation

Classroom observation was time-consuming. This technique took a total of three months in Cycle A to attain a climate in which the PRs and I could participate in this study with a minimum of anxiety. Further, I had to set intervals between observation sessions aiming at allowing the PRs to work normally with their classes without any external interference. Another constraint was the time available to analyse the learning opportunities after observation.

Reflection

The discussion of the learning opportunities illustrated above suggests that in spite of individual differences, this study should take into consideration the following aspects:

- Academic and professional qualifications
  - The PRs held the highest qualification provided by teacher education institutions.
  - During teacher education the teachers did not have the opportunity to deepen the methods of facilitating learning in the different subjects in primary school.

- Planning of learning opportunities
  - Planning of learning units took place every two weeks on Saturdays.
  - The sequence of learning units was established by the group of teachers allocated to Grade 1.
  - The teachers strictly followed the learning units.

- Individual planning mostly included what was established during the learning opportunity.

– Learning tasks and material

- All teachers used the books adopted by the Ministry of Education.
- The PRs followed the same steps and procedures indicated in the text book when facilitating writing, reading and numbering.
- The learning tasks assigned to learners were the same in all classes as the PRs strictly followed the textbook and the planning carried out at school level. Only one of the PRs diversified learning tasks.
- The teachers did not have ways to produce complementary learning materials.

– Time

- The compulsory timetable at school forced teachers to be dedicated to the learning opportunities for a given period only.
- Discussions and meetings should be planned for the Saturdays when the group of teachers in Grade 1 were planning the units.
- Short individual or collective meetings could take place before or after the schooling day.
- Learningshops should be planned for the breaks between the trimesters or semesters.

Reflection on the above mentioned aspects helped me to understand, on the one hand, the impact that traditional professional development programmes have on individual teachers and on the other hand, the motivation teachers have regarding innovative practices. As a result I went back to the draft of the questionnaire and reviewed the issues related to the preferences for in-service education programmes, hours of planning per week and assessment of individual learning. I suggested objects that could be used as learning materials and considered the possibility of providing basic materials like used paper and pens.

The reflection on this step was useful on continuing the literature review on TCPD and selecting critical friends and the policy documents to consider in this study.

4.5 DEDUCTIONS FROM POLICY DOCUMENTS

Before beginning and throughout the activities with the teachers, respondents and practitioner-researchers (PRs) I studied policy documents from the Ministry of Education (MoE), such as the Education Sector Strategic Plan, Strategy for Teacher Education and TCPD, National Education Policy and other relevant documents related to teacher education and TCPD. These documents are used as sources on understanding both the importance and the foreseen actions that put into practice the legislation on TCPD.

As discussed in previous chapters in Mozambique TCPD is one component of the whole teacher education policy and strategy. Therefore there is a slight difference between the terms used to describe TCPD through in-service education programmes, at school or ZIP level, and in-service education programmes through attendance of initial teacher education in colleges or via distance education. Furthermore, there is no specific content referring to the TCPD in the table of contents in the document on Strategy for Teacher Education – 2004-2015. The lack of a particular topic on strategies for TCPD appears to be an indication of the insufficient clarity about what TCPD should be in order to raise teachers' motivation in participating in the programmes run by the MoE.

In analysing the Education Sector Strategic Plan I noticed that the foreseen national programmes for professional development of all teachers facilitating learning at different levels of education, including teacher educators, are not fully implemented. However, I noticed an increased awareness of the process of initial reading and writing skills through the *Jornadas Pedagógicas* programme that I refer to in Chapter 1. This programme is still used as emergency procedures as only teachers from the lowest grades in primary education are involved in solving specific educational problems. Moreover, the issue of TCPD continues to be the responsibility of a ZIP in collaboration with schools, teacher education colleges and provincial and district directorates supported by pedagogical technician from the ME.

The main finding from policy documents indicates that in spite of the importance given to TCPD, it is still a constraint to be dealt with. Professional development programmes, encompassing content knowledge and pedagogical skills, have to be considered a priority

either for teachers appointed without professional qualifications and for the majority who are holding a teacher education certificate. Therefore, taking into consideration the large number of teachers in primary education, approaches to TCPD should primarily consider the responsibility of the school and the involvement of the individual teacher.

4.6 FINDINGS OF THE PILOT STUDY

This section reports the findings of and reflection on the pilot study questionnaire as discussed in chapter 3. The pilot study utilised as baseline analysis, as referred to earlier in this study, involved 20 volunteer respondents from two provinces. Of these, 12 respondents were from Maputo-Cidade and 8 from the Province of Maputo. I launched the pilot study thinking that the respondents could answer and return the questionnaires within a period of a week. However, after agreeing on the date to collect the questionnaires, five out of the 18 were returned later due to different reasons. The reasons indicated by the teachers were related to lack of time or forgetfulness to answer the questionnaire. Therefore I had to approach the respondents three times in order to collect the questionnaires and 5 out of the 18 questionnaires collected were returned after 10 days.

Eighteen questionnaires (90%) were returned. Notwithstanding the duration of the pilot study process, the return rate was satisfactory. I understood the delay on answering the questionnaires as a direct result of the pressure that the teachers in Maputo face from the frequent requests from students from higher education institutions to answer questionnaires and/or to be interviewed. Additionally I interpreted the delay as demanding an additional activity to be performed by the teachers. Some teachers answered the questionnaires at the school.

Time needed to complete the questionnaire

In general the teachers completed the questionnaires in 35 minutes. They commented on the time, pointing out that they had many things to do at school during the normal timetable. Actually the teachers did not refer to the number of questions but rather to time. This comment convinced me of the time I would need to deliver and collect the

questionnaires. However, I took the risk of depending on the respondents' availability and on identifying a large number of schools due to the possibility of a low return rate per school.

Understanding of concepts and terminology

Visual learning, fact-based learning and emotional learning were indicated as unclear, under-utilised and unusual concepts in their day-to-day practice.

Understanding the questions

The majority of the respondents understood the questions. However, in question 10 the uncertainty was on the calculation of the hours, they spend on planning of learning opportunities as the practice in primary schools is to have collective and individual planning. Collective planning took place every two weeks among teachers from the same grade in order to sequence the learning content and units. Then, based on the collective plan, each teacher plans the learning opportunities for her/his class.

As the planning of learning opportunities is a crucial component for the facilitation of learning, I reflected on getting more accurate answers from my sample.

General comments on the questionnaire

One of the findings of teachers' comments on the questionnaire referred to question 6. The variables did not include the latest initial teacher education programmes run by government and the private sector. Another comment was that the issues presented in the questionnaire were interesting and related to their profession and classroom practices. The constraint was that they did not have time to spend on completing the questionnaire. This proved that reading habits are still a problem among teachers. They also commented on the language used. They said that the questions should be asked more informally. Apart from the general comments the respondents raised the following issues:

The highest professional qualification achieved

The options should include the latest teacher education programmes introduced in public and private institutions.

Formal short in-service education programmes attended

Although all respondents answered the question, a percentage indicated that instead of "the last four years" it is better to indicate the period "from 2004 to 2007". Another comment was that all short in-service education programmes were formal. I decided to maintain the word "formal" in order to distinguish short in-service education programmes that were organised by the school/ZIP or other institutions.

Other important teacher roles

The majority of the teachers were of the opinion that the list of teacher roles was exhaustive and complete.

The pilot study of the baseline analysis provided valuable information towards the improvement of the questions. On revising the questionnaire, questions 4 and 11 were re-written, more teacher education programmes were included and the options *visual learning, fact-based learning* and *emotional learning* were removed. At this stage of this PAR, I got the impression that the respondents of the pilot study wanted to participate in the study but the problem was to find time to read the question and statements. This comment came when I was approaching one of the volunteer respondents, before observing the questionnaire. I encouraged them, saying that the study aimed at exploring interventions to support primary school teachers and she could complete the questionnaire when they were available in the following week.

From the pilot study I realised that a percentage of respondents would need more than a week to complete the questionnaire. Therefore significant information from the pilot study was related to the need for paying more attention to teachers' motivation and time to complete the questionnaire. Then, apart from the written consent from each teacher, I had to inform the respondents that they would have at least one week to complete the questionnaire in order to avoid disturbing their daily duties. Additionally they were informed that they could choose where they wanted to answer to the questions, which questions they wanted to answer and the dates on which they wanted to return the questionnaire to me. Deliberately I took the risk of maintaining the number of questions as, according to my observation, the matter of TCPD can be scrutinised within a cycle comprising initial teacher education. Therefore the questionnaire included issues about

both academic and professional qualifications, opportunities for and opinions concerning continuing professional development, planning of learning opportunities, teaching and learners' assessment.

As part of a baseline analysis, the questionnaire broadly generated relevant data essentially concerned with positive and negative aspects of the respondents' teaching practice. I divided the positive aspects in three dimensions. The first was the importance given by teachers to their CPD in the context of in-service teacher education programmes, through events organised at local level – district, ZIP or school level – aiming at the improvement of their professional skills. The second dimension was related to the role that self-reflection and investigation of educational practices plays towards professional development. The last one was the teachers' perception of the process of facilitating learning, learning and learner assessment. The negative aspects dealt with the limitations indicated by the respondents in the pilot study.

4.7 FINDINGS OF QUESTIONNAIRE

4.7.1 Administration of the Questionnaire

I began the administration of the questionnaires in September 2007 by delivering the questionnaires to each of the 135 schools in the sample. As a convenience sample, the number of the identified schools depended on the number of respondents to be involved. All teachers from the 135 schools were approached to answer the questionnaire. In total approximately 3 000 teachers were approached and they were free to decide to participate in the study. Therefore, in each province I approached as many schools as necessary to reach the identified sample group of teachers.

The majority of teachers in Grades 1 and 2 followed the same timetable in the country: classes began approximately at 10:30 am and ended at 13:30 as mentioned in Chapter 3. As I was planning to deliver the questionnaires to my sample before the beginning of the shift or at its end, I started delivering the questionnaires form 06:15 in the morning. As I did so, I met the respondents from at least 4 groups of teachers before the beginning of the

shift and the remaining 2 from neighbouring schools at the end of the shift. I left the questionnaires and the letters and recommendations for the respondents whom I could not meet due to class timetables with the school principal, or the pedagogical deputy and some cases with the grade delegate.

Although I had negotiated with the respondents the date to collect the questionnaires, the collection was still a time-consuming process. In this respect the collection varied from schools that completed them in one to three days and those that only completed the questionnaires after three follow-up telephone calls or visits in more than two weeks. In some cases it was necessary to resend the questionnaires to some groups of respondents.

As many as 1 028 questionnaires were administrated from a population of 19 609 primary school teachers facilitating learning in Grades 1 and 2 at a total of 135 schools. The schools' participation was also determined by time and cost constraints referred to in Chapter 3. The schools participating in this study were from the provincial capital, suburban areas surrounding the capital and close districts. Table 3.9 displays the geographical distribution of the sample.

Administrating the questionnaire was both a time consuming task mainly due to the following reasons:

- According my observation, the majority of teachers did not have a reading culture; they read just what is strictly necessary. Then to complete the questionnaire meant one more reading task. This delayed the completion, and consequently the return and collection of the questionnaires. In one of the school, one teacher said: *I am a Portuguese language teacher, but I do not like to read.*

- The teachers do not feel motivated to complete questionnaires due to the lack of continuity and feedback from researchers who had approached them.

- One teacher's comment was that the teachers used to provide information but no changes took place in their profession.

In an attempt to save time I asked the school principals their support to collect the questionnaires according to the teachers' pace on completing the questionnaires.

Additionally I provided my contact details that could be used by the teachers. The principals were supportive and monitored the process in order to maximise the response rate.

The delivery and return process was strongly influenced by the academic, social and political agendas at the province, district and the school level. The teachers and their learners in certain occasions had been involved in activities that were not compatible with my visit to schools. For example, the schools had numerous compulsory assessment tasks, social events, visits from government members and significant teacher absenteeism. In this study teacher absenteeism was the most prominent reason for delaying the return and collection of the questionnaires.

I came to understand that there is an array of marginal events and reasons, including the absenteeism referred to, that had been disrupting normal classes. The learning facilitators dedicate less time than the proposed in the syllabus for the learning opportunities and do not have I interpreted this as an issue that negatively influenced performing individual teacher responsiveness to CPD. I got the impression that apart from the previous mentioned weaknesses, the duration of the school day, which comprises approximately four hours, aggravated by the lack of curriculum management skills among the teachers, had a detrimental effect on self-directed professional development based on reflection of all teachers. However, as I mentioned previously in this chapter, I found a strong support and commitment from the principals and the deputy in all visited schools and from provincial and district directors.

Despite the limitations faced during the administration of the questionnaires, the process was rewarding since the real context in which the learning facilitation process takes place came to the surface. Another reward was the principals' comments on the questionnaire. They indicated the relevance of the questions and showed their interest in using the content of the questionnaire for conducting their activities with the teachers.

4.7.2 Results and Findings of Questionnaire

Having administered all questionnaires I started the process of capturing data. I coded the responses and the Department of Statistics at the University of Pretoria proceeded to data entry by introducing the data in SPSS. Then all the questionnaires were returned to me for data cleaning in order to verify the correspondence between the data from each questionnaire and the data entry. Following this procedure, the Department of Statistics performed the running frequencies to look for missing cases and consistence analysis and produced the output of the questionnaire. The results and findings in this section are, in general, presented in the following order:

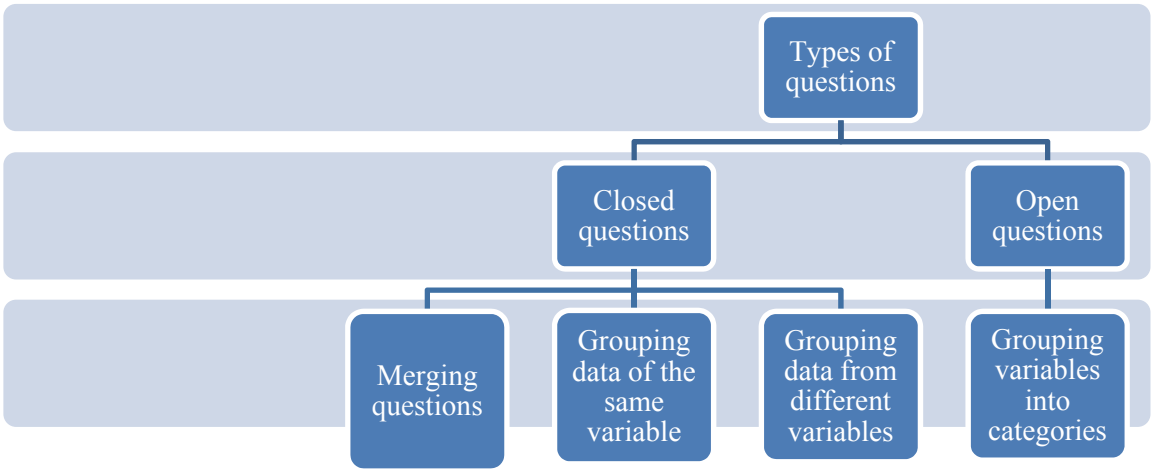
- A title related to the variable.
- The question from the questionnaire that the data answer.
- The presentation/provision of the three major results from the highest to the lowest.
- An explanatory discussion of the results.
- Statistical results from the whole sample by province or professional qualifications organised in tables and or graphs/charts/visual representations derived from the data.
- Statistical comparison among variables.

The data were analysed in depth. In doing so I decided to disaggregate the data by province and by professional qualification to obtain the frequency analysis of the responses. I carried out the frequency analysis to determine how many respondents answered the questions or selected a certain option presented in the questionnaire. In doing so all data were disaggregated by province in order to get a global picture with respect to the information gathered through the questionnaires in each province involved in this study. The data were also disaggregated according to professional qualification in order to obtain the pertinent relationship between professional qualification and a specific variable of this study questionnaire.

The analysis of the questionnaire comprised 64 variables (V) included in 30 questions. From these, 27 were closed questions/items and 3 were open-ended questions. Therefore I

decided to carry out two different analyses aiming at the interpretation of the statistical data. One of the analyses is related to the quantitative data. This analysis mostly follows the order of the presentation indicated above. The second type of analysis is concerned with the qualitative data gathered from the open-ended questions/items. The analysis here comprises the discussion of statistical data from the entire sample. I discuss the findings of each one of the categories. Owing to the nature of the data I opted for 4 different criteria of grouping the V in order to attain different purposes. Figure 4.1 below is a visual representation of the criteria used for the discussion of the data.

Figure 4.1: Types of criteria for the discussion of the data



Criterion 1: Merging data of different categories

This criterion was used to increase the consistency of the data when the lesser frequency represents a low percentage. The categories with low frequency were merged with the previous ones. Consequently the variable (V) with new categories was converted into a new variable (VV).

Criterion 2: Grouping data of the same variable (V) of closed question

In these questions teachers were asked to indicate their first, second and third choice from a set of given options.

Question 16: Consider the examples below. Indicate the 1st, 2nd and 3rd in order of importance for you as aims of an in-service education programme. The 1st option was coded as V20, the 2nd as V21, and 3rd as V22.

Question 17: Consider the examples below. Indicate the 1st, 2nd and 3rd in order of what should be typical of an effective in-service education programme. The 1st option was coded as V23, the 2nd as V24, and 3rd as V25.

Question 18: Consider the examples below. Indicate the 1st, 2nd and 3rd in order of preference of an in-service education programme that you prefer. The 1st option was coded as V26, the 2nd as V27, and 3rd as V28.

Question 19: Consider the examples below. Indicate the 1st, 2nd and 3rd in order of the factors that an in-service education programme should be sensitive to. The 1st option was coded as V29, the 2nd as V30, and 3rd as V31.

In analysing the data, the number of teachers participating in this study (1028) was multiplied by the number of options included in the respective question. Accordingly, the first variable (V20; V23; V26; V29) of each of the above-mentioned questions includes the option indicated as the 1st choice by the teachers; the second variable (V21; V24; V27; V30) includes the option indicated as the 2nd choice, and the 3rd variable (V22; V25; V28; V31) includes the option indicated as the 3rd choice. Each respondent was supposed to indicate three options as response to the question.

As a result of the grouping criteria, on providing the total data in the statistics table, in the column indicated for total data, I refer rather to the total number of responses obtained instead of the number of respondents. More details of the grouping strategies are provided in the discussion of the respective variables.

Criterion 3: Grouping data of the same variable (V) of closed question

The questions demanded the respondents to indicate their preference in the indicated issues. To answer to the question the respondents were free to choose one or more of the options indicated. In order to discuss the results of V32 to V37 (question 20) and V38 to

V44 (question 21), like in criteria 2, the number of teachers participating in this study (1 028) were multiplied by the number of options included in the respective question. Similarly, I refer rather to the total number of responses obtained instead of the number of respondents.

Criterion 4: Grouping into five broad categories the variable (V) of the same open-ended question

The open-ended questions required the teachers to indicate information or suggestions. Therefore, as Table 4.3 shows, the 2 V of the same open question (Variables 14 & 15; Variables 17 & 18; Variables 62 & 63) were grouped into 5 categories. Each category combines related information or suggestions. My discussion then focuses on the frequencies in each category created for the variables.

Due to the amount of information gathered from V14 and V15, V17 and V18, V63 and V64, on the one hand, and to increase clarity, the results of typical of an effective in-service education programme factors that an in-service education programme should be sensitive to variables were analysed by province. This strategy provides a reader-friendly reading of the findings in each of the categories.

The discussion by category comprises the responses of the whole sample from the highest to the lowest, following the sequence of the priority given by the respondents. The percentages indicated for each province refers to the percentage within the province.

	Question 12 Variables 14 and 15	**Question 14 Variables 17 and 18**	**Question 30 Variables 62 and 63**
Categories	Curriculum Methods of facilitating learning Assessment Professional development Others	Curriculum Methods of facilitating learning Assessment Administrative tasks Others	Financial Academic Pedagogical Library and Research Award and Certificate

Table 4.3: Categories for analysis of the open questions

4.7.3 Statistical Findings Regarding Gender

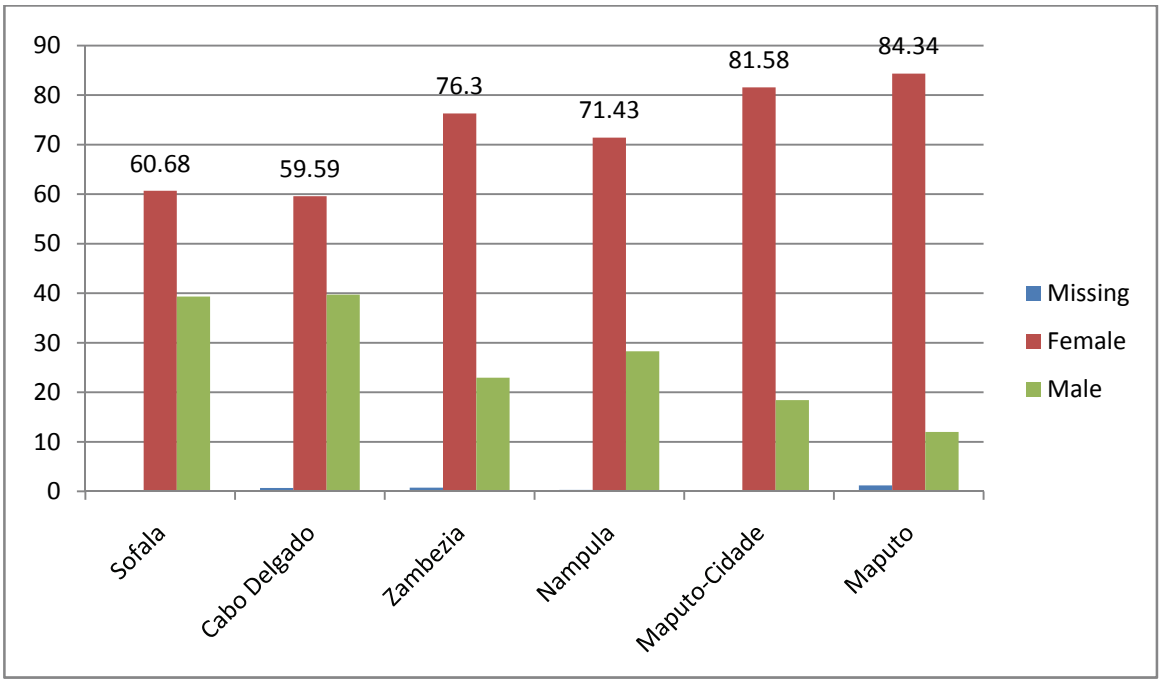
Question 4: What is your gender?

The results displayed in Figure 4.2 indicate that out of the total number of teachers participating in this study (1 028), 736 (71.8%) are female and 287 (27.92%) are male. The other 5 teachers (0.49%) did not answer to the question about gender. The data show that there are more female than male teachers facilitating learning in Grades 1 and 2. However, data from the MINED show that in 2007 there were 53 055 teachers facilitating learning in primary schools. From those 18 527 (34.92%) were female and 34 528 (65.08%) were male (Ministry of Education, 2007).

The prevalence of male teachers was typical in the country, except in Maputo and Maputo-Cidade where, in 2007, the percentage of female and male teachers were 53.55% and 66% respectively. I interpreted the frequency of more female respondents, in two ways. Firstly, primary education comprises five grades and the study only involved teachers from two of them. Secondly, I think that there is a general preference to appoint female teachers for Grades 1 and 2. Regarding this interpretation, the sample of this study is an example. From 2007 to 2008 this PAR study included 4 female and 2 male teachers, and from 2008 to 2010 it included 3 female and 2 male teachers. My third interpretation is that I am convinced that female teachers are the group of teachers that returned the most questionnaires.

The gender of teachers from the provinces who participated in this study varies from province to province. In this study, Maputo is the province with a greater percentage of female teachers, followed by Maputo-Cidade and Zambézia. The statistics on gender representation according to province are illustrated below in a bar graph.

Figure 4.2: Provincial representation of the teachers according to gender



4.7.4 Statistical Findings Regarding Age

Question 5: What is your age?

The age of the teachers appears to have to do with the overall expansion of education to all citizens from 1975 and particularly to the policy on teacher education. Consequently, from that year, more and more young individuals had achieved grades 7 and 10 and attended teacher education programmes or were appointed as teachers without teacher education certificates. Therefore the ages represented in Table 4.4 ranges from 18 years to more than 51 years. As Table 4.4 shows, 382 (37.16%) teachers at the age of 21-30 are an indication that in Grades 1 and 2 the teachers are predominantly young. These results also suggest that those teachers were educated under the more recent models of teacher education and appointed to Grades 1 and 2.

Province	Frequency %	Age of the Teachers						Total
		Missing	18-20	21-30	31-40	41-50	51+	
Sofala	Frequency	1		41	38	27	10	117
	%	0.85		35.04	32.48	23.08	8.55	100.00
Cabo	Frequency	2	2	62	53	18	9	146
Delgado	%	1.37	1.37	42.47	36.30	12.33	6.16	100.00
Zambézia	Frequency	3	3	94	78	77	15	270
	%	1.11	1.11	34.81	28.89	28.52	5.56	100.00
Nampula	Frequency	2	7	140	91	82	14	336
	%	0.60	2.08	41.67	27.08	24.40	4.17	100.00
Maputo-	Frequency	6		8	27	24	11	77
Cidade	%	7.89		10.53	35.53	31.58	14.47	100.00
Maputo	Frequency	1		37	17	16	12	83
	%	1.20		44.58	20.48	19.28	14.46	100.00
Total	Frequency	15	12	382	304	244	71	1 028
	%	1.46	1.17	37.16	29.57	23.74	6.91	100.00

Table 4.4: Provincial representation of the teachers according to age

4.7.5 Academic Qualifications of the Teachers

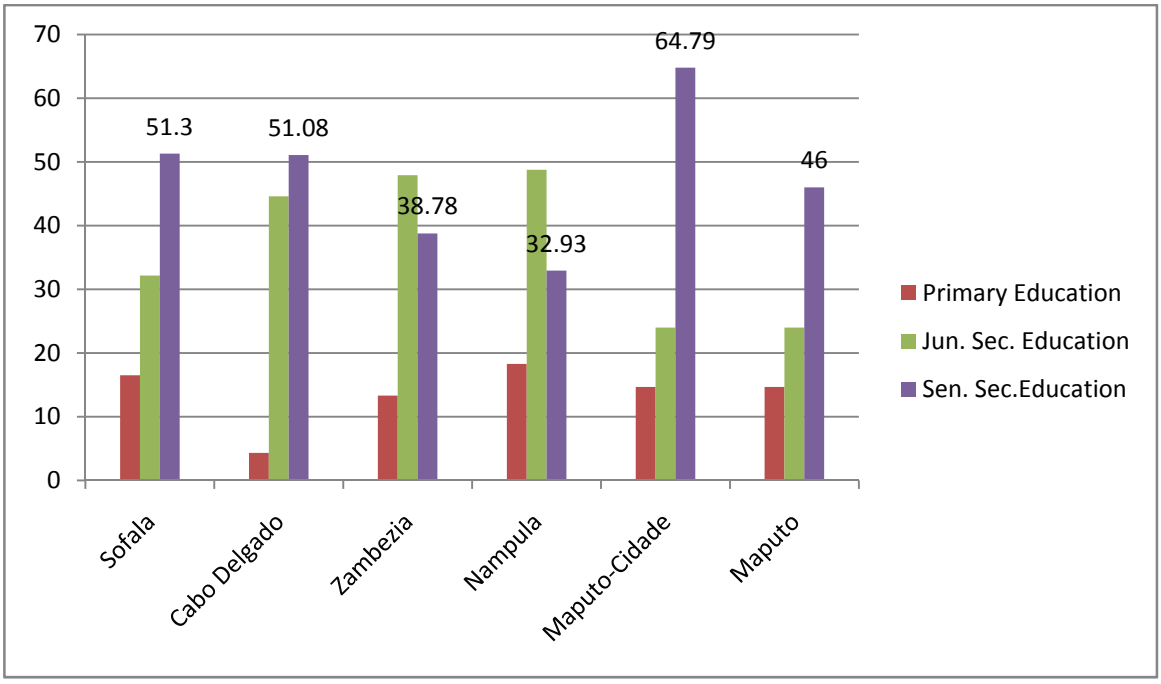
Question 6: What is the highest level of academic education you have achieved?

As many as 1 021 (97.3%) teachers answered the question about academic qualification and 27 (2.63%) did not. The data show that the level of academic qualification of the teachers varies from Primary to Higher Education. This denotes that there are primary school teachers who hold academic certificate higher than the required for primary education. In this respect table 4.5 illustrates that 432 (42.02%) teachers have achieved senior secondary education, 419 (40.76%) junior secondary education and 140 (13.62%) primary education, while only 10 (0.97 %) had achieved higher education. This frequency and percentage is not included in Figure 4.3.

Statistical data displayed in Figure 4.3 indicate that the highest academic level achieved was held by teachers from Maputo-Cidade (64.79%), followed by Maputo (61.33%) and Sofala (51.30%). As stated in Chapter 3, the respondents from all provinces that took part in this study were identified in the capital, suburban areas and district next to the capital. In these contexts there are more secondary schools and facilities for the provision of evening classes. Therefore these figures meet the current situation in terms of opportunities for teachers living in towns or in suburban areas to complete secondary and

higher education. In Maputo-Cidade the capital of the country, there exist more opportunities than in any other provincial capitals.

Figure 4.3: Distribution of the academic qualifications according to province



The values of the Chi-square tests on the comparison of the academic qualifications of the teachers from the six provinces are represented in the table below.

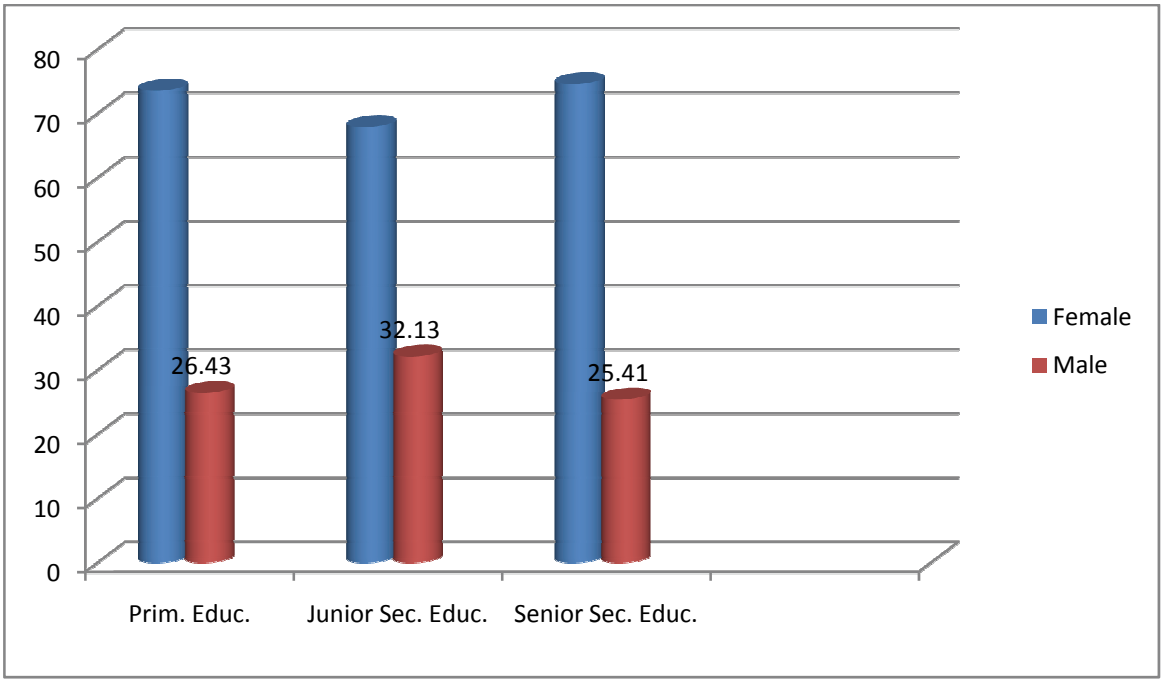
Statistics	DF	Value	Probability
Chi-square	10	60.9338	<.0001
Likelihood Ratio Chi-square	10	65.7164	<.0001
Mantel-Haenszel Chi-square	1	0.2263	0.6343
Phi Coefficient		0.2480	
Contingency Coefficient		0.2407	
Cramer's v		0.1753	

Table 4.5: Statistics of academic qualifications of teachers from the six provinces

The academic qualifications of teachers from this study vary significantly ($X^2 = 60.93$, p = <0.05). There is a statistical relationship between academic qualifications and provinces participating in this study. In provinces like Maputo-Cidade and Maputo, more than 60% hold senior secondary education certificates, while in provinces like Zambézia, in the centre and Nampula in the north, less than ⅓ hold the same degree. These results seem to be explained by the level of economic development which is higher in Maputo-Cidade,

the capital of the country, than in other provinces. As you go from south to north the level of education decreases.

Figure 4.4: Comparison of academic qualifications according to gender



The values of the Chi-square tests on the comparison of the academic qualifications of the participating teachers from the six provinces by gender are represented in the table below.

Statistics	DF	Value	Probability
Chi-square	2	5.0163	0.0814
Likelihood Ratio Chi-square	2	4.9330	0.0824
Mantel-Haenszel Chi-square	1	1.0285	0.3105
Phi Coefficient		0.0713	
Contingency Coefficient		0.0711	
Cramer's v		0.0713	

Table 4.6: Statistics of academic qualifications according to gender

The academic qualifications of teachers from this study do not vary significantly (X^2 = 5. p = >0.05). There is no statistical relationship between academic qualifications and gender among the teachers participating in this study. It seems that the government policy on gender equity is being successful. For instance, in the academic year of 2007 out of the 359 510 learners enrolled in junior secondary education, 43.24% were female, while in 2004 out of the 199 015 learners 41.26% were female.

4.7.6 Professional Qualifications of the Teachers

Question 7: What is the highest level of professional qualification you have achieved?
The majority of teachers who answered to this question have the minimal requirement to facilitate learning in primary education according to the current patterns for teacher education in Mozambique. I wanted to determine whether teachers appointed to Grades 1 and 2 are appropriately qualified for primary education according to the current patterns for teacher education in Mozambique. The results in Table 4.7 indicate that 351 (34.14%) teachers obtained the IMAP or ADPP certificate, 35 (3.40%) obtained the IMP or MP certificate, and 379 (36.87%) the CFPP certificate and 244 (23.74%) indicated that they had no professional qualification. These results show that there were more teachers with CFPP certificates than with the other models of certifying teachers. This result is consistent with the figures of the Ministry of Education, which show that in 2007, 40% of primary school teachers were certified by the former CFPP model of teacher education (Ministry of Education and Culture/National Directorate of Planning and Cooperation, 2007). As referred in Chapter 1 this model provided initial teacher education programme during three years courses to candidates who held Grade 7 certificate.

			Professional Qualification					Total
Province	**Frequency %**	**Missing**	**No Qualification**	**CFPP**	**IMP & MP**	**IMAP & ADPP**	**Higher Education**	
Sofala	Frequency	1	21	51	4	37	3	117
	%	0.85	17.95	53.59	3.42	31.62	2.56	100.00
Cabo	Frequency		65	65	3	12	1	146
Delgado	%		44.52	44.52	2.05	8.22	0.68	100.00
Zambézia	Frequency	7	69	68	7	119		270
	%	2.59	25.56	25.19	2.59	44.07		100.00
Nampula	Frequency	1	81	155	13	84	2	336
	%	0.30	24.11	46.13	3.87	25.00	0.60	100.00
Maputo-	Frequency	2		19	5	49	1	76
Cidade	%	2.63		25.00	6.58	64.47	1.32	100.00
Maputo	Frequency	1	8	21	2	50		83
	%	1.20	9.64	25.30	2.41	60.24		100.00
Total	Frequency	12	244	379	35	351	7	1 028
	%	1.17	23.74	36.87	3.40	34.14	0.68	100

Table 4.7: Professional qualifications of the teachers as represented per province

Legend

CFPP = *Centro de Formação de Professores*; IMP = *Instituto Médio Pedagógico*; MP = *Magistério Primário*; IMAP = *Instituto de Magistério Primário*; ADPP = *Ajuda Dinamarquesa de Povo para Povo.*

It would be of value to take into consideration that out of 53 055 primary school teachers in 2007, 21 311 (40.16%) did not attend initial teacher education (Ministry of Education and Culture/DPC, 2007:18). This institution also indicates that from those who have attended initial teacher education, as many as 19 163 (36.11%) attended CFPP after having concluded Grade 7. Another issue to consider is that the figures from the Ministry of Education and Culture/DPC show that the 7 235 (13%) of teachers with IMAP certificates are the second model in terms of certificates held by teachers in primary education.

Grades 1 and 2 are the foundation for the lowest primary education as they provide and/or develop language and calculation skills. The incidence of teachers from IMAP, ADPP, IMP and MP in Grades 1 and 2 can be interpreted as an indication of the great concern from schools to the MEC to improve learning in lower primary education, essentially with respect to reading and writing skills and Mathematics. However, due to the shortage of qualified teachers, teachers from CFPP and those without any qualification are still being appointed in Grades 1 and 2, mainly in provinces like Sofala, Cabo Delgado and Nampula.

A comparison of professional qualifications among the teachers from the 6 provinces indicates that Maputo and Maputo-Cidade have the highest percentage of qualified teachers from higher education and from IMAP/ADPP and IMP/MP. Conversely those provinces have the lowest percentage of CFPP. The Province of Maputo and Maputo-Cidade are neighbouring provinces and the same happens with the capitals which are also close. The capital of Maputo-Cidade, Maputo-Cidade, is 8 kilometres from Matola, the capital of Maputo. This suggests to me that, combined with the opportunities to attend secondary schools previously mentioned, the teachers from these provinces take advantage of the diversity of teacher education programmes provided in both towns.

Although the inclusion of higher education courses had been indicated in Maputo-Cidade during the pilot test, an examination of Table 4.7 denotes a shortage of teachers certificated by higher education in that province. This clearly suggests that, in primary schools, highly qualified teachers are not appointed to Grades 1 and 2.

Comparing the percentage of academic qualifications with professional ones, in the whole sample and by province and gender, I found little differences in the data displayed in Table 4.5 (academic qualifications) and 4.8 (professional qualifications). Such differences suggest that a percentage of teachers, having completed the professional qualification they need to be appointed as a primary school teacher, continue their education and increase their academic level. In such cases, with respect to the statistical data represented in Table 4.7, one can assume that the 36.87% of teachers with CFPP certificates have passed junior secondary education. A similar interpretation could be offered for the 37.54% from IMAP/ADPP or IMP/MP. Additionally, the results from junior and senior secondary education could include the academic level of teachers with no qualification (23.74%). Of the 0.97% who hold higher education certificates 0.68% have a professional qualification. This suggests that when the teachers cannot enrol in teacher education institutions, they attend other higher education programmes provided by private institutions.

On considering the statistical data specified in Table 4.5 and 4.8, it becomes clear that the majority of primary school teachers from this study were waiting for opportunities to be enrolled in the next level of academic or professional education and have achieved these levels.

Professional Qualification	Frequency %	Gender Female	Gender Male	Total
No qualification	Frequency	169	73	242
	%	69.93	30.17	100.00
CFPP	Frequency	242	136	378
	%	64.02	35.98	100.00
IMP/MP	Frequency	25	10	35
	%	71.43	28.57	100.00
IMAP/ADPP	Frequency	286	64	350
	%	81.71	18.29	100.00
Higher education	Frequency	3	4	7
	%	42.86	57.14	100.00
Total	Frequency	725	287	1 012
	%	71.64	28.36	100.00

Table 4.8: Frequency of the professional qualification of teachers according to gender

The values of the Chi-square tests on the comparison of the professional qualifications of the teachers from the six provinces by gender are represented in the table below.

Statistics	DF	Value	Probability
Chi-square	4	31.5269	<.0001
Likelihood Ratio Chi-square	4	32.2949	<.0001
Mantel-Haenszel Chi-square	1	15.7233	<.0001
Phi Coefficient		0.1765	
Contingency Coefficient		0.1738	
Cramer's v		0.1765	

Table 4.9: Statistics of professional qualification according to gender

The professional qualification of teachers from this study vary significantly (X^2 = 31.52, p = <0.05). In this study there is a statistic relationship between professional qualification and gender. Males tend to be predominant in the old model of teacher education, like CFPP, while females tend to dominate in the new model like IMAP. As is the case in academic qualifications, the government policies on education have been encouraging female participation in teacher education, not only as an opportunity for girls' professional qualifications but also as a strategy to increase the number of female teachers. The assumption is that by increasing the number of female teachers the attendance of girls will be increased with special incidence in rural areas. This will accomplish the Mozambican government goals with respect to gender equity at all levels of education.

4.7.7 Years of Experience in Facilitating Learning

Question 8: How many years of teaching experience do you have?

Table 4.10 illustrates the years of experience in facilitating learning. From the sample of this study it is evident that 370 (35.99%) have more than 10 years experience, 259 (25.19%) have 3-5 and 220 (21.40%) 6-10 years of experience. Of the 1 028 as many as 35 (3.4%) did not answer to the question. The teachers who had 1 year of experience were 85 (8.27%) and those with 2 years of experience were 59 (5.74%). With reference to the years of experience in facilitating learning, I found it of crucial importance to present all

data from the sample as facilitating learning in Grades 1 and 2 requires specific pedagogical skills.

Province	Frequency %	Missing	Years of Teaching Experience 1	2	3-5	6-10	10+	Total
Sofala	Frequency	1	5	6	39	20	46	117
	%	0.85	4.27	5.13	33.33	17.09	39.32	100.00
Cabo	Frequency	6	8	6	57	36	33	146
Delgado	%	4.11	5.48	4.11	39.04	24.66	22.60	100.00
Zambézia	Frequency	6	3	15	75	49	95	270
	%	2.22	11.11	5.56	27.78	18.15	35.19	100.00
Nampula	Frequency	17	38	31	67	76	107	336
	%	5.06	11.31	9.23	19.94	22.62	31.85	100.00
Maputo-	Frequency	2	1	1	6	11	55	76
Cidade	%	2.63	1.32	1.32	7.89	14.47	72.37	100.00
Maputo	Frequency	3	3		15	28	34	83
	%	3.61	3.61		18.07	33.73	40.96	100.00
Total	Frequency	35	85	59	259	220	370	1 028
	%	3.4	8.27	5.74	25.19	21.40	35.99	100.00

Table 4.10: Teaching experience of the teachers

Data from the 6 provinces involved in this study indicate that there were 85 (8.27%) teachers facilitating Grades 1 and 2 in their first year of employment. In total 59 (5.74%) teachers were appointed in their second year of working. The data suggest that the schools preferably appoint the less experienced teachers to Grades 1 and 2. In addition, in relation to the newly appointed teachers, the difference between the percentages can be understood as an indication that in the second year of employment the teachers are appointed to other grades rather than Grades 1 and 2.

4.7.8 Shifts Currently Taught per Day at the School

Question 9: How many shifts at each school you are currently teaching per day?

In primary schools all teachers have at least one class, even those who have pedagogical duties. As can be observed in Table 4.11, of the 1 028 who took part in this study, 852 (82.88%) teachers had only one shift at their own school, 162 (15.7%) had 2 shifts, 8 (0.78%) had 3 shifts and as few as 6 (0.58%) had 4. From question 9, I intended to determine the teachers' overload since Grades 1 and 2 are supposed to be demanding in

terms of planning of learning opportunities, production of learning materials and facilitating learning.

Province	Frequency %	Number of Shifts at Own School				
		1 Shift	2 Shifts	3Shifts	4 Shifts	Total
Sofala	Frequency	102	15			117
	%	87.18	12.82			100.00
Cabo	Frequency	139	4		3	146
Delgado	%	95.21	2.74		2.05	100.00
Zambézia	Frequency	188	81	1		270
	%	69.63	30.00	0.37		100.00
Nampula	Frequency	301	27	5	3	336
	%	89.58	8.04	1.49	0.89	100.00
Maputo-	Frequency	69	5	2		76
Cidade	%	90.79	6.58	2.63		100.00
Maputo	Frequency	53	30			83
	%	63.86	36.14			100.00
Total	Frequency	852	162	8	6	1 028
	%	82.88	15.76	0.78	0.58	100.00

Table 4.11: Number of shifts currently taught per day at the school

Comparing the number of shifts among the 6 provinces, the results show that in provinces such as Maputo and Zambézia there are more teachers facilitating learning in 2 shifts.

Province	Frequency %	Number of Shifts at the Additional School 1			
		Missing	1 Shift	2 Shifts	Total
Sofala	Frequency	111	6		117
	%	99.87	5.13		100.00
Cabo	Frequency	138	8		146
Delgado	%	94.52	5.48		100.00
Zambézia	Frequency	250	19	1	270
	%	92.59	7.04	0.37	100.00
Nampula	Frequency	318	17	1	336
	%	94.64	5.06	0.30	100.00
Maputo-	Frequency	80	3		76
Cidade	%	96.39	3.62		100.00
Maputo	Frequency		53	30	83
	%		63.86	36.14	100.00
Total	Frequency	970	56	2	1 028
	%	94.36	5.45	0.19	100.00

Table 4.12: Shifts currently taught per day at the additional school 1

The data concerning the shifts currently taught per day at the additional school 1 (V10) show that 970 (94.36%) teachers did not mark this option. The results suggest that the respective teachers had no shifts at the additional school 1.

Province	Frequency %	Number of Shifts at the Additional School 2			
		Missing	1 Shift	2 Shifts	Total
Sofala	Frequency	116		1	117
	%	99.15		0.85	100.00
Cabo	Frequency	145		1	146
Delgado	%	99.32		0.68	100.00
Zambézia	Frequency	268	1	1	270
	%	99.26	0.37	0.37	100.00
Nampula	Frequency	336			336
	%	100.00			100.00
Maputo-	Frequency	76			76
Cidade	%	100.00			100.00
Maputo	Frequency	83			83
	%	100.00			100.00
Total	Frequency	1024	1	3	1 028
	%	99.61	0.10	0.29	100.00

Table 4.13: Shifts currently taught per day at the additional school 2

Table 4.13 represents the results of the number of shifts which the 1 028 teachers of the sample had at additional school 2. Of these, 1 024 (99.61%) did not mark the option, and 3 (0.29%) indicated that they had 3 shifts and as few as 1 (0.10%) indicated that she had 1 shift. The answers missing in V11 indicate 0 additional shifts. The 1 024 respondents have no shifts in additional school 2. I launched this study thinking that a percentage of teachers in towns and surrounding districts, particularly in Maputo-Cidade and Maputo, had more than 1 shift at their own school owing to the shortage of teachers in primary education. Furthermore, I thought teachers worked in more than one school in order to increase their income and obtain means to afford their academic and/or professional qualification.

4.7.9 Hours Spent on Lesson Planning per Week

Question 10: How many hours, on average, do you spend on lesson planning per week?
In the academic year of 2007 the teachers from all public schools in Mozambique used to carry out joint planning every two weeks as part of curriculum development at school level and mutual support among the teachers. The teachers carried out this activity organised in groups of grades on Saturdays during sessions of 2-4 hours, according to a schedule previously established in each district or province. I intended to obtain information about the time used for the planning of learning opportunities (lessons). In

total 370 (35.99%) said that they spend 1-5 hours on lesson planning, while 292 (28.40%) spend 6-10 hours and 274 (26.65%) spend more than 10 hours. Table 4.14 provides the statistical data of the hours, in average, spent on lesson planning per week.

Province	Frequency %	Hours spent on Lesson Planning per Week				
			1-5	6-10	10+	Total
Sofala	Frequency	Missing	43	33	37	117
	%	4	36.75	28.21	31.62	100.00
Cabo	Frequency	3.42	63	30	39	146
Delgado	%	14	43.15	20.55	26.71	100.00
Zambézia	Frequency	9.59	133	67	48	270
	%	22	49.26	24.81	17.78	100.00
Nampula	Frequency	8.15	71	122	111	336
	%	32	21.13	36.31	33.04	100.00
Maputo-	Frequency	9.52	36	15	17	76
Cidade	%	8	47.37	19.74	22.37	100.00
Maputo	Frequency	10.53	24	25	22	83
	%	12	28.92	30.12	26.51	100.00
Total	Frequency	14.46	370	292	274	1 028
	%	92	35.99	28.40	26.65	100.00

Table 4.14: Hours on average spent on lesson planning per week

4.7.10 Number of In-Service Education Programmes Attended From 2004-2007

Question 11: How many formal short in-service education programmes have you attended from 2004 to 2007?

Table 4.15 illustrates that the majority of teachers, 712 (69.26%), attended 1-5 in-service education programmes (INSEP) whereas 171 (23.64%) attended more than 5 in-service education programmes and 73 teachers (7.10%) did not answer the question. The number of INSEP attended indicated by the teachers from 2004-2007 suggests that there was at least one programme per year to prepare the teachers on matters of learning facilitation. The data provide a clear indication that teachers attended a significant number of PDPs presented by the provinces and district supported by the National Institute for Development of Education and the Ministry of Education to ensure the introduction of the new curriculum for basic education in 2004. These programmes include objectives, content knowledge and pedagogical skills. During the INSEP, the central activity consisted of the presentation of the new content and syllabus and practising the new approaches to facilitating learning. From 2004 PDPs on the new curriculum continued

being a priority for the next academic years, mostly during the break between the trimester and semester. The data also suggest that INSEP appear to play an important role in complementing the pre-service education provided by teacher education colleges. The importance of INSEP is increased in the Mozambican educational context, where pre-service education takes place during one academic year. Therefore INSEP appears to be one of the best opportunities teachers have for the acquisition and/or development of specific particularities of the process of facilitating learning. Table 4.15presents the results related to INSEP attended.

Province	Frequency %	In-service Education Programmes Attended			
		Missing	1-5	5+	Total
Sofala	Frequency	1	80	36	117
	%	0.85	68.38	30.77	100.00
Cabo	Frequency	8	118	20	146
Delgado	%	5.48	80.82	13.70	100.00
Zambézia	Frequency	8	210	52	270
	%	2.96	77.78	19.26	100.00
Nampula	Frequency	49	163	124	336
	%	14.58	48.51	36.90	100.00
Maputo-	Frequency	3	63	10	76
Cidade	%	3.95	82.89	13.16	100.00
Maputo	Frequency	4	78	1	83
	%	4.82	93.98	1.20	100.00
Total	Frequency	73	712	171	1 028
	%	7.10	69.26	23.64	100

Table 4.15: Number of in-service education programmes attended from 2004-2007

4.7.11 Two Most Valuable Topics

Question 12: Indicate the two most valuable topics that have been focused on in the in-service education programmes which you attended.

Table 4.16 displays the data regarding the most valuable topics that have been focused on in the INSEP that the teachers have attended. In this regard the teachers participating in this study were asked to mention the two most valuable topics. Since the question includes two variables (V14 & V15), I got two topics from each respondent. Therefore, to accommodate this procedure statistically, the sample size (1 028 respondents) was multiplied by two. Consequently the total frequencies to be considered for the responses is 2 056.

I formulated this question to elicit teachers' perception concerning to the topics focused on in the INSEP they have participated in during the past four years. The teachers' perceptions with regard to those topics indicate 982 (60.73%) responses related to methods of facilitating learning, 320 (19.79%) to curriculum, 153 (9.46%) indicated other topics than those directly related to educational practices, 109 (6.74%) indicated assessment, 53 (3.28%) indicated professional development and there were 439 (21.35%) omitted responses. The discussion on the most valuable topics mentioned by the teachers participating in this study, from the highest to the lowest percentages, follows in Table 4.16

Province	Frequency %	The Two Most Valuable Topics					
		Curr	MFL	Assess	Prof Dev	Other	Total
Sofala	Frequency	41	105	6	1	27	180
	%	22.78	58.33	3.33	0.56	15.00	100.00
Cabo	Frequency	69	164	9	2	5	249
Delgado	%	27.71	65.86	3.61	0.80	2.01	100.00
Zambézia	Frequency	91	226	20	38	59	434
	%	20.97	52.07	4.61	8.76	13.59	100.00
Nampula	Frequency	76	387	58	12	36	569
	%	13.36	68.01	10.19	2.11	6.33	100.00
Maputo-	Frequency	16	40	16	0	12	84
Cidade	%	19.05	47.62	19.05	0.00	14.29	100.00
Maputo	Frequency	27	60	0	0	14	101
	%	26.73	59.41	0.00	0.00	0.87	100.00
Total	Frequency	320	982	109	53	153	1 617
	%	19.79	60.73	6.74	3.28	9.46	100.00

Table 4.16: Frequency of the two most valuable topics according to province

Legend

Curr = Curriculum; MFL = Methods of facilitating learning; Assess = Assessment; Prof dev = professional development

Methods of facilitating learning

Methods of facilitating learning guide the teachers in selecting or producing learning materials. On considering methods of facilitating learning, the teachers pointed out general and specific aspects of this topic. In relation to general aspects, they referred to the knowledge and skills acquired on planning learning opportunities, classroom practices and improvising learning materials by using local resources. With regard to specific aspects, they mentioned subjects such as Mathematics, Portuguese and Science.

With regard to Mathematics, the teachers mostly indicated methods of facilitating learning of numbers, progressive and regressive counting and calculation. When referring to Portuguese, the teachers mainly indicated methods of facilitating learning of initial reading and writing skills, reading and interpretation of texts and the relationship between image and text. In relation to Sciences (Natural Sciences, Social Sciences and Integrated Sciences) they mentioned the methods of facilitating learning, environment and ecosystems. The responses to question 12 are summarised in Table 4.17.

I came to understand that the majority of responses (60.73%) represented in Table 4.16 indicate clearly that the methods of facilitating learning are related to what teachers are doing. Therefore they regard them as the most valuable topics. Additionally, methods of facilitating learning were the main, and sometimes the unique topic of CPD activities and/or programmes and of supervision and inspection led by the MINED and provincial and district directorates. Furthermore, the findings suggest that, on the one hand, the professional qualification currently provided does not meet the teachers' needs concerning methods of facilitating learning and, on the other hand, the teachers are aware of the weaknesses of the qualification obtained.

Curriculum

The 320 (19.79%) responses about curriculum covered matters such as curriculum transformation and curriculum development. On referring to curriculum transformation, the process carried out by INDE which culminated in the implementation of the new curriculum, the teachers listed topics like curriculum implementation, the process of curriculum transformation itself and local curriculum as one of the innovations introduced by the new curriculum since 2004. The responses concerning curriculum development comprise what the teachers had learned with respect to sequencing learning units. Regarding the findings about curriculum, I got the impression that the teachers were interested in the new changes in education.

Other

The responses covered issues such as HIV/AIDS, gender and health, hygiene and safety. In relation to HIV/AIDS, the respondents referred to both discussions and current sensitisation at local and national level about HIV/AIDS and the prevention of the

disease. The responses include gender equity and girls' education and dropout among girls. With respect to health, hygiene and safety the responses comprise *saúde escolar* (procedures to ensure good health of the learners) and malaria.

Assessment

In lowest primary education, Grades 1-5, there are 3 approaches to assess, namely diagnostic, formative and summative assessment. Formative assessment is the main approach used to verify the quality of the learners' learning. This approach uses a variety of tools to collect information according to the nature of the learning and the context in which the learning occurred (MEC-Moçambique, 2008).

The main issues indicated by the teachers included the meaning of assessment, the types of assessment, how to assess the learner and define the learner record. The responses indicated in Table 4.16 suggest that, apart from the knowledge and skills provided by teacher education colleges to the student-teachers and by the programmes provided to those who enter in the teaching profession without a professional qualification, regular PDPs provided by ZIPs and other providers do focus on learner assessment. Although only 109 (6.74%) of responses selected assessment as the most valuable topic, the issues raised mostly comprise areas of concern about learning in lower primary education. In this respect it is important to note that learners in lowest primary education show low performance when assessed against the outcomes specified by the grade. This weakness in Mozambican education is related to a variety of factors, including assessment conducted by under-qualified teachers.

Professional development

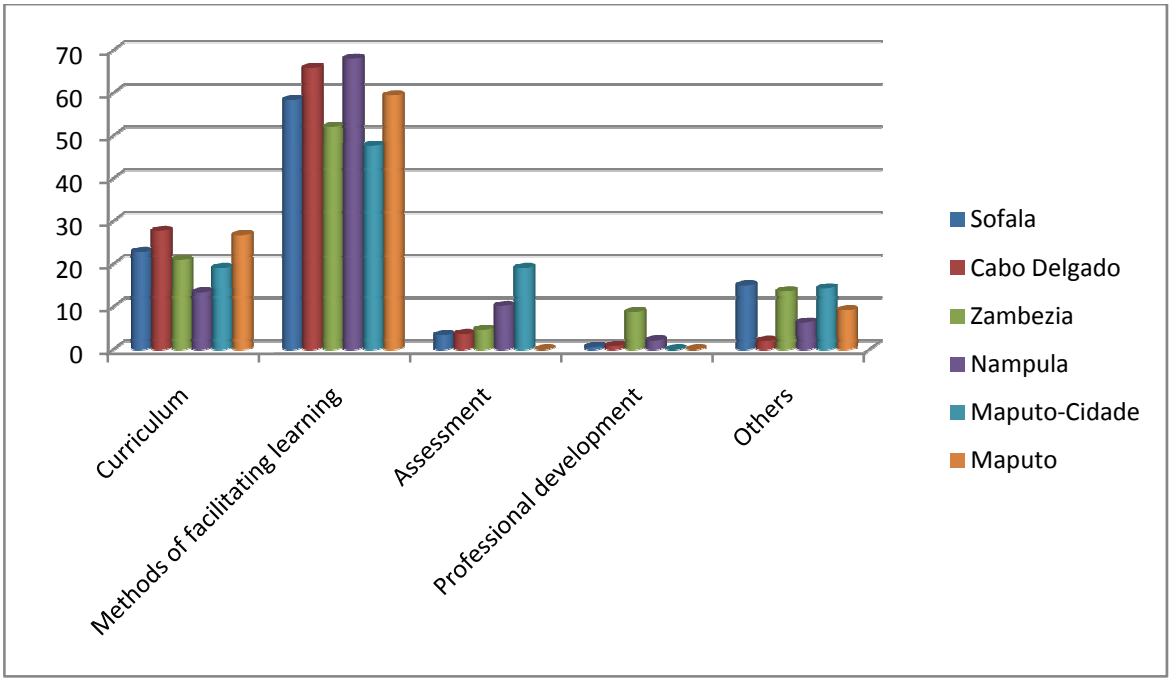
The results displayed in Table 4.16 indicate that 53 (3.28%) of teachers participating in this study said that professional development was the most valuable topic throughout the in-service education programmes they participated in from 2004 to 2007. From this perspective the issues of professional development derived from the responses are broadly related to what teachers focus on when facilitating learning and specific behaviours that enable and guide the teaching profession. Therefore the responses related to professional development mainly included pedagogical knowledge, syllabus design and the analysis of the learners' achievement. Regularly at school or ZIP level teachers discuss the level of

accomplishment of the syllabus to ensure that the learning opportunities embrace the content established for the period of the academic year. The teachers have to mention the content of the syllabus and the related pages from the textbook as a component of curriculum management. Looking at the responses, it appears that this activity has been of great relevance for teachers' professional development. Another topic mentioned in the responses was the teacher profile. Teacher profile is still an undecided component of the teaching profession in Mozambique owing to the variety of teacher qualifications. However, there is some consensus in terms of the need to be professionally qualified and ethical issues of the teaching profession.

Regarding the most valuable topics indicated in Table 4.17 it should be of value to note the great difference among the findings. This clearly suggests that methods of facilitating learning are the most preferred topic for the PDP.

A comparison of the results within each province indicates that the most valuable topics vary from province to province. Figure 4.5 illustrates the two most valuable topics according to province:

Figure 4.5: Representation of the two most valuable topics according to province



Category	Response	Frequency
Curriculum	**Curriculum transformation**	283
	The process of curriculum transformation	
	Implementation of the new curriculum	
	Learner-centred approach	
	The new subjects and content	
	Introduction of bilingual education	
	(Semi-)automatic promotion	
	Local curriculum	
	The basic kit of learning material	
	Reintroduction of pre-school	
	Curriculum development	36
	Sequencing learning units	
Methods of Facilitating Learning	**Methods of facilitating learning**	593
	Improvement of the quality of teaching and learning	
	Improvement of pedagogical practices	
	Teaching methods/methodologies	
	Planning of learning opportunities	
	Improvement of the learning process	
	Teaching in large classes	
	Teaching multiple grade classes	
	Aula modelo ("standard" learning opportunity)	
	Working with disabled children	
	Elaboration: teachers and learners	
	Microteaching	
	Improvising learning material using local resources	
	CRESCER	
	Inclusive education	
	Methods of Facilitating Mathematics	95
	Counting – progressive and regressive counting	
	Numeracy	
	Maths pace	
	Geometry	
	Sum, subtraction, multiplication and division	
	Mental calculation	
	Methods of Facilitating Portuguese	254
	Graphics	
	Initial reading and writing skills	
	Vowels, phonetics combination and letters	
	Introduction of the alphabet	
	Reading and interpretation of texts	
	Relationship between image-text	
	Spelling	
	Speaking	
	Methods of Facilitating (Integrated) Sciences	47
	Environment	
	Ecosystem	
	Natural Sciences	
	Social Sciences	

Assessment	Assessment	109
	Types of evaluation	
	Assessment for a quality learning	
	What does assessment mean?	
	How to assess the learner	
Professional Development	How to define learner records	
	Accomplishment of the syllabus	53
	Improvement of my knowledge in the pedagogical field	
	Analysis of learners' achievement	
	Analysis of the trimester	
	Teacher profile	
Other	**Administrative tasks**	15
	Fulfilment of maps	
	School management	
	Gender issues	28
	Dropout among girls	
	Gender equity/girls' education	
	Teaching on gender perspective	
	Health and hygiene and safety in streets	22
	General health issues	
	Malaria	
	HIV/AIDS	57
	(Debates) about HIV/AIDS	
	The teacher and HIV stigma	
	How to prevent HIV/AIDS	
	How to live with a positive HIV	
	Research	4
	Research methods	
	Techniques for data collection	
	Human rights and democracy	8
	Right to education	
	Street children	
	Dropout	
	Environmental education	10

Table 4.17: Summary of the most valuable topics

4.7.12 Usefulness of In-Service Education Programmes

Question 13: To what extent do you think that these programmes, in general, were useful in improving your professional learning?

As indicated in Table 4.18, in general the respondents said that the INSEP were very useful in improving their professional learning. A total of 603 (58.66%) said that the programmes were very useful, 308 (29.96%) said that they were useful, 50 (4.86%) said that they were not very useful or useless. Although 67 (6.52%) of the teachers did not answer the question, when joining the percentages of responses of the options very useful (58.66%) and useful (29.96%), the result shows that the rate of usefulness was 89.62%. I interpreted this result as an indication of the relevance of INSEP for the teachers.

Province	Frequency %	The Extent of Usefulness				
		Missing	Very useful	Useful	Quite useful/ Not very useful/ Useless	Total
Sofala	Frequency	3	69	29	16	117
	%	2.56	58.97	24.79	13.68	100.00
Cabo	Frequency	6	97	37	6	146
Delgado	%	4.11	66.44	25.34	4.11	100.00
Zambézia	Frequency	5	142	110	13	270
	%	1.85	52.59	40.74	4.81	100.00
Nampula	Frequency	19	216	94	7	336
	%	5.68	64.29	27.98	2.08	100.00
Maputo-	Frequency	17	42	14	3	76
Cidade	%	22.37	55.26	18.42	3.95	100.00
Maputo	Frequency	17	37	24	5	83
	%	20.48	44.58	28.92	6.02	100.00
Total	Frequency	67	603	308	50	1 028
	%	6.52	58.66	29.96	4.86	100

Table 4.18: Frequency of the extent to which in-service education programmes were useful according to province

4.7.13 Areas in Which the Teachers Made Progress

Question 14: Having participated in in-service education programmes, indicate two areas in which you made progress.

The table which follows, Table 4.19, displays the data of the areas in which the teachers have made progress. With reference to question 14, the teachers participating in this study were asked to indicate two areas in which they made progress. Since the question includes two variables (V14 & V15), I got two topics from each respondent. Therefore, to accommodate this procedure statistically, the sample size (1 028 respondents) was multiplied by two. Then the total frequencies to be considered for the responses are 2 056.

The teachers' perception with respect to the two areas in which they made progress varies substantially. In total 927 (64.55%) responses included methods of facilitating learning, 167 (11.63%) included curriculum, 163 (11.35%) indicated assessment, 134 (9.32%) other topics and 45 (3.13%) included administrative tasks. There were 620 (30.15%) negative responses. In this regard they mentioned as the most valuable topics issues such as current sensitisation about HIV/AIDS and environmental education at local and national level. When compared with the most valuable topics, the findings indicate that professional development was replaced by administrative tasks.

The representation of the areas in which the teachers have made progress follows in Table 4.19.

Province	Frequency %	Two Most Valuable Topics					
		Curr	MFL	Assess	Prof dev	Other	Total
Sofala	Frequency	10	103	2	3	21	139
	%	7.19	74.10	1.44	2.16	15.11	100.00
Cabo	Frequency	39	145	35	5	2	226
Delgado	%	17.26	64.16	15.49	2.21	0.88	100.00
Zambézia	Frequency	43	211	36	28	74	392
	%	10.97	53.83	9.18	7.14	18.88	100.00
Nampula	Frequency	53	367	78	8	17	523
	%	1013	70.17	14.91	1.53	3.25	100.00
Maputo-	Frequency	8	45	8	0	8	69
Cidade	%	11.59	65.22	11.59	0.00	11.59	100.00
Maputo	Frequency	14	56	4	1	12	87
	%	16.09	64.37	4.60	1.15	13.79	100.00
Total	Frequency	167	927	163	45	134	1 436
	%	11.63	64.55	11.35	3.13	9.33	100.00

Table 4.19: Frequency of the areas in which teachers made progress

Legend

Curr = Curriculum; MFL = Methods of facilitating learning; Assess = Assessment; Prof dev = professional development

Methods of facilitating learning

Methods of facilitating learning provide and/or deepen teachers' content knowledge and professional skills in order to manage the syllabus and specific subject methods. In addition they offer skills for classroom management. At school and ZIP level methods of facilitating learning approaches include providing learning materials for the different steps of the learning opportunity. Thus the high percentage of responses referring to

methods of facilitating learning was the topic in which the teachers had made progress. The first interpretation is that there is a weakness of the methods of facilitating learning, either as a result of the shortage of teacher education programmes in teacher education colleges, or from the activities carried out to provide professional skills to newly appointed teachers without professional qualifications as stated in Chapter 1. This weakness is reflected on the low mastery of methods of facilitating in Grades 1 and 2. The second interpretation is associated with the relevance of the topic to the teachers' practices. It appears that the teachers apply the acquired and/or developed knowledge and skills in their classes and make progress. The third interpretation is that PD has an impact on daily classroom practices.

Curriculum

In Mozambique the curriculum outcomes such as educational aims and objectives, school programmes for each grade, teachers' guides and some learning materials are centrally established and provided by the Ministry of Education. At micro-level such as at school and ZIP level, the teachers have little responsibility for curriculum development in terms of learning units. This is often done by the teachers in groups for grades. They have to sequence the learning units and indicate the learning tasks to be performed by the learners during the next two weeks and propose learning materials. After agreement has been reached among the teachers with respect to the units, each teacher is responsible for her/his own lesson plan and learning material.

The responses associated with curriculum point to curriculum as one of the most valuable (15.52%) considerations. The findings suggest that it is likely that curriculum issues are approached as information that has to be provided to the teachers rather than as a set of knowledge and skills to be used towards the improvement of classroom practices.

Assessment

The positive impact of assessment topics incorporated in PDPs is reflected in the percentage of responses included by the teachers. The difference between the percentages of responses (5.30%) represented in Table 4.19 and the percentage of responses represented in Table 4.20 (7.93%) is an indication that even though a certain group of teachers did not indicate assessment as one of the most valuable topics, they made

progress in this topic. Furthermore, the data suggest that assessment is a topic to be included in more PDP in order to improve teachers' knowledge and skills for learner assessment.

Other

Educational activities associated with local or national issues such as health and hygiene, gender equity, new endemic disease and environment sometimes feature at school. These activities involve the teachers and they are responsible for facilitating learning regarding these topics. These topics improve the teachers' knowledge and, to some extent, the classroom practices, in the sense that the knowledge acquired helps the way in which teachers approach those topics or related issues. The percentage of responses on other topics (6.52%) suggests that they have a positive impact on teacher professional development.

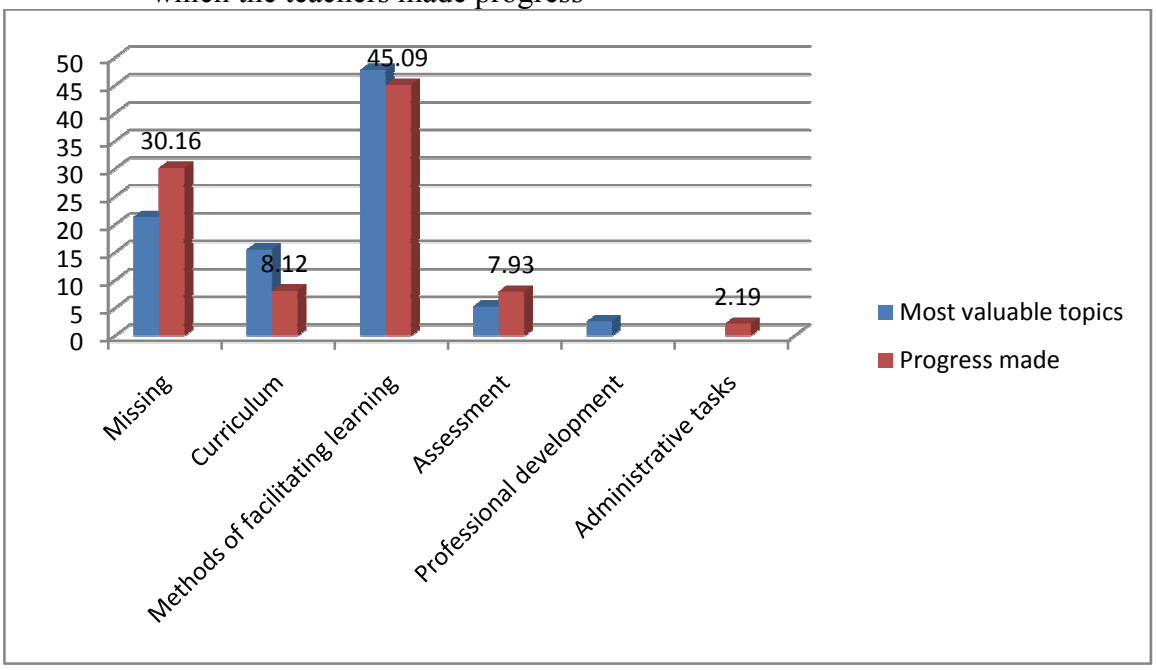
Administrative tasks

The General Regulation of Basic Education (REGEB) defines for all schools a set of 28 documents which form the *Escrituração Escolar* (School Book keeping). Eighteen of them are books and the other 10 are in the form of application forms. Apart from the application and book-keeping, teachers discuss the regulation in primary education concerning the functioning of primary schools, assessment, the teaching profession and other documents sent by the provincial directorate and the Ministry of Education.

Figure 4.6 below contains data regarding the most valuable topics and the progress made. When comparing the findings of the two areas in which teachers made progress and the two most valuable topics represented in Figure 4.6, the data indicate a higher percentage of missing responses in areas in which teachers made progress (30.16%) than for the two most valuable topics (21.35%). I interpreted the no response as an indication that teachers did not make progress after attending INSEP or, at least, did not find a specific classroom practice that had been directly influenced by INSEP. The area of methods of facilitating learning (MFL) continues to be indicated with a higher percentage of responses with 45.09%. The rates received in these variables show, on the one hand, the frequency of MFL throughout INSEP, and on the other hand, the relevance of that topic for the

teachers and the impact on facilitating learning. This means that teachers feel that MFL is a priority in INSEP for a successful classroom practice.

Figure 4.6: Comparison of percentages on the most valuable topics and the topics in which the teachers made progress



For the difference between the most valuable topic (15.52%) and progress made (8.12%) on curriculum issues, I had a positive interpretation. The first interpretation is that topics on curriculum comprise issues to be put into practice when facilitating learning and issues to be acquired as information about curriculum implementation. Curriculum issues were useful in terms of new information acquired with respect to the new subjects and new approaches to facilitating learning, bilingual education, the way in which to approach the local curriculum and other innovations introduced by the new curriculum from 2004.

Looking at Figure 4.5 the percentages on assessment indicate a lower percentage (5.30%) for this topic as the most valuable one than assessment as the topic in which the teachers made progress (7.93%). In relation to these results, my understanding is that facilitating learning, mainly in Grades 1 and 2, includes a large component of assessment while the teacher and learners approach the content in order to attain the specified objectives for the learning opportunity. In these grades each step of the learning opportunity is a mixture of feedback and new learning content. In this sense the results on assessment create the

impression that the topic on assessment was incorporated within the topic on MFL. The topic on assessment was rated lower.

With respect to the category on professional development the results shown in Figure 4.5 lead to a similar interpretation as the category on curriculum. Professional development was indicated as the most valuable topic (2.58%) and no response was obtained indicating this category as the topic in which the teachers made progress. It appears that the topics on PD during in-service education programmes were of an informative nature with no direct relationship to classroom practice. Conversely, administrative tasks had more to do with practical issues to be implemented at classroom level. As a result it was rated as the area in which teachers made progress (2.19%) and no response was obtained indicating this category as the most valuable topic.

The category on other topics obtained a higher percentage as the most valuable topic (7.44%) than the area in which the teachers made progress (6.52%). Others include a variety of topics as indicated in Table 4.20. These results suggest that most of the topics included in the calendar and activities of INSEP aim at empowering teachers with useful information, knowledge and skills. Therefore, the other topics or areas still represent preferred content to be approached during INSEP.

Table 4.20 bellow illustrates a summary of the topics mentioned by the teachers.

Category	Response	Frequency
Curriculum	**Curriculum transformation**	123
	The new curriculum	
	Implementation of the new curriculum	
	Learner-centred approach	
	New subjects	
	Classroom practices on bilingual education	
	Local curriculum	
	(Semi-)automatic promotion	
	Curriculum development	41
	Sequencing units	
	Defining objectives	
	Improvising learning materials using local resources	
	Basic kit of learning material	

Methods of Facilitating Learning	Methods of facilitating learning Improvement in the pedagogical field and classroom practices Improvement of teaching and learning process Acquiring knowledge to improve the learners' learning Improvement of the teacher quality Teaching in large classes Teaching multiple grade classes Working group (how to organise) Remedial learning tasks Working with disabled children OSUWELA project CRESCER Network Raising learner motivation/How to motivate the learner Planning of learning opportunities Use of local languages in teaching and learning Use of learning material and educational games Micro-teaching Inter-disciplinary	592
	Methods of facilitating mathematics Pace of the Mathematics learning Sum, subtraction, multiplication and division Mental calculation Counting	90
Methods of Facilitating Learning	**Methods of Facilitating Portuguese** Bilingual education Teaching methodology of Portuguese/how to teach Analytic-synthetic method Graphics and calligraphy Teaching methodology of initial reading and writing Reading and interpretation Teaching and learning of a letter/ Introduction of a new letter How to interpret images Introduction of the alphabet Speaking methodology	201
	Methods of Facilitating (Integrated) Sciences Natural Sciences Integrated sciences	53
	Physical Education	8

Assessment	Assessment Types of evaluation How to design a test Learning and assessment How to assess the learner Continuing/systematic assessment Regulation of assessment Programme evaluation	163
Adminis-trative tasks	Fulfilment of assessment maps Administrative tasks Study of regulations in primary education	45
Other	**Research** Direct observation	8
	Parent involvement in the school	8
	Gender issues Dropout among girls Girls' enrolment	12
	Conflict management Improvement of knowledge	4 9
	Health and hygiene and safety in streets Health in schools How to prevent diseases Malaria Pulverisation and use of mosquito nets	24
	HIV/AIDS How to prevent HIV/AIDS	71

Table 4.20: Summary of the topics in which the teachers made progress

4.7.14 Emphasis of In-Service Education Programmes

Question 15: What do you think should be the emphasis of in-service education programmes?

Table 4.21 indicates the teachers' preference in terms of emphasis of INSEP. The option regarding *rectifying the teachers' weaknesses* was indicated by 638 (62.06%) teachers as the preferred emphasis of in-service education programmes. The second most indicated was *developing the teachers' strengths*, by 349 (33.95%). In total 41 (3.99%) teachers

did not answer the question. I included this question to find out what should be the starting point in carrying out a PDP. This means that the intention was to know whether teachers prefer a PDP which directly focuses on their weakness or, on the contrary, prefer to begin by focusing on what teachers actually know and, from it, the PDP embraces activities. As indicated in Table 4.21, the majority of teachers indicated that they prefer to be involved in a PDP that rectifies weaknesses, which might be an indication of areas that need improvement. This suggests that this approach is customary in PD and teachers are familiar with it. Furthermore, by being familiarised with such an approach, the 33.95% responses indicate that there also exists a perception among teachers that PDPs could be designed taking into consideration what the teachers know.

Province	Frequency %	Emphasis of In-service Education Programmes			
		Missing	Dev. Teach. Str.	RTW	Total
Sofala	Frequency	3	44	70	117
	%	2.56	37.61	59.83	100.00
Cabo	Frequency	5	35	106	146
Delgado	%	3.42	23.97	72.60	100.00
Zambézia	Frequency	9	92	169	270
	%	3.33	34.07	62.59	100.00
Nampula	Frequency	9	130	197	336
	%	2.68	38.69	58.63	100.00
Maputo-	Frequency	10	26	40	76
Cidade	%	13.16	34.21	52.63	100.00
Maputo	Frequency	5	22	56	83
	%	6.02	26.51	67.47	100.00
Total	Frequency	41	349	638	1 028
	%	3.99	33.95	62.06	100.00

Table 4.21: Emphasis of in-service education programmes

Legend

Dev. Teach. Str. = Developing the teachers' strengths; RTW = Rectifying the teachers weaknesses

4.7.15 Aims of an In-Service Education Programme

Question 16: Consider the examples below. Indicate the 1st, 2nd and 3rd in order of importance for you as aims of an in-service education programme.

The tables which follow, Table 4.22, Table 4.23 and Table 4.24 display, respectively, the 1st, 2nd and 3rd in order of importance the aims of an INSEP indicated by the teachers participating in this study. The results indicated in Table 4.22 below show that 370

(41.7%) teachers indicated *increase the quality of learners' learning* as the 1st aim of an INSEP. The results displayed in Table 4.22 show that 290 (32.26%) indicated that the 2nd aim of an in-service education programme is to *improve pedagogical practices*. Lastly, the results displayed in Table 4.22 indicate that 371 (41.59%) indicated *allow experience sharing among teachers* as the 3rd aim. In total, there were 362 (11.74%) no responses to this question. These results clearly suggest the main aims of PD at ZIP level. In these ZIP meetings teachers used to present the problems they faced in their practice and discussed with fellow teachers the better strategies to solve them. Another aim of those meetings was to improve the teachers' subject knowledge and professional skills and to share the best practices experienced in each school of the ZIP.

Improving learners' learning was the fundamental aim of any in-service education programme. Therefore, looking at the results from question 16, I understood that the ZIP and other INSEP had been providing opportunities for teachers to improve learners' learning. Additionally, the responses indicated that the teachers acknowledged the advantages of the diversity of PDP providers in Mozambique.

Professional Qualification	**Freq %**	**Aims of an In-service Education Programme**					
		IQoLL	**IPP**	**ETSN**	**SCTG**	**AEST**	**Total**
No qualification	Freq	87	54	12	27	46	226
	%	38.50	23.89	5.31	11.95	20.35	100.00
CFPP	Freq	149	73	11	47	60	340
	%	43.82	21.47	3.24	13.82	17.65	100.00
IMP/MP	Freq	15	6	1	3	4	29
	%	51.72	20.69	3.45	10.34	13.79	100.00
IMAP/ADPP	Freq	116	56	26	35	66	299
	%	38.80	18.73	8.70	11.71	22.07	100.00
Higher education	Freq	3	1	2	0	1	7
	%	42.86	14.29	28.57	0.00	14.29	100.00
Total	Freq	370	190	52	112	177	901
	%	41.07	21.09	5.77	12.43	19.64	100.00

Table 4.22: Aims of an in-service education programme – improving learning

Legend

Freq = Frequency; IQoLL= Increase the quality of learner's learning; IPP = Improve pedagogical practices; ETSN = Expand teachers subject knowledge; SCTG = Standardised content to be taught in each grade; AEST = Allow experience sharing among teachers.

Based on Chi-square tests on participating teachers' comparison of professional qualification by increase the quality of learners learning, the following can be deducted: The opinions of teachers participating in this study with respect to the aims of an in-service education programme do not vary significantly (X^2 = 22.7926, p = >0.05). There is no statistic relationship between professional qualifications and the view that to *increase the quality of learners learning* is the first aim of an in-service education programme. Teachers with no qualifications and those from the levels of professional qualifications referred to the same aim. It seems that the level of professional qualifications does not impact on the view of the aim of an in-service education programme.

Professional Qualification	**Freq %**	**Aims of an In-service Education Programme**					
		IQoLL	**IPP**	**ETSN**	**SCTG**	**AEST**	**Total**
No qualification	Freq	36	77	38	45	30	226
	%	15.93	34.07	16.81	19.91	13.27	100.00
CFPP	Freq	37	118	59	75	51	340
	%	10.88	34.71	17.35	22.06	15.00	100.00
IMP/MP	Freq	1	11	8	6	2	28
	%	3.57	39.29	28.57	21.43	7.14	100.00
IMAP/ADPP	Freq	38	81	58	90	38	298
	%	12.75	27.18	17.11	30.20	12.75	100.00
Higher education	Freq	1	3	0	3	0	7
	%	14.29	42.86	0.00	42.86	0.00	100.00
Total	Freq	113	290	156	219	121	899
	%	12.57	32.26	17.35	24.36	13.46	100.00

Table 4.23: Aims of an in-service education programme – according to qualification

Legend

Freq = Frequency; IQoPL= Increase the quality of learners' learning; IPP = Improve pedagogical practices; ETSN = Expand teachers subject knowledge; SCTG = Standardised content to be taught in each grade; AEST = Allow experience sharing among teachers

Based on Chi-square tests the opinion of teachers participating in this study with respect to the second aim of an INSEP does not vary significantly (X^2 = 22.1551, p = >0.05). There is no statistic relationship between professional qualifications and the view that to *improve pedagogical practices* is the second aim of an INSEP programme. In this study only teachers certificated by IMAP/ADPP indicated a different aim of INSEP. In addition, teachers certificated by higher education institutions rated *standardised content to be taught in each grade* at the same level.

Professional Qualification	Freq %	Aims of an In-service education Programme IQoLL	IPP	ETSN	SCTG	AEST	Total
No qualification	Freq	52	18	23	44	87	224
	%	23.21	8.04	10.27	19.64	38.84	100.00
CFPP	Freq	64	38	35	58	144	339
	%	18.88	11.21	10.32	17.11	42.48	100.00
IMP/MP	Freq	7	1	3	3	14	28
	%	25.00	3.57	10.71	10.71	50.00	100.00
IMAP/ADPP	Freq	60	40	30	42	122	294
	%	20.41	13.61	10.20	14.29	41.50	100.00
Higher education	Freq	2	0	1	0	4	7
	%	28.57	0.00	14.29	0.00	57.14	100.00
Total	Freq	185	97	92	147	371	892
	%	20.74	10.87	10.31	16.48	41.59	100.00

Table 4.24: Aims of an in-service education programme – improving pedagogical practice

Legend

Freq = Frequency; IQoLL= Increase the quality of learners' learning; IPP = Improve pedagogical practices; ETSN = Expand teachers subject knowledge; SCTG = Standardise content to be taught in each grade; AEST = Allow experience sharing among teachers

Based on Chi-square tests the opinion of teachers participating in this study with respect to *allow experience sharing among teachers* as an aim of an in-service education programme does not vary significantly (X^2 = 13.0303, p = >0.05). There is no statistic relationship between professional qualifications and the view that to *allow experience sharing among teachers* is the third aim of an in-service education programme. In this study teachers with no qualifications and those from the levels of professional qualifications included in this study referred to the same aim. It seems that the level of professional qualifications does not impact on the view of the third aim of an in-service education programme.

4.7.16 Typical Characteristics of an In-Service Education Programme

Question 17: Consider the examples below. Indicate the 1st, 2nd and 3rd in order of what should be the typical of an effective in-service education programme.

In total, as Table 4.25 presents, 698 (22.63%) teachers indicated *based on effective pedagogical practices* as the first typical of an effective INSEP. The second was to *ensure regular follow-up of classroom practices* 693 (22.47%) and the third was to *promote continuity INSEP* 582 (21.53%). In total there were 327 (31.8%) no responses.

Pedagogical practices along with methods of facilitating learning were referred to as the most valuable topic (V14 & 15) and the priority in most INSEP in Mozambique in order to overcome the limitation of the teacher education programmes and the no attendance of professional courses. However, the follow-up and continuity were great constraints.

Province	Frequency	Typical Characteristics of an In-service Education Programme					
	%	BEPP	PILM	PCINEP	ERFCP	EAEP	Total
Sofala	Frequency	90	35	77	86	60	351
	%	25.86	10.06	22.13	24.71	17.24	100.00
Cabo	Frequency	110	40	109	117	56	438
Delgado	%	25.46	9.26	25.23	27.08	1296	100.00
Zambézia	Frequency	201	87	176	177	141	810
	%	25.70	11.13	22.51	22.63	18.03	100.00
Nampula	Frequency	215	90	216	216	94	1008
	%	25.87	10.83	25.99	25.99	11.31	100.00
Maputo-	Frequency	40	16	32	44	23	238
Cidade	%	25.81	10.32	20.65	28.39	14.84	100.00
Maputo	Frequency	42	28	54	53	32	249
	%	20.10	13.40	25.84	25.36	15.31	100.00
Total	Frequency	698	296	664	693	406	3 084
	%	25.32	10.74	24.08	25.14	14.73	100.00

Table 4.25: Typical characteristics of an effective in-service education programme

Legend

BEPP = Based on effective pedagogical practices; PILM = Promote improvising of learning material; PCINEP = Promote continuity of INEP; ERFCP = Ensure regular follow-up of classroom practices; EAEP = Ensure assessment by experienced persons

4.7.17 Preference for an In-Service Education Programme

Question 18: Consider the examples below. Indicate the 1st, 2nd and 3rd in order of preference of an in-service education programme that you prefer.

The data relating to teachers' preferences of INSEP are represented in Table 4.26, 4.28 and 4.29 below, indicating, respectively, the 1st, 2nd and 3rd in order of preference of in-service education programme. In Table 4.26, the results show that 335 (36.53%), teachers prefer *regular meetings* as the 1st model of an INSEP. the results displayed in Table 4.28 show that 360 (39.43%) indicated *peer observation as* the 2nd preferred model. Lastly, the results displayed in Table 4.29 indicate that 340 (37.28%) teachers indicated *classroom observation* as the 3rd preferred model.

Regular meetings are carried out by teachers from the same grade in order to discuss topics related to their classroom practices. Other types of meeting take place at ZIP level among teachers from different schools subdivided into groups or cycles or grades, and sometimes as whole groups of grades. Peer observation consists of observation carried out between teachers from the same grade according to a schedule previously established at a school. In turn, classroom observation consists of observation carried out by the deputy principal or by the grade delegate. Peer observation was the most widely used practice in primary schools as a model of professional development. The 3rd option of classroom observation suggests that, actually, the teachers prefer to be observed by fellow teachers rather than by the deputy principal and by the grade delegate as they feel that they are in the presence of someone who is in the same position.

Qualification	Freq	Preference for In-service Education Programme							
	%	RM	RD	PO	Sup	CO	W/S	R/Ss	Total
No qualification	Freq	83	25	34	13	61	13	0	239
	%	36.24	10.92	14.85	5.68	26.64	5.68	0.00	100.00
CFPP	Freq	141	29	60	9	90	19	0	348
	%	40.52	8.33	17.24	2.59	25.86	5.46	0.00	100.00
IMP/MP	Freq	11	5	7	1	5	1	0	30
	%	36.27	16.67	23.33	3.33	16.67	3.33	0.00	100.00
IMAP/ADPP	Freq	100	34	61	6	80	23	0	304
	%	32.89	11.18	20.07	1.97	26.32	7.57	0.00	100.00
Higher	Freq	0	1	2	0	2	0	1	6
education	%	0.00	16.67	33.33	0.00	33.33	0.00	16.67	100.00
Total	Freq	335	94	164	29	238	56	1	917
	%	36.53	10.25	17.88	3.16	25.95	6.11	0.11	100.00

Table 4.26: Professional development by regular meetings

Legend

Freq = Frequency; RM = Regular meetings; RD = Regular dialogue; PO = Peer Observation; Sup = Supervision; CO = Classroom Observation, W/S = Workshop/Seminar; R/Ss = Reading/Self-study

Chi-square tests on participating teachers' comparison of professional qualifications by regular meeting revealed the following.

Statistics	DF	Value	Probability
Chi-square	24	172.8517	<.0001
Likelihood Ratio Chi-square	24	32.9900	0.1043
Mantel-Haenszel Chi-square	1	1.0724	0.3004
Phi Coefficient		0.4342	
Contingency Coefficient		0.3982	
Cramer's v		0.2171	

Table 4.27: Comparison of professional qualifications by regular meeting

The opinions of teachers participating in this study with respect to regular meetings vary significantly (X^2 = 172.8517, p = <0.05). There is a statistical relationship between professional qualifications and the view that to *meet regularly* is the first preferred model of an INSEP. It seems to be consistent with what is currently happening in primary schools. Teachers participate in group grade meetings every two weeks in order to plan and sequence learning units. In this study only the teachers with higher education qualifications indicated different models of an INSEP.

Qualification	Freq %	Preference on In-service Education Programme							
		RM	RD	PO	Sup	CO	W/S	R/Ss	Total
No qualification	Freq	32	22	92	34	47	2	0	229
	%	13.97	9.61	40.17	14.85	20.52	0.87	0.00	100.00
CFPP	Freq	37	38	158	46	55	11	1	37.90
	%	10.69	10.98	45.56	13.29	15.90	3.18	0.29	100.00
IMP/MP	Freq	6	3	13	4	3	1	1	30
	%	20.00	10.00	43.33	13.33	10.00	3.33	0.00	100.00
IMAP/ADPP	Freq	50	47	96	48	49	11	1	302
	%	16.56	15.56	31.79	15.89	16.23	3.64	0.33	100.00
Higher education	Freq	2	0	1	1	2	0	0	6
	%	33.33	0.00	16.67	16.67	33.33	0.00	0.00	100.00
Total	Freq	127	110	360	133	156	25	2	913
	%	13.91	12.05	39.43	14.57	17.09	2.74	0.22	100.00

Table 4.28: Professional development by peer observation

Legend

Freq = Frequency; RM = Regular meetings; RD = Regular dialogue; PO = Peer Observation; Sup = Supervision; CO = Classroom Observation, W/S = Workshop/Seminar; R/Ss = Reading/Self-study

Qualification	Freq %	Professional Development by Classroom Observation							
		RM	RD	PO	Sup	CO	W/S	R/Ss	Total
No qualification	Freq	31	17	29	44	80	27	1	229
	%	13.54	7.42	12.66	19.21	34.93	11.79	0.44	100.00
CFPP	Freq	47	20	38	44	143	51	1	344
	%	13.66	5.81	11.05	12.79	41.57	14.83	0.29	37.72
IMP/MP	Freq	2	1	3	7	12	5	0	10
	%	6.67	3.33	10.00	23.33	40.00	16.67	0.00	100.00
IMAP/ADPP	Freq	45	25	46	46	103	37	1	303
	%	14.85	8.25	15.18	15.18	33.99	12.21	0.33	100.00
Higher education	Freq	0	1	0	3	2	0	0	100.00
	%	0.00	16.67	0.00	50.00	33.33	0.00	0.00	100.00
Total	Freq	125	64	116	144	340	120	3	912
	%	13.71	7.02	12.72	15.79	37.28	13.16	0.33	100.00

Table 4.29: Professional development by classroom observation

Legend

Freq = Frequency; RM = Regular meetings; RD = Regular dialogue; PO = Peer Observation; Sup = Supervision; CO = Classroom Observation, W/S = Workshop/Seminar; R/Ss = Reading/Self-study

4.7.18 Factors that an In-Service Education Programme should be Sensitive to

Question 19: Consider the examples below. Indicate the 1st, 2nd and 3rd in order of the factors that an in-service education programme should be sensitive to.

The results indicated in Table 4.30 below show that 855 (31.24%) respondents indicated teaching methods as the 1st factor that an in-service education programme should be sensitive to, 784 (28.64%) indicated examples of case studies as best practice, 550 (20.09%) respondents indicated methods of facilitating adult learning. The majority of professional development activities are conducted at ZIP level by fellow teachers or pedagogical teams from the different education sectors. I intended to assess the importance the teachers attach to methods of facilitating adult learning in professional development activities. When comparing the percentage of responses that indicate teaching methods (31.24%) and the percentage of responses that indicate methods of facilitating adult learning (20.09%), my interpretation is that the majority of teachers are

not aware that the principles of facilitating learning for adults should be taken into consideration during continuing professional development programmes.

Province	Frequency	Factors Concerning an In-service Education Programme				
	%	Teaching methods	MFAL	Individual learning	ECSBP	Total
Sofala	Frequency	107	82	58	98	345
	%	31.01	23.77	16.81	28.41	100.00
Cabo	Frequency	136	75	92	126	429
Delgado	%	31.70	17.48	21.45	29.37	100.00
Zambézia	Frequency	242	147	170	223	782
	%	28.30	26.73	31.02	28.44	100.00
Nampula	Frequency	256	159	162	240	817
	%	7.69	18.66	19.48	16.86	100.00
Maputo-	Frequency	48	35	31	42	156
Cidade	%	30.77	22.44	19.87	26.92	100.00
Maputo	Frequency	66	52	35	55	208
	%	31.73	25.00	16.83	26.44	100.00
Total	Frequency	855	550	548	784	2 737
	%	31.24	20.09	20.02	28.64	100.00

Table 4.30: Factors that an in-service education programme should be sensitive to according to province

Legend
MFAL = Methods of facilitating adult learning; ECSBP = Examples of case studies of best practices

4.7.19 Preference Regarding the Duration of an In-service Education Programme

Question 20: Indicate your preference in terms of the duration of an in-service education programme.

Table 4.31 displays the results of the preferences regarding the duration of an INSEP. Each statement contains two components, namely the duration of the INSEP – 1-5 days – and the expected activity after the INSEP. My intention was, apart from the duration in terms of days, to determine whether the teachers are aware of the relevance of follow-up and reflection on what they have done after the INSEP. Otherwise they indicated that they preferred follow-up providing results from the INSEP which they had participated in.

Question 20 has 6 variables. This question asked the teachers to mark one or more variables. Therefore my expectation was to obtain 6 168 responses by multiplying the 6 variables by 1 028 teachers participating in this study. From the total, 447 (7,25%) respondents indicated 5 days with follow-up providing concrete results, 400 (6.49%) indicated 5 days with follow-up of reflection after 3 months and 298 (4,83%) indicated 2 days with follow-up providing concrete results. As Table 4.31 illustrates, the main component privileged in an INSEP is duration.

Province	Frequency	Preference on Duration of In-service Education Programme						
	%	1d+Ref	2d+Ref	5d+Ref	1d+Res	2d+Res	5d+Res	Total
Sofala	Frequency	13	26	54	28	30	56	207
	%	6.28	12.56	26.09	13.53	14.49	27.05	100.00
Cabo Delgado	Frequency	24	30	61	45	51	89	300
	%	8.00	10.00	20.33	15.00	17.00	29.67	100.00
Zambézia	Frequency	37	73	116	45	64	113	448
	%	8.26	16.29	25.89	10.04	14.29	25.22	100.00
Nampula	Frequency	47	114	119	103	108	120	611
	%	7.69	18.66	19.48	16.86	17.68	19.64	100.00
Maputo-Cidade	Frequency	4	12	21	4	24	30	95
	%	4.21	12.63	22.11	4.21	25.26	31.58	100.00
Maputo	Frequency	8	14	29	8	21	39	95
	%	6.72	11.76	24.37	6.72	17.65	32.77	100.00
Total	Frequency	113	269	400	233	298	447	1 780
	%	7.47	15.11	22.47	13.09	16.74	25.11	100.00

Table 4.31: Preference on duration of an in-service education programme

Legend
1d+Ref 1 day with follow-up of reflection after 3 months
2d+Ref 2 days with follow-up of reflection after 3 months
5d+Ref 5 days with follow-up of reflection after 3 months
1d+Res 1 day with follow-up providing concrete results
2d+Res 2 day with follow-up providing concrete results
5d+Res 5 days with follow-up providing concrete results

From an analysis of the results displayed in Table 4.31, the teachers' opinion with respect to preference on duration of an in-service education programme is indicated in the following order from the highest to the lowest:

- 5 days with follow-up providing concrete results

- 5 days with follow up of reflection after 3 months
- 2 days with follow-up providing concrete results
- 2 days with follow up of reflection after 3 mounts
- 1 day with follow-up of reflection after 3 months
- 1 day with follow-up providing concrete results

These results show that, in general, teachers prefer longer in-service education programmes to short ones. Since most INSEPs discuss methods of facilitating learning and learning content, these results are consistent with the findings of question 12 (V14 & V15) and question 14 (V17 & V18). The teachers indicated methods of facilitating learning as the most valuable topic and also the topics in which they made progress after attending an INSEP. In general, the results displayed in Table 4.31 underscore, in addition to the duration of the INSEP, the importance conferred by the teachers to questions like: *What follows?* The teachers preferred concrete results to reflection as a means of closing a set of activities within an INSEP context.

With reference to the preference for follow-up providing concrete results, the results yielded in the question are consistent with what is expected from professional development providers after having conducted an INSEP. The teachers participating in such programmes are supposed to demonstrate concrete results in their classroom practices and especially regarding the learners' achievement.

4.7.20 Contribution to Own Continuing Professional Development

Question 21: How could you contribute to your own continuing professional development?

Question 21 has 7 variables. To respond to the answer, the teachers were asked to mark one or more variable. Therefore my expectation was to obtain 7 196 responses by multiplying the 7 variables by 1 028 teachers participating in the study. The results displayed in Table 4.32 show that from the total, 680 (23.70%) respondents indicated moving from CFPP to IMAP/ADPP or from IMAP/ADPP to Higher Education as the preferred contribution for their own continuing professional development; 560 (19.52%)

indicated the option taking responsibility for my own continuing professional development, while 520 (18.12%) indicated participating in ZIP meetings. Another 4 327 (60.13%) responses were not indicated by the teachers as preferable ways to contribute to their own continuing professional development. Table 4.32 suggests that the majority of the teachers preferred continuing professional development via increasing of the level of professional qualification. This preference is consistent with the first criteria for improvement in the teacher career (Ministry of Education, 2008). However, individual efforts and ZIP support, almost with similar importance, are also realised for continuing professional development.

Province	Freq	Contribution to own Continuing Professional Development							
	%	TR	Mon	Wait	DevHL	ZIP	Acad	Prof	Total
Sofala	Freq	67	32	11	49	66	37	70	332
	%	20.18	9.64	3.31	14.76	19.88	11.14	21.08	100.00
Cabo	Freq	100	55	16	71	84	39	104	469
Delgado	%	21.32	11.73	3.41	15.14	17.91	8.32	22.17	100.00
Zambézia	Freq	159	74	21	112	117	68	184	735
	%	21.63	10.07	2.86	15.24	15.92	9.25	25.03	100.00
Nampula	Freq	153	94	28	137	189	100	252	953
	%	16.05	9.86	2.94	14.38	19.83	10.49	26.44	100.00
Maputo-	Freq	38	16	1	35	26	19	33	168
Cidade	%	22.62	9.52	0.60	20.83	15.48	11.31	19.64	100.00
Maputo	Freq	43	22	2	45	38	25	37	212
	%	20.28	10.38	0.94	21.23	17.92	11.79	17.45	100.00
Total	Freq	560	293	79	449	520	288	680	2 869
	%	19.52	10.21	2.75	15.65	18.12	10.04	23.70	100.00

Table 4.32: Contribution to own continuing professional development

Legend

TR = Taking responsibility for my own CPD; Mon = Monitoring my own CPD; Wait = Waiting to be trained; DevHL = Developing habits of learning; ZIP = Participating in ZIP meetings; Acad = Attending the following academic level; Prof = Moving from CFPP to IMAP/ADPP or from IMAP/ADPP to Higher Education

As can be seen in Table 4.32, the results show that the teachers' opinion with respect to the contribution to their continuing professional development was indicated in the following order from the highest to the lowest:

- Moving from CFPP level to IMAP/ADPP or from IMAP/ADPP to Higher-Education
- Taking responsibility for my own continuing professional development
- Participating in ZIP meetings
- Developing habits of learning
- Monitoring/controlling my own continuing professional development
- Attending the following academic level
- Waiting to be trained

4.7.21 Recognition of Continuing Professional Development

Question 22: How do you think should continuing professional development be recognised?

In Mozambique there are a significant number of providers of professional development programmes as indicated in Chapter 1 and different ways of their recognition. The responses represented in Table 4.33 indicate that 484 (47.08%) of the teachers think that continuing professional development should be recognised through credit points for progression in the professional career, 359 (3.92%) through certificates/diplomas from college or university, while 112 (10.89%) teachers think that CPD points should be periodically awarded. Another 59 (5.74%) did not answer the question. Since the overall impression is that INSEP is not being appropriately recognised by means of improvement in the teachers' career and salary, I included this question in the questionnaire aiming at determining the teachers' perception concerning other ways of recognition. Actually the teachers prefer the certificates, the main way currently used in Mozambique, followed by credit points as the most preferred ways of recognition. The assumption here is that the existing recognition is acceptable. However, it will be of value to create organisational conditions to confer credit points for teachers participating in a specific INSEP.

Province	Frequency %	Recognition of Continuing Professional Development					
		Missing	Not awarded	Periodically Awarded	Certificate	Credit points	Total
Sofala	Frequency	7	2	17	37	54	117
	%	5.98	1.71	14.53	31.62	46.15	100.00
Cabo	Frequency	6		12	72	56	146
Delgado	%	4.11		8.22	49.32	38.36	100.00
Zambézia	Frequency	10	4	25	101	130	270
	%	3.70	1.48	9.26	37.41	48.15	100.00
Nampula	Frequency	26	3	38	103	166	336
	%	7.74	0.89	11.31	30.65	49.40	100.00
Maputo-	Frequency	7	3	9	17	40	76
Cidade	%	9.21	3.95	11.84	22.37	52.63	100.00
Maputo	Frequency	3	2	11	29	38	83
	%	3.61	2.41	13.25	34.94	45.78	100.00
Total	Frequency	59	14	112	359	484	1 028
	%	5.74	1.36	10.89	34.92	47.08	100

Table 4.33: Recognition of continuing professional development

4.7.22 Opinion about Teacher Roles

Question 23: Consider the following teacher roles. Indicate your opinion about each one of these roles.

The teachers' perception of teacher roles is provided in Table 4.34. The inclusion of the seven teacher roles in this questionnaire aimed at determining the teachers' perception of the roles illustrated in the listed statements. Owing to the equal relevance assigned to all teacher roles in the teaching profession, I decided to represent all options indicated by the respondents. The results show that there are more *yes* than *no* options. However, the *leader, administrator and manager* role had the highest *no* options.

The teachers' opinion concerning the teacher roles was indicated in the following order from the highest to the lowest:

- Teacher as a learning mediator
- Scholar, researcher and lifelong learner
- Community, citizenship and pastoral role
- Learning area/subject/discipline/phase specialist
- Assessor

- Interpreter and designer of learning programmes and materials
- Leader, administrator and manager.

In spite of the differences among the roles, in terms of percentage achieved, I interpreted the teachers' options as a positive understanding of their roles. The low percentage regarding the role of *Interpreter and designer of learning programmes and materials* among the roles indicated with *yes* appears to be related to the current situation in Mozambique. Learning programmes and the most of the learning materials are provided by the MEC or NGO's foreign governmental institution. The low percentage on the options *leader, administrator and manager* suggests that there is a lack of teachers' understanding of this role as a role related to their pedagogical and administrative responsibilities at classroom level. For instance, teachers usually complete a set of maps related to their learners' attendance and achievement mainly at the end of a trimester and semester.

Variables	Teacher role	Response	Freq	Percentage
V46	Learning mediator/facilitator	Missing	124	12.06
		No	22	2.14
		Yes	882	85.80
V47	Interpreter and designer of learning programmes and materials	Missing	444	43.19
		No	260	25.92
		Yes	324	31.52
V48	Leader, administrator and manager	Missing	467	45.43
		No	321	31.23
		Yes	240	23.35
V49	Scholar, researcher and lifelong learner	Missing	341	33.37
		No	75	7.30
		Yes	612	59.53
V50	Community, citizenship and pastoral role	Missing	359	34.92
		No	97	9.94
		Yes	572	55.64
V51	Assessor	Missing	430	41.63
		No	130	12.65
		Yes	468	45.53
V52	Learning area/subject/discipline/phase specialist	Missing	388	37.34
		No	153	14.88
		Yes	487	47.37
	Total		7 196	100.00

Table 4.34: Teachers' opinion regarding teacher roles

"Teacher as a Learning Mediator" was selected as the most important teacher role. Tables 4.34 - 4.40 display the teachers' opinion according to professional qualifications.

Professional Qualification	Frequency %	Response No	Response Yes	Total
No qualification	Frequency	5	206	211
	%	0.56	23.04	23.60
CFPP	Frequency	10	332	342
	%	1.12	37.14	38.26
IMP/MP	Frequency	0	30	30
	%	0.00	100.00	3.36
IMAP/ADPP	Frequency	7	298	305
	%	0.78	33.33	34.12
Higher education	Frequency	0	6	6
	%	0.00	100.00	0.67
Total	Frequency	22	872	894
	%	2.46	97.54	100.00

Table 4.35: Teachers' opinion with respect to the role of learning mediator

Professional Qualification	Frequency %	Response No	Response Yes	Total
No qualification	Frequency	72	77	149
	%	12.41	13.28	25.69
CFPP	Frequency	102	125	227
	%	44.93	55.07	39.14
IMP/MP	Frequency	4	15	19
	%	0.69	2.59	3.28
IMAP/ADPP	Frequency	79	102	181
	%	13.62	17.59	31.21
Higher education	Frequency	3	1	4
	%	0.52	0.17	0.69
Total	Frequency	260	320	580
	%	44.83	55.17	100.00

Table 4.36: Teachers' opinion with respect to the role of interpreter and designer of learning programmes and material

Professional Qualification	Frequency %	Response No	Response Yes	Total
No qualification	Frequency	93	51	144
	%	16.67	9.14	25.81
CFPP	Frequency	127	87	214
	%	22.76	15.59	38.35
IMP/MP	Frequency	9	7	16
	%	1.61	1.25	2.87
IMAP/ADPP	Frequency	91	89	180
	%	50.56	49.44	32.26
Higher education	Frequency	0	4	4
	%	0.00	100.00	0.72
Total	Frequency	320	238	558
	%	57.35	42.65	100.00

Table 4.37: Teachers' opinion with respect to the role of leader, administrator and manager

Professional Qualification	Frequency %	Response No	Response Yes	Total
No qualification	Frequency	15	160	175
	%	8.57	91.43	25.74
CFPP	Frequency	28	232	260
	%	10.77	89.23	38.24
IMP/MP	Frequency	0	24	24
	%	0.00	100.00	100.00
IMAP/ADPP	Frequency	31	187	218
	%	14.22	85.78	32.06
Higher Education	Frequency	0	3	3
	%	0.00	100.00	100.00
Total	Frequency	74	606	680
	%	10.88	89.12	100.00

Table 4.38: Teachers' opinion with respect to the role of scholar, researcher and lifelong learner

Chi-square tests on participating teachers' comparison of professional qualifications according to the role of scholar, researcher and lifelong learner revealed that the professional qualifications of teachers from this study do not vary significantly (X^2 = 6.7685, p = >0.05). There is no statistical relationship between the professional qualifications and the role of scholar, researcher and lifelong learner among the teachers participating in this study. Although all teachers holding IMAP/ADPP and Higher Education certificates have selected the option *yes*, it seems that a lack of or different professional qualifications do not have an impact on the teachers' opinion about the role of scholar, researcher and lifelong learner.

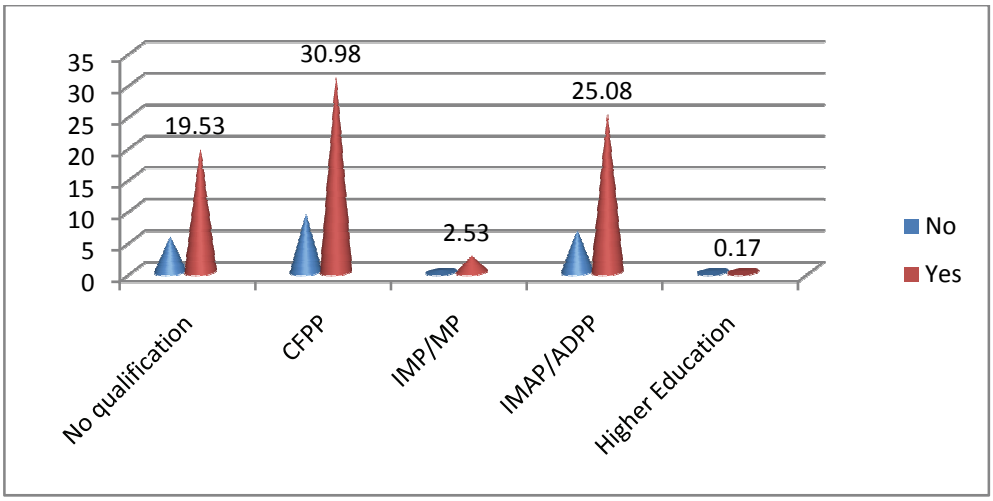
Professional Qualification	Frequency %	Responses No	Responses Yes	Total
No qualification	Frequency	28	147	175
	%	4.22	22.17	26.40
CFPP	Frequency	47	207	254
	%	7.09	31.22	38.31
IMP/MP	Frequency	1	18	19
	%	0.15	2.71	2.87
IMAP/ADPP	Frequency	21	193	214
	%	3.17	29.11	32.28
Higher education	Frequency	0	1	1
	%	0.00	0.15	0.15
Total	Frequency	97	566	663
	%	14.63	85.37	100.00

Table 4.39: Teachers' opinion with respect to the role of community, citizenship and pastoral role

Professional Qualification	Frequency %	Response No	Response Yes	Total
No qualification	Frequency	33	116	149
	%	5.56	19.53	25.08
CFPP	Frequency	54	184	238
	%	9.09	30.98	40.07
IMP/MP	Frequency	2	15	17
	%	0.34	2.53	2.86
IMAP/ADPP	Frequency	39	149	188
	%	6.57	25.08	31.65
Higher education	Frequency	1	1	2
	%	0.17	0.17	0.34
Total	Frequency	129	465	594
	%			100.00

Table 4.40: Teachers' opinion with respect to the role of assessor

Figure 4.7: Teachers' opinion with respect to the role of assessor



Professional Qualification	Frequency %	Responses No	Responses Yes	Total
No qualification	Frequency	37	133	170
	%	21.76	78.24	100.00
CFPP	Frequency	49	200	249
	%	19.26	80.32	100.00
IMP/MP	Frequency	2	18	20
	%	10.00	90.00	100.00
IMAP/ADPP	Frequency	64	130	194
	%	32.99	67.01	100.00
Higher Education	Frequency	0	2	2
	%	0.00	100.00	100.00
Total	Frequency	152	483	635
	%	23.94	76.06	100.00

Table 4.41: Teachers' opinion with respect to the role of learning area/subject/ discipline/phase specialist

Statistics	DF	Value	Probability
Chi-square	4	14.4155	0.0061
Likelihood Ratio Chi-square	4	14.8148	0.0051
Mantel-Haenszel Chi-square	1	7.3715	0.`0066
Phi Coefficient		0.1507	
Contingency Coefficient		0.1490	
Cramer's v		0.1507	

Table 4.42: Chi-square tests on participating teachers' comparison of professional qualification according to the role of learning area/subject/discipline/phase specialist

The professional qualifications of teachers from this study do not vary significantly (X^2 = 14.4155, p = <0.05). There is no statistical relationship between professional qualifications and the role of learning area/subject/discipline/phase specialist among the teachers participating in this study.

4.7.23 Opinion on Issues to Consider Regarding Planning Lessons

Question 24: Consider each statement below and indicate your opinion on the issues to consider when planning lessons.

The teachers' perceptions in relation to issues to consider when planning of learning opportunities are provided in Table 4.43. My intention was to determine the issues that teachers take into consideration when planning learning opportunities and their understanding of instruction. The results show that 182 (17.70%) respondents strongly disagree that instruction aims to identify the learning problems of individual learners, 132 (12.84%) strongly disagree that instruction must be based on knowledge of psychology, and 105 (10.21%) strongly disagree that planning should cover both immediate and long term goals. Furthermore, 723 (70.33%) respondents agree/strongly agree that instruction aims at supporting the learning of individual learners, 648 (63.04%) agree/strongly agree that planning should cover both immediate and long term goals and 638 (62.06%) agree/strongly agree that instruction must be based on knowledge of psychology. Regarding the neutral and missing responses, the results indicate that the design of instruction involves analysis; design and evaluation are the issues that received more neutral responses – in total 118 (11.48%).

Comparing the percentage (58.27%) of agree/strongly agree responses with the strongly disagree/disagree responses (7.30%), the results show a large difference. The results suggest that the teachers have positive perceptions of the issues to consider when planning learning opportunities. The original data with the frequencies of teachers' roles according to province were maintained in order to provide a complete picture.

Variable	Statement		Respondents' Opinions			
			Missing	Strongly Disagree/ Disagree	Neutral	Agree/ Strongly Agree
53	Instruction aims to support the learning of individual learners	Freq	187	76	42	723
		%	18.19	7.39	4.09	70.33
54	Instruction aims to identify learning problems of individual learners	Freq	207	182	89	550
		%	20.14 %	17.70	8.66	53.50
55	Planning should cover both immediate and long term goals	Freq	185	105	90	648
		%	18.00	10.21	8.75	63.04
56	Instruction must be based on knowledge of psychology	Freq	191	132	67	638
			18.58	12.84	6.52	62.06
57	Design of instruction involves analysis, design and evaluation	Freq	236	75	118	539
		%	22.96	7.30	11.48	58.27

Table 4.43: Issues to consider when planning lessons

Looking at the results mentioned above, the teachers' opinions concerning the issues to consider when planning learning opportunities indicate that they agree/strongly agree about the following issues listed from the highest to the lowest:

- Instruction aims to support the learning of individual learners
- Planning should cover both immediate and long term goals
- Instruction must be based on knowledge of psychology
- Instruction aims to identify learning problems of individual learners
- Design of instruction involves analysis, design and evaluation

It is of value to note that the issue *design of instruction and evaluation* received more neutral responses.

4.7.24 Regularity of Individual Learner Assessment

Question 25: How often do you assess individual learners in terms of learning achieved? Table 4.44 displays the results of the regularity of individual learner assessment in terms of learning achieved. From the total as many as 697 (67.80%) teachers indicated that they asses individual learners every day, 259 (25.00%) assess once or more a month, and 46 (4.47%) assess never/once a year/once a semester/once a trimester.

The chapter on evaluation from the General Regulation of the Basic Education establishes that assessment is a component of educational practice, which if being analysed provides significant feedback regarding the learning and facilitating the learning process (MEC-Mozambique, 2008:57). In addition to that, this document refers to the regularity of assessment tasks, establishing continual, trimestral and annual assessment. Continual activity aims to identify the learning achieved by learners and plans remedial procedures for each learner. This question was designed to determine whether the teachers assess individual learners and the regularity of these assessment tasks. From Figure 4.44 one will notice that the teachers assess individual learners every day. In this case, assessment means the corrections they do in the learners' exercise books by marking the correct and wrong answers. This is positive in terms of the fact that the majority of the teachers (67.80%) indicate that they assess individual learners every day. The results related to the assessment carried out once or more a month (25.00%) provides evidence that a percentage of teachers assess the learners more times than the trimestral established assessment in order to identify the level of the learners' learning – as expected by the Ministry of Education (MEC-Moçambique, 2008:62). Although the calendar of the majority of assessment tasks is decided at school level, my intention was to obtain information with respect to individual learner assessment, and subsequent analysis and recording in the continual assessment context set out in no.3 of Article 68 of the General Regulation of the Basic Education (MEC-Moçambique, 2008:61). According to my observation the results do not provide accurate information concerning what the teachers participating in this study actually did. Usually teachers outline the learning tasks to the class and wait for the learners to perform. When the learners have finished the indicated learning tasks they get up and form a queue to show the teacher what they have done. Then, the teacher corrects the answers. In this context teachers do not have time to assess

individual learners every day during the normal class timetable. Therefore, my interpretation also is that I did not phrase correctly the question and it did not yielded to what I wanted to determine.

Province	Frequency %	Frequency of Individual Learner Assessment				
		Missing	Never/ Once a year/Once a Semester/ Once a trimester	Once or more a Month	Every day	Total
Sofala	Frequency	6	6	28	77	117
	%	5.13	5.13	23.93	65.81	100.00
Cabo	Frequency	2	8	48	88	146
Delgado	%	1.37	5.48	32.88	60.27	100.00
Zambézia	Frequency	2	13	61	194	270
	%	0.74	4.81	22.59	71.85	100.00
Nampula	Frequency	11	13	95	217	336
	%	3.27	3.87	28.27	64.58	100.00
Maputo-	Frequency	4	2	11	59	76
Cidade	%	5.26	2.63	14.47	77.63	100.00
Maputo	Frequency	1	4	16	62	83
	%	1.20	4.82	19.28	74.70	100.00
Total	Frequency	26	46	259	697	1 028
	%	2.53	4.47	25.00	67.80	100.00

Table 4.44: Regularity/frequency of individual learner assessment in terms of learning achieved

Professional Qualification	Frequency %	Responses			Total
		Never/ Once a y/Once a s/ Once a semester	Once or more a month	Every day	
No qualification	Frequency	17	84	140	241
	%	7.05	34.85	58.09	100.00
CFPP	Frequency	14	99	257	370
	%	3.78	26.76	69.46	100.00
IMP/MP	Frequency	1	8	24	33
	%	3.03	24.24	72.73	100.00
IMAP/ADPP	Frequency	22	66	261	339
	%	3.54	19.47	76.99	100.00
Higher Education	Frequency	0	2	5	7
	%	0.00	28.57	71.43	100.00
Total	Frequency	44	259	687	990
	%	4.44	26.16	69.39	100.00

Table 4.45: Regularity/frequency of individual learner assessment in terms of learning achieved

Based on Chi-tests regarding the frequency with which teachers assess individual learners in terms of leaning achieved vary significantly ($X^2 = 31.52$, $p = <0.05$) there is a statistical relationship between professional qualifications and the frequency of individual learner assessment. Higher qualified teachers tend to assess more than less qualified teachers. It seems that the higher qualified the teachers are the more they are aware of individual learner assessment.

4.7.25 Analysis of Individual Learners' Achievement

Question 26: How often do you analyse individual learners' achievement?

In table 4.46 below 504 (50.81%) teachers said that they analyse individual learners' achievement every day, 302 (30.44%) analyse once or more a month and 167 (16.83%) analyse once a trimester. As in question 25 it appears that the teachers mostly refer to everyday control of the learners' exercise books.

Professional Qualification	Frequency %	Analysis of individual learner's achievement				Total
		Never/ Once a year/ Once a Semester	Once a trimester	Once or more a month	Every day	
No qualification	Frequency	5	40	71	126	242
	%	2.07	16.53	29.34	52.07	100.00
CFPP	Frequency	9	69	105	187	370
	%	2.43	18.65	28.38	50.54	100.00
IMP/MP	Frequency	1	1	13	20	35
	%	2.86	2.86	37.14	57.14	100.00
IMAP/ADPP	Frequency	4	56	110	168	338
	%	1.18	16.57	32.54	49.70	100.00
Higher education	Frequency	0	1	3	3	7
	%	00.00	14.29	42.86	42.86	100.00
Total	Frequency	19	167	302	504	992
	%	1.92	16.83	30.44	50.81	100.00

Table 4.46: Analysis of individual learners' achievement by teacher qualification

Similarly the responses to the question interrelated to the analysis of individual learners' achievement by professional qualification, seems to be associated to the professional qualification that the respondents held. The more qualified the respondents are the more they are likely to analyse the learners' achievement, although primary school teachers

holding a higher education certificate did not necessarily attended higher education for primary education.

Province	Frequency %	Missing	Analysis of individual learner's achievement				Total
			Never/ Once a year/ Once a Semester	Once a trimester	Once or more a month	Every day	
Sofala	Frequency	2	3	13	26	73	117
	%	1.71	2.56	11.11	22.22	62.39	100.00
Cabo	Frequency	3	3	35	34	71	146
Delgado	%	2.05	2.05	23.97	23.29	48.63	100.00
Zambézia	Frequency	1	5	42	77	145	270
	%	0.37	1.85	15.56	28.52	53.70	100.00
Nampula	Frequency	9	5	59	111	152	336
	%	2.68	1.49	17.56	33.04	45.24	100.00
Maputo-	Frequency	6	2	5	30	33	76
Cidade	%	7.89	2.63	6.58	39.47	43.42	100.00
Maputo	Frequency	3	1	13	26	40	83
	%	3.61	1.20	15.66	31.33	48.19	100.00
Total	Frequency	24	19	167	304	514	1.028
	%	2.33	1.85	16.25	29.57	50.00	100.00

Table 4.47: Frequency of analysis of individual learners' achievement by province

The results displayed in Table 4.47 indicate that Sofala presents respondents with the highest percentage (62.39%), followed by Zambézia (53.70%) and Cabo Delgado (48.63%). Given the role that the analysis of individual learners' achievement plays in overall academic achievement this data seems to be, in general, associated with the low achievement in Grades 1 and 2. I included this question to find out whether the respondents monitor the learning process.

4.7.26 Use of Analysis of Individual Learners' Achievement

Question 27: What do you use the information of the analysis for?

Table 4.48 illustrates that 380 (38.85%) teachers indicated that they use the information of the analysis of individual learners' achievement to improve teaching, 264 (26.99%) indicated that they reflect on teaching and 174 (17.79%) to improve planning. My intention was to determine the implication that the analysis of individual learners' achievement has for subsequent learning opportunities. Additionally I intended to

understand how individual learner assessment can directly or indirectly contribute to continuing professional development.

Looking at these results, the interpretation is that the process of facilitating learning is clearly teacher-centred, since only 124 (12.68%) teachers indicated that the information of the analysis is used to support the learner. The positive aspect is that as few as 36 (3.50%) teachers indicated that they use the information of the analysis for the purpose of generating marks.

Professional Qualification	**Freq %**	**Use of Analysis of Individual Learner's Achievement**					
		Suppor-ting learners	**Giving marks**	**Reflec-ting on teaching**	**Impro-ving planning**	**Impro-ving teaching**	**Total**
No qualification	Freq	29	7	61	35	108	240
	%	2.97	0.72	6.24	3.58	11.04	24.54
CFPP	Freq	54	12	96	69	132	363
	%	5.52	1.23	9.82	7.06	13.50	37.12
IMP/MP	Freq	5	3	6	9	11	34
	%	0.51	0.31	0.61	0.92	1.12	3.48
IMAP/ADPP	Freq	33	14	101	58	128	334
	%	3.37	1.43	10.33	5.93	13.09	34.15
Higher education	Fre	3	0	0	3	1	7
	%	0.31	0.00	0.00	0.31	0.10	0.72
Total	Fre	124	36	264	174	380	978
	%	12.68	3.68	26.99	17.79	38.85	100.00

Table 4.48: Use of analysis of individual learners' achievement by professional qualification

When comparing the percentages of responses by professional qualification, the results from Table 4.48 indicate that the respondents certified by a medium level of professional qualification (IMAP/ADPP and IMP/MP) tend to have the highest percentage with respect to the use of analysis of individual learners' achievement on improving teaching. However, due to the limited academic and professional skills provided by secondary and teacher education, respectively, teachers' continuing professional development should continue paying attention to learners' assessment.

Province		Use of Analysis of Individual Learner's achievement						
Frequency	%	Missing	Supporting learners	Giving marks	Reflecting on teaching	Improving planning	Improving teaching	Total
Sofala	Frequency	5	11	4	39	18	40	117
	%	4.27	9.40	3.42	33.33	15.38	34.19	100.00
Cabo	Frequency	4	18	4	25	30	65	146
Delgado	%	2.74	12.33	2.74	17.12	20.55	44.52	100.00
Zambézia	Frequency	6	15	9	69	51	120	270
	%	2.22	5.56	3.33	25.56	18.99	44.44	100.00
Nampula	Frequency	12	58	12	91	47	116	336
	%	3.57	17.26	3.57	27.08	13.99	34.52	100.00
Maputo-	Frequency	8	11	4	22	13	18	76
Cidade	%	10.53	14.47	5.26	28.95	17.11	23.68	100.00
Maputo	Frequency	3	13	3	21	16	27	83
	%	3.61	15.66	3.61	25.30	19.28	32.53	100.00
Total	Frequency	38	126	36	267	175	386	1028
	%	3.70	12.26	3.50	25.97	17.00	37.75	100.00

Table 4.49: Use of analysis of individual learners' achievement by province

Similarly, the results displayed in Table 4.50, show the tendency of a more teacher-centred approach in provinces like Cabo Delgado (44.52%), Zambézia (44.44%) and Nampula (34.52%). However, there is no large difference among the six provinces applicable to this study. The use of analysis of individual learners' achievement for the purpose of learner support indicates that Nampula shows the highest percentage (34.52%), followed by Maputo (15.66%) and Maputo-Cidade (14.47%). In the same way, this data set appears to be related to low achievement in Grades 1 and 2.

In terms of reflecting on teaching, the data set indicates that Sofala presents respondents with the highest percentage (33.33%), followed by Maputo-Cidade (28.95%) and Cabo Nampula (27.8%). Given the role that the analysis of individual learners' achievement plays in overall academic achievement this data set seems to be, in general, associated with the low achievement in Grades 1 and 2. I included this question to find out whether the respondents monitor the learning process.

4.7.27 Regularity of Provision of Instruction to Prevent Early Underachievement

Question 28: How often do you provide instruction to prevent early underachievement? Table 4.50 displays the results of the regularity of provision of instruction specifically to prevent early underachievement. In this regard the table shows that as many as 816 (83.01%) teachers indicated that they provide instruction once or more a month, 115 (11.70%) and 52 (5.29%) provide never/once a year/once a semester. As previously mentioned, the chapter on evaluation from the General Regulation of the Basic Education establishes that the purpose of continual assessment is to identify the learning achieved by learners and plan remedial procedures for each learner. In this sense, provision of instruction could be one of the procedures. The frequencies of this variable suggest that at least the teachers indicate to their class the learning tasks recommended in the learner textbooks.

Professional Qualification	Frequency %	Regularity of Provision of Instruction to Prevent Early Underachievement			Total
		Never/ Once a year/Once a Semester/	Once a trimester	Once or more a month	
No qualification	Frequency	14	37	189	240
	%	1.42	3.76	19.23	24.42
CFPP	Frequency	18	46	303	367
	%	1.83	4.68	30.82	37.33
IMP/MP	Frequency	4	2	28	34
	%	0.41	0.20	2.85	3.46
IMAP/ADPP	Frequency	16	28	291	335
	%	1.63	2.85	29.60	34.08
Higher education	Frequency	0	2	5	7
	%	0.00	0.20	0.51	0.71
Total	Frequency	52	115	816	983
	%	5.29	11.70	83.01	100.00

Table 4.50: Regularity of provision of instruction to prevent early underachievement by professional qualification

Statistical data displayed in Table 4.50 indicate that the majority of the respondents who answered to this question provide instruction to prevent early underachievement once ore more a month, particularly in the incidence of those certified by CFPP (30.82%), followed by IMAP/ADPP (29.6%) and those without a professional qualification (19.23%). Similarly to the other topics on assessment, higher qualified respondents do not

necessarily show the best practices. My interpretation is that the respondents do not provide trimester assessment opportunities by their own initiative, since in Mozambican primary schools, the end of the trimester used to be the occasion for assessment and feedback to learners and parents. These assessment tests are compiled by a group of teachers of the same grade and distributed to all teachers. This procedure does not allow for an individual teacher to assess his/her particular class. Therefore, the assumption here is that, apart from the learning tasks that teachers assign to learners, the teachers do not design tests and the learners have few opportunities to learn.

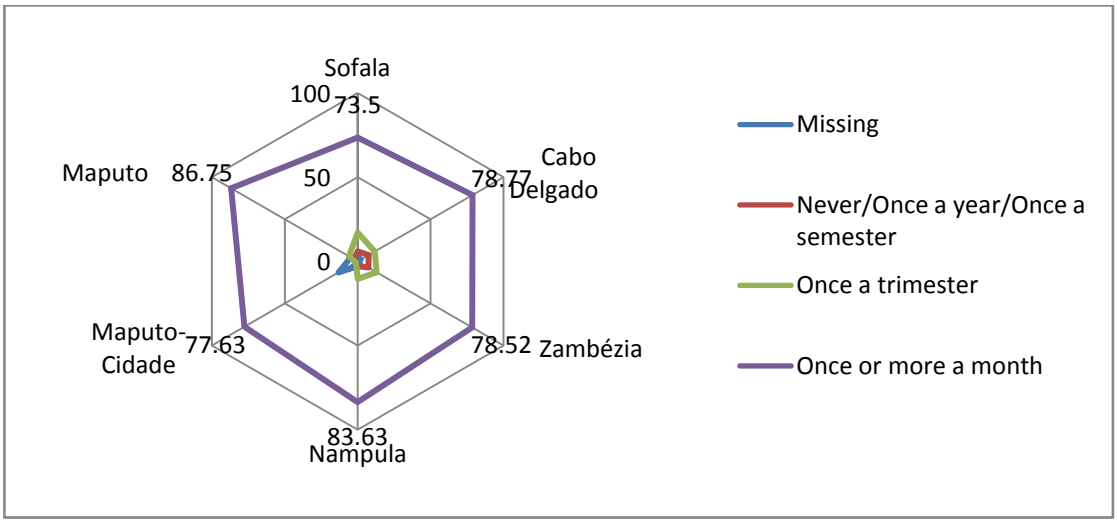
Province	Frequency	Provision of Instruction to Prevent Early Underachievement				
	%	Missing	Never/ Once a year/Once a Semester/	Once a trimester	Once or more a month	Total
Sofala	Frequency	4	7	20	86	117
	%	3.42	5.98	17.09	73.50	100.00
Cabo Delgado	Frequency	3	11	17	115	146
	%	2.05	7.53	11.64	78.77	100.00
Zambézia	Frequency	3	20	35	212	270
	%	1.11	7.41	12.96	78.52	100.00
Nampula	Frequency	10	10	35	281	336
	%	2.98	2.98	10.42	83.63	100.00
Maputo-Cidade	Frequency	10		1	59	76
	%	13.16		1.32	77.63	100.00
Maputo	Frequency	4	2	5	72	83
	%	4.82	2.41	6.02	86.75	100.00
Total	Frequency	34	52	117	825	1 028
	%	3.31	5.06	11.38	80.25	100.00

Table 4.51: Provision of instruction to prevent early underachievement by province

Table 4.51 illustrates the provision of instruction to prevent early underachievement according to province. In this table, Maputo shows the highest percentage (86.75%), followed by Nampula (83.63%) and Cabo Delgado (78.77%). With respect to the provision of instruction during a trimester, Sofala indicates the highest percentage (17.09%) followed by Zambézia (12.96%) and Cabo Delgado (11.64%). As can be observed, in general, the results suggest that there is more incidence of monthly remedial instruction than in a trimester. This is evidence that the teachers only assign the periodical assessment included in the learning material and those established by the school.

The data captured in Table 4.51 are visually represented in Figure 4.7 below.

Figure 4.8: Visual representation of instruction to prevent early underachievement



4.7.28 Regularity of Writing Reports about Potential Underachieving Learners

Question 29: How often do you write a report about potential underachieving learners? The results displayed in Table 4.52 indicate that 676 (69.19%) teachers participating in this study write reports about potential underachieving learners once a trimester, 201 (20.57%) write once a month while 42 (4.30%) write once a year or once a semester. This question was included to elicit whether the teachers keep records in terms of notes related to underachiever learners, aiming at follow-up and provision of remedial instruction. The results suggest that the teachers only write the compulsory report required at the end of the trimester.

Professional Qualification	Frequency %	Regularity of writing report about potential underachieving learners					
		Never	Once a year	Once a semester	Once a trimester	Once a month	Total
No qualification	Frequency	5	18	8	151	54	236
	%	2.12	7.63	3.39	63.98	22.88	100.00
CFPP	Frequency	3	12	17	249	86	367
	%	0.82	3.27	4.63	67.85	23.43	100.00
IMP/MP	Frequency	1	1	1	22	6	31
	%	3.23	3.23	3.23	70.97	19.35	100.00
IMAP/ADPP	Frequency	7	11	16	247	55	336
	%	2.08	3.27	4.76	73.51	16.37	100.00
Higher Education	Frequency	0	0	0	7	0	7
	%	0.00	0.00	0.00	100.00	0.00	100.00
Total	Frequency	16	42	42	676	201	977
	%	1.64	4.30	4.30	69.19	20.57	100.00

Table 4.52: Regularity of writing report about potential underachieving learners

Table 4.52 displays the data concerning the regularity of writing reports about potential underachieving learners by professional qualification. The data related to trimester reports show that all respondents certified by higher education (100%), followed by those certified by IMAP/ADPP (73.51%) and IMP/MP (70.97%) have a noticeable preference of trimester assessment. The results are consistent with the procedures in primary schools with respect to assessment according to the calendar.

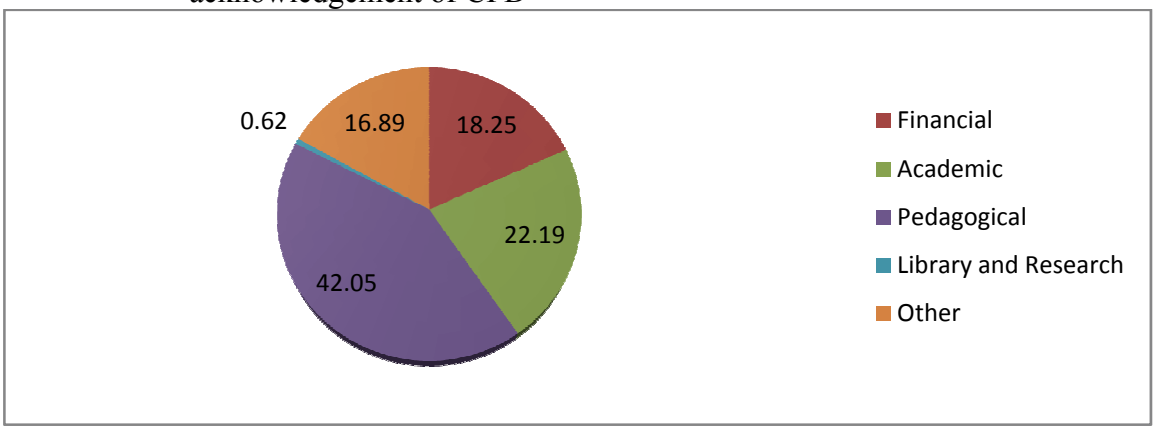
4.7.29 Teachers' Suggestions about Acknowledgement of Continuing Professional Development

Question 30: What suggestions do you have to improve the acknowledgment of teachers' continuing professional development from educational sectors?
The figure that follows below, displays the data of the suggestions for acknowledging teachers' continuing professional development (TCPD). As many as 682 (42.05%) respondents included pedagogical issues, 360 (22.19%) included academic issues, 296 (18.25%) included financial issues, 274 (16.89%) included other issues. On considering other issues, the respondents included matters like awards, certification, acknowledgment of the teacher's work, regulation and learning materials; 10 (0.62%) included library and research while 434 (22.11%) did not respond to the question.

This question aimed at collecting information regarding suggestions for the improvement of acknowledgement of TCPD. The reason for including this question at the end of the questionnaire was, on the one hand, to obtain from the respondents individual suggestions about the acknowledgement of CPD. I included this question expecting that the respondents would generate a variety of suggestions for CPD to be acknowledged in terms of financial incentives, promotion in the career and certificates. Apart from these suggestions, the respondents indicated library, research and a large diversity of suggestions beyond my expectations.

The following pie-chart represents the suggestions indicated by the teachers for the improvement of the acknowledgement of continuing professional development by educational sectors.

Figure 4.9: Representation of the suggestions for the improvement of acknowledgement of CPD



Pedagogical issues

Pedagogical issues were indicated as the first suggestion for the acknowledgement of professional development programmes (PDPs). Pedagogical issues included in the responses mainly embrace PDP matters which positively impact on classroom practices. In primary education, most of the PDP activities took place at ZIP level, essentially aiming at improving professional skills of all teachers or for teachers from a specific grade. In some circumstances these programmes did not include all teachers due to the large number of teachers appointed for the grade. Regarding pedagogical issues, the teachers pointed out that education sectors should carry out seminars for professional development throughout the academic year, mainly at the end of the trimester in order to improve content knowledge and professional skills. These findings led to two interpretations. The first interpretation is that teachers consider that PDP positively influences their profession. Therefore the responses indicate the need for improving specific areas, such as content knowledge and professional skills. The second interpretation is that PDP has not been a continued activity. An example of the lack of continuity is the suggestion for more opportunities to participate in PDP activities.

Academic issues

With respect to academic issues, the responses include the provision of bursaries, opportunities to increase the level of academic and professional qualifications and the increase of the number of teacher education colleges. The findings clearly illustrate the teachers' willingness to improve their academic and professional qualifications. This aspect is consonant with the difference found between the academic (V6) and professional

(V7) qualifications of the respondents. To be enrolled in the next level of professional qualification usually implies holding a higher academic qualification than the one needed as a requirement for the position. By progressing in terms of knowledge and professional skills the teachers also make improvement in their professional career. I became aware of the teachers' motivation to achieve the next academic or professional level within the context of expansion of education opportunities in Mozambique.

Financial

There are 2 modalities that allow a teacher to progress in their career and increase her/his salary (Ministry of Education and Culture, 2009). One modality is designated vertical progression and the other one is horizontal progression. In the first one, the teacher progresses according to the period of service in the profession. In the second modality the teacher can progress by achieving a higher level of academic and/or professional qualification than that currently held. The increase in salary obtained through the second modality is most significant.

Other suggestions indicated are seminars with financial incentives and loans for housing. These findings suggest that CPD have not been taken into consideration in the teachers' careers. Consequently the teachers are permanently looking for opportunities to be enrolled in the next academic or professional level in order to improve their salaries.

Other

As many as 274 (11.33%) respondents included other issues as suggestions for the acknowledgment of CPD. Of these, acknowledgement of the teacher's work, learning material, regulation, awards, certification and parents' involvement had the highest frequency.

Library and research

The majority of primary schools do not have facilities to accommodate a library. For this and other reasons libraries, or even complementary books, are still concerns. In total, as few as 10 (0.49%) respondents referred to the provision of libraries and opportunities to carry out research as a suggestion for acknowledging CPD. This suggestion is an indicator that there is a shortage of libraries in primary schools for daily academic activities.

Further, after having participated in CPDPs, the teachers feel the need for material that would make possible the implementation of the new knowledge and skills.

Table 4.53 below summarises the responses distributed into categories as stated in section 4.2.

Category	Response	Frequency
Financial	Promotion in the career/changing the category	296
	Increasing the salary	
	Salary on time	
	Seminars with financial incentives/payment	
	Loans for housing	
Academic	Increase the academic level	360
	Teacher education should be continuous to improve teaching	
	Increasing the number of teacher education colleges	
	Increasing the duration of teacher education	
	The education sector should provide bursaries	
	Increasing the level of professional qualifications	
	Providing adequate teacher education	
	Appointing qualified teachers in Grades 1 and 2	
	Building more teacher education colleges	
	Increasing professional qualification in teacher education colleges	
	Provision of teacher education through distance education	
	Provision of opportunities to attend teacher education courses	
Pedagogical	Promoting mutual support and collaboration among teachers	682
	Presenting seminars for pedagogical updating to improve teaching	
	Professional development should be continued/TCPD	
	Improving the curriculum for primary education	
	Trimester seminars/throughout the year	
	Semester seminars at the beginning of the year	
	Carrying out short term TCPD at school or ZIP level	
	More professional development to improve content knowledge	
	Promoting experience sharing with other provinces	
	Promoting experience sharing among teachers	
Libraries & research	**Libraries and Research**	10
	Libraries at schools	
	Promotion of knowledge	
	Promotion of research	
Other	**Award**	21
	Awards for the most dedicated teachers	
	Praise teachers with much experience	
	Certification	9
	Certificate from an institution or university	
	Providing certificates from teacher education institutions	

Regulation	
Regulation of class size to reduce the number of learners	37
Class size should be regulated to allow better control	
Regulation on CPD and transparency on the selecting teachers for PD	
Eliminating automatic promotion	
Learning material	83
Improving learning material	
Provision of learning material according to learning content	
Provision of sufficient material for teachers and learners	
Availability of learning material on time	
Improvements (on)	109
Acknowledgement of the teacher work by society	
Improving infrastructure/classroom	
Improving working conditions	
Improving social conditions	
More attention from the Ministry of Education side	
Moral support	
Effective control and teacher evaluation	
Parent involvement	25
Promotion of respect among community and teacher (CD)	
Promotion of parent collaboration	

Table 4.53: Summary of the suggestions for the acknowledgment of continuing professional development

4.7.30 Reflection on the Questionnaire

The use of questionnaire, as part of the Cycle A, aimed at providing a baseline analysis of the topic under study as already stated in Chapter 3. For this purpose, informed by the literature review and my own experience, the major issues which involve TCPD and classroom practice were identified and considered. In doing so, the central questions/items of the questionnaire comprise the next issues:

- academic and professional qualification;
- experiences on and opportunities for CPD;
- models of TCPD;
- individual contribution for own professional development;
- teacher roles; and
- procedures concerning individual learner assessment.

In designing the questionnaire I viewed the mentioned questions/items as the probable internal factors that, at classroom level, influence individual learning facilitator on taking responsibility on her/his own CPD. Therefore, I launched to administration of the questionnaire having in mind that the questions/items I have identified as being crucial one will provide substantive data to inform the Cycle B of this PAR. Consequently, is worth mentioning that the findings of the questionnaire provided an understanding in the domains of:

- motivation and contribution for continuing professional development
- preference for topics for continuing professional development
- preference for models of continuing professional development
- preferred ways to contribute to their own professional development
- impact of the different levels of professional qualifications on the teachers' perception of the teachers' roles and assessment

In addition the findings shows insignificant impact of the level of professional qualifications on the teachers' perception of the teachers' roles and deficient monitoring of individual learner achievement.

Regarding the weakness on monitoring of individual learner achievement is worth mentioning that the responses to Question 25 from the questionnaire (*How often do you assess individual learner in terms of learned achieved*?) showed lack of accordance with the practise in Grades 1 and 2 and my own observation. I interpreted this fact as a direct consequence of the wrong way in which I phrased the question. Nevertheless, the set of responses on monitoring of individual learner achievement provided important data to be taken into consideration on the PAR.

The diversity of responses given by the respondents regarding the topics that have been focused on in the in-service education attended (Question 12: *Indicate the two most valuable topics that have been focused on in the in-service education programmes that you have attended.*) confirmed that each teacher has specific needs and interests. This result informed my practice as promoter of TCPD and the importance of a self-directed

professional development model. Therefore, while working with the PRs, the main strategy was to facilitate learning according to what they need to improve and innovate.

From this understanding and the observations throughout the administration of the questionnaires, I took the risk of delaying the beginning of the second cycle of the PAR process. To begin with I designed the first learningshop to familiarise the PRs with basic issues on Action Research (AR).

According to my observation during the administration of the questionnaire, the teachers strictly stayed in the school during the period they have to be in the classroom with the class for the learning facilitation. Every two weeks they engaged in planning with fellow teachers from the same grade. This planning takes approximately four hours. Frequent collective assessment sessions at schools also were one of my observations as being the reason for the reduced length of opportunities offered to learners to learn. When comparing the time that the learners actually had for effective learning opportunities and the time devoted to assessment, I observed that this task takes up a large part of the academic year. Likewise, considering the current notion of assessment as an integral part of the facilitating learning (widely substantiated by literature), specific school day dedicated to assessment would not take place as often as it does. Another observation is concerned with effective school days that the learners have. Due to many cases of teachers' absenteeism and marginal events at local level, the days allocated for the academic year are significantly reduced.

The overall process of piloting and administration of the questionnaires provided useful inputs to my intention in exploring an intervention for improving the practices of primary school teachers through PAR. Thus the reflection on all processes developed an awareness of the difficulties I would have of both observing learning opportunities and involving the PRs in extra-classroom and/or extra-school activities in. Despite this experience, I took the risk on delaying the beginning of the second cycle of the PAR process. To begin with I designed the first learningshop to familiarise the PRs with basic issues on AR.

The sample used was not representative of all Mozambican teachers' experience and availability. Owing the limitations already referred to in Chapter 3 the respondents engaged in this study had been facilitating learning in towns and suburban areas. This situation gave them more opportunities to progress regarding their academic and professional qualifications which are the established way to progress in the teaching career, and consequently in the salary categories. Therefore, the conclusion that the respondents preferred to move from CFPP to IMAP/ADPP or from IMAP/ADPP to higher education was an indication that CPD by means of PAR to improve pedagogical practices would not be simple task to hold in Maputo-Cidade.

At the end of the reflection on the questionnaires is worth mentioning that since the literature review up to the analysis of the data gathered improved the way I understand TCPD. The literature reviewed provided different perspectives of the nature, the influential factors the diversity of approaches and models of TCPD which expanded the view in which I can schedule a PD programme. With respect to the data, I come to realise how learning facilitators understand their roles as educators, specifically concerning monitoring individual learner learning and provision of remedial tasks. This improved my practice in the sense that I understood and experienced transformation in my usual practice of motivating ownership of pedagogical practice.

4.8 LEARNINGSHOPS

The learningshops followed the period devoted to semi-structured classroom observation. The PRs participated in three learningshops, namely on "Action Research for Professional Development", "Instructional Analysis to Promote Learning" and "Assessment and Learners Achievement". After classroom observation, I did not think the PRs would fully appreciate individual action research projects due to the overall working condition, like suitable classrooms, lack of blackboards, learning materials, desks for teachers and learners, time of the school day and the time that teachers are at school. Instead the PRs could apply elementarily action research procedures. I took the risk of promoting action research or action research procedures which can develop habits of continuously asking questions about one's practice. Led by my observation as a supervisor and facilitator of

in-service education programmes, another risk I took was to encourage the PRs to look at the facilitating learning beyond the usual constraints raised mainly by teachers in Grades 1 and 2, such as:

- overcrowded classes
- overcrowded curriculum
- inappropriate system of education
- predominance of learners who do not speak Portuguese as a mother tongue
- semi-automatic promotion
- lack of study habits among the learners
- insufficient parent support.

In order to overcome the constraints mentioned above, I intended to encourage the PRs to question and critically look at what they were doing to promote learning and what they could do better.

As stated earlier in this chapter, the PRs hold senior secondary education and IMAP certificates, as academic and professional qualifications respectively, at the outset of this study. Consequently, according to the teacher education curriculum, they were familiarised with research methods in education. Based on this fact, I launched into the learningshop on action research thinking that the PRs would acquire specific information, knowledge and skills concerning a research method that they could use in the classroom and that propagated continuing professional development. By participating in this learningshop, each PR could use the previous sensitivity to educational research and find useful tools for systematically asking her-/himself questions such as:

- What can I do to ...?
- What can I improve ...?
- What can I do better ...?
- How can I elaborate innovative learning tasks in order to motivate my learners ...?
- How can I support (a specific learner) to learn better?

– How/where can I obtain more knowledge/skills/learning material to improve the learning opportunities?

In this regard the learningshops were designed to attain the following purposes, namely to:

- look at essential tools and to harmonise the language to be used in the study
- prepare the teachers to take part in the PAR cycles
- discuss with the teachers ways for their CPD in the context of their educational practices
- contribute to the improvement of knowledge and skills on research methods
- contribute to the teachers' growth and my own CPD
- understand the participating teachers' awareness with respect to CPD.

As can be seen in the visual representation of the activities performed in this PAR cycles (Table 4.57), the research process was not linear. A number of activities took place simultaneously. This is the case in the three learningshops which took place while the administration of the questionnaires was still in progress. This overlap allowed me to use data from the questionnaires already completed. For instance, reading/self-study was the least preferred part of in-service education programmes of the respondents. Thus, in order to take into consideration this disadvantage, the learningshop sessions were carefully translated and the hand-outs reduced to the bare essentials.

As previously stated, one of the purposes of the learningshop was to contribute to the teachers' growth and my CPD. For this purpose I decided to leave the PRs to their own devices for 2-3 months in order to create opportunities to practise and implement what they had experienced or learned during the learningshop sessions. After that I met the PRs for following-up and reflection on the professional learning achieved. I asked about their impressions about the learningshops. Another intention of the meeting held was to provide space for analysis of the learningshops taking into consideration their practice after the new experiences. Thus, the PRs presented their impressions and spoke about what they had learned and after the learningshops I wrote a short report on it. Appendix F provides the report.

The learningshop process is described in the following sub-sections of this study.

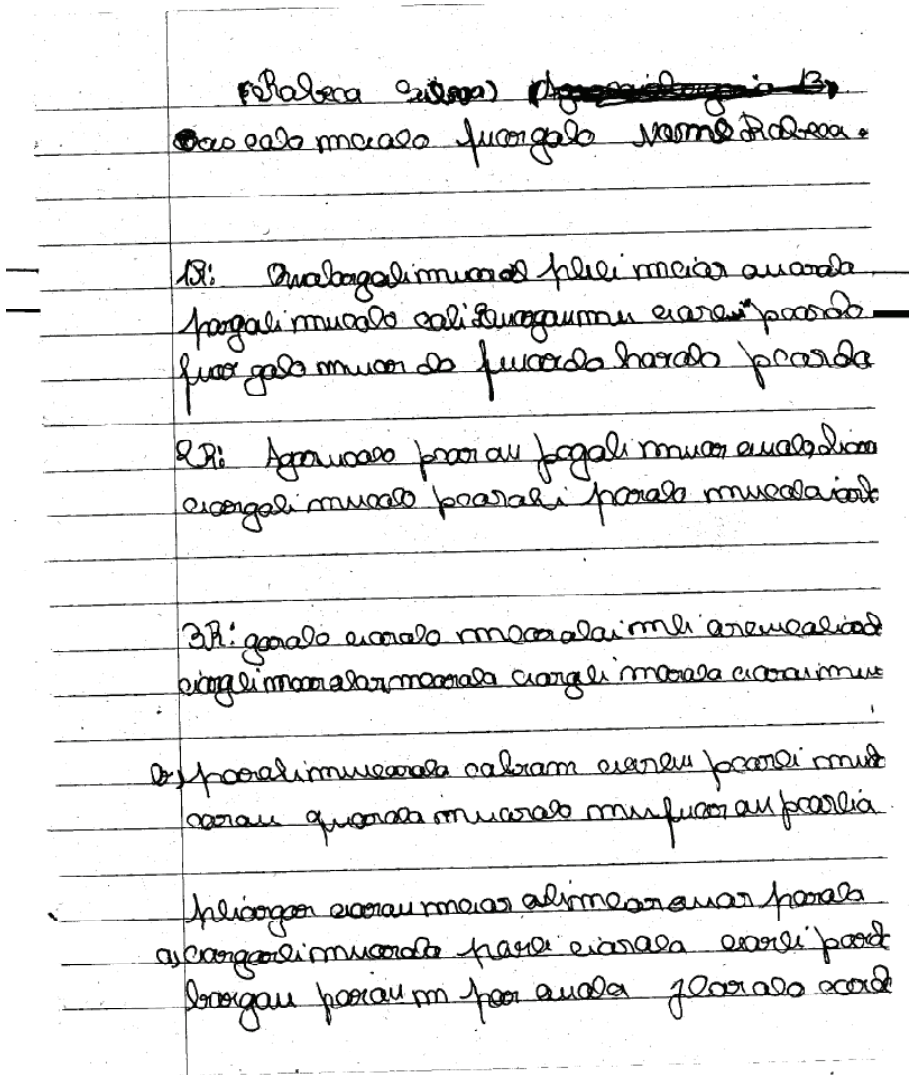
4.8.1 Methodology Used for the Learningshops

The participants of the learningshops were the 5 teachers involved in this PAR study as practitioner-researchers and me. To carry out this part of the study, the dates and the schedule were planned with the agreement of each teacher and permission from the deputy principal of the school was obtained. To avoid overloading the teacher during their holidays between trimester 1 and 2, the sessions of the learningshop took place only in the morning for five hours. The first learningshop was conducted by Dr Du Toit, my supervisor, with my support at the Eduardo Mondlane University. The following 2 were conducted by me at Unidade 18 Primary School.

I began the learningshops informed by understanding of both adult and transformative learning. My intention was to provide opportunities for professional learning that they could immediately apply to their daily practice by reflecting and critically thinking about what is done to facilitate learning in Grades 1 and 2. Therefore, during the learningshops, the prevailing methods were discussion in small groups and presentations in plenary related to what they had experienced as primary school teachers and the experiences from the sessions. In doing so, after or preceding presentations, the teachers were usually invited to in groups or individually, present their reflections, comments or ideas and possible applicability of what was being discussed. In pertinent cases, the PRs planned learning opportunities.

My experience of primary education achievement in subjects like Portuguese and Mathematics, and according to my observation reinforced the need for encouraging the PRs to reflect critically on what they were doing and what they could improve. For instance, in one of the provinces I got an extreme example of a learner in grade 5 who, apart from the name, could not write understandable words that I could use as case study. The following extract is what the learner wrote:

Photo image 1: Learner's writing



The text is written in Portuguese. However, I could not translate since the segments (words) did not make any sense. The learner only indeterminately joined letters from the beginning until the end of the text. This example shows that the learner did not acquire the writing skills establish for Grade 1 and she/he successively passed from one grade to another up to Grade 5. None of the learning facilitators supported the learner by means of remedial tasks on reading. This limitation in terms of the learning process gave me the impression that the learning facilitators who the learner had did not feel responsibility for the learner achievement. Another impression is that the learning facilitators do not master appropriate methods neither for facilitating learning nor for recovering learners to find out a possible solution.

The probable limitations in terms of methods of facilitating learning supposed previously, is aggravated by the low level of reading skills among the learning facilitators'. For instance, in the context of the Southern and Eastern African Consortium for Monitoring Education Quality II (SACMEQ II), the study related to Mozambique showed that in upper primary education (PE 2nd level – Grades 6 & 7), the learning facilitators' test was similar to the learners' test (Passos, 2009).

4.8.1.1 Learningshop on action research

The purpose of the learningshop on Action Research was to:

- present an action research approach as a method for investigation
- present an action research approach as a tool for professional development
- promote reflection on the need for innovative practice in the context of continuing professional development
- discuss with the PRs possible actions to be carried out to monitor their educational practices towards their own CPD.

The learningshop on action research took place on 16th and 17th April 2008. Dr Du Toit conducted the sessions in one of the rooms of the Faculty of Education at Eduardo Mondlane University, since at the Unidade 18 Primary School there were no classrooms available, nor facilities for a PowerPoint presentation. In order to overcome the language constraints among the teachers, the presentations and the hand-outs provided during the learningshop were translated by me.

The topic and content of the learningshop were presented as a working proposal for the sessions and the PRs. Dr Du Toit designed the sub-topics aimed at guiding the discussion and future study and implementation of action research projects. The topics of the learningshop comprised issues such as:

- Teacher responsibilities
- Teacher's roles
- Leadership role

- Old and new paradigm of facilitating learning – with a focus on whole brain learning as innovative idea
- Traditional research
- Action Research
- Critical reflection
- Possible theoretical framework for the research project
- Project design.

Photo image 2: Learningshop on action research

Dr Du Toit conducted the AR learningshop in a friendly and humoristic way – as part of demonstrating the principles of whole brain (Herrmann in Du Toit, 2006) methods of facilitating of learning. He *inter alia* used coloured cards and asked the PRs to select the first and the last one to show how people have different characteristics and learning preferences. In order to improve the participation of the PRs in their professional learning they were invited to discuss with the neighbour colleague the cards selected. During the entire session the PRs were invited to present their own ideas and experiences on the issues being discussed. They discussed about their experiences as learners in the past, having teachers with different styles of teaching and expressed their feelings concerning them. Then, to complete the reflection on their teachers they were invited to say what kind of teacher they were. This created the background for all sessions of the learningshop.

The PRs had the opportunity to elaborate on their own examples, ask questions and add comments on what was being discussed – demonstrating learner-centeredness.

Following the learningshop, I provided all hand-outs prepared by Dr Du Toit and translated into Portuguese to the PRs. I also provided a kit of hand-outs on practical issues of action research in order to expand information related to the process of doing action research and the basic steps for designing an action research project.

I found, in general, a high motivation among the PRs throughout the learningshop sessions. They were interested in the presentation and the proposed task and discussions and one of the comments by PR2 was that "...before [the seminar] I talked more than the learners in the classroom and after the seminar, I began to give more time or more opportunities to the learner to learn". PR5 said that "I learned the teacher role in the classroom (...) and how to work with learners who have different learning disabilities".

Reflection on and analysis of the learningshop on action research

After the learningshop the PRs took much to decide about the drafting of the projects. When I visited them in July I noticed that they did not feel confident to start with a project for their professional development. One of them said: "We are still learning how to do it". My first impression was that, on the one hand, they felt unsure of what to include in the

project. Having noticed this hesitation, I provided a handout on practical issues on action research, translated and adapted from McNiff and Whitehead (2002) in the book *Action Research – Principles and Practice* (2nd ed). Then, I designed a form to be completed by the PR with information on the desired project to overcome the constraints faced. The form included suggestions on the issues that they mentioned while drafting the project. After that I analysed the objectives and the content of the form with one of my critical friends. The second impression follows the first. I thought that the PRs did not have habits of doing wide-ranging tasks other than individual and/or collective planning of learning opportunities and facilitating learning in classes. Moreover, designing the AR project would mean one more activity, aggravated by the complex working conditions at the school.

At this stage of this PAR I confirmed the importance of developing teachers' competences through both emphasis and development of the teachers' strengths. When designing and developing the learningshop, Dr Du Toit provided practical and scientific knowledge starting from what the practitioner-researchers (PRs) knew. This approach improved my own practice on conducting CPD in the sense that the PRs should know the "what", "when" and "why" of the innovative practices and the scientific foundation of their classroom practices. For instance, as can be seen in Table 4.54, the PRs reported that they worked in a known context; however, they mentioned the new knowledge acquired.

Reflection on the learningshop on AR helped me to better understand educational change as a slow process and the unforeseen time that it can take due to the number of factors involved in a change process. This was particularly valuable for planning and observing the next learningshop. Following the learningshop I tried to observe some learning opportunities but this was not feasible since the PRs felt uncomfortable, owing to the conditions in which they were working with the learners during the period of the school renovation. Each PR class comprised 60-65 learners and by that time two teachers shared the same space under a tree to facilitate learning.

In July 2008, I as a research-mentor (RM) generated a discussion with the PRs on the learningshop. They made comments on the new experience and wrote a report. The table that follows, illustrates extracts of what the PRs pointed out.

Question	PR1	PR2	PR3	PR4	PR5
How did you find the learning-shop?	The topics were not new. They were related to our work. However, I obtained new experiences.	The topics were approached with certain naturally as they were not new and related to our work. We got more experiences and developed our profession.	The learningshop was very useful since we learned many important things related to our professional life. The learningshop was totally useful	The learningshop was important because it allowed me to increase my level toward my professional development. I obtained more experiences with respect to the teaching and learning process I appreciated the effort by Dr Pieter du Toit, with the collaboration of Mrs Cristina Tembe. This process should be continued and permanent	The learningshop approached a variety of topics that enriched my work during the 2nd trimester. The learningshop was part of my continuing and permanent learning. It would have more seminars in order to improve my practice.
What were the most valuable issues?	- Experiential learning - constructive learning - professional development - teachers' responsibilities and tasks - teachers roles - relationship between contents and objectives - learning opportunity - action-research	- Experiential learning - Constructive learning - Professional development - teachers' responsibilities and tasks - teachers roles - relationship between contents and objectives - learning opportunity - action-research	- Learning opportunity - relationship between content and objectives		- Types of learning - Experiential learning - constructive learning - teacher role in the classroom -learner role -how to work with learner with different learning disabilities - how to motivate the learner - how assess the level of understanding - how to elaborate learning tasks for underachieving learners - how to asses learners with visual and writing difficulties

What did you learn/ acquire from the learning-shop? What innovative changes did you introduce in your practice?	I learned about professional development, learning opportunities and action research	The topics were not new, were issues related to our work. What we gained was more experience. Learning opportunity: This topic refers to a learner-centred approach. The learner should be the learning centre and all activity. All activities should be learner-centred. Before the learningshop, I talked more than the learner in the classroom. After the learningshop, I began to give more time or more opportunities for learning.	I used to facilitate learning using a teacher-centred approach, where the teacher speaks more than the learner. The relationship between learning content and learning objectives; we improved skills on - objectives statement - sequencing objectives - relationship among objectives In this learningshop we gained new experiences: We have to use a learner-centred approach. The learner should have more opportunities to learn.	Remedial learning: I had the opportunity to acquire skills that allow me to work with under-achieving and low disciplined learners I do not have specific changes due to the working conditions during the two trimesters when the school was being renovated.	

Table 4.54: Qualitative feedback regarding the learningshop on action research

4.8.1.2 Learningshop on basic issues of instructional design

The learningshop on basic issues of instructional design took place in one of the classrooms at the Unidade 18 Primary School, from July 21 to 22 during the school holidays following the 2nd academic trimester. The objective of this learningshop was to apply Gagné's (1972) instructional design model to the planning of learning opportunities for the first two weeks in grades 1 and 2. The outcomes of the learningshop were jointly identified with the PRs in order to take into consideration the planning recommended at the school and Gagné's instructional events.

Action

The learningshop consisted of three parts, namely introduction to instructional design model, sequencing two learning units and planning of respective learning opportunities. I organised each part of the learningshop considering presentation, discussions and production of examples of what had been discussed. I subdivided the PRs into two groups, according to the grade they taught. Such grouping, allowed the PRs to develop discussions and planning in a real setting.

I began the session promoting a discussion on common terms such as education, lesson, instruction, learning and learning opportunity in order to obtain the PRs' understanding of these terms with respect to facilitating learning. Apart from these concepts, Bloom's taxonomy was reviewed and specified with concrete learning activities and outcomes.

Photo image 3: Learningshops on instructional design and assessment


Following the first discussion, I presented instructional design as a process that encompassed analysis, design, development, implementation and evaluation and after that we explored the ways to adapt the learning objectives and content of the learning unit previously provided in this learningshop. Furthermore, the PRs used elaborate examples of innovative proposals. At this stage I combined group discussion and planning, traditional direct teaching and group presentation. I basically used a flipchart and blackboard to support the interaction with the PRs. Since I made reference to the teacher as a "learning mediator" and "interpreter and designer of learning programmes and materials", I also reviewed the teachers' roles presented during the learningshop. I reinforced this activity with a discussion on how to prevent underachievement and I encouraged the PRs to pay more attention to underachieving learners.

Observation

At the outset of the learningshop I felt that the PRs were motivated to participate. I also felt that from the first learningshop in April to July, when this second learningshop took place, the PRs had developed the ability to interpret learning disabilities. Another realisation at this stage of the PAR was that the PRs used more learner-centred approaches. In this respect it was more frequent to hear from them about the need for curriculum management, taking into consideration the learning pace of a specific group of learners.

From the discussion of the terms about facilitating the learning process, I found that the translation of the term *instruction* into Portuguese gave a different meaning. Instruction was understood as education and knowledge instead of a process; instruction=instrução; teaching, knowledge acquired (Costa & Melo, 1992).

Throughout the learningshop I found interest in and willingness to change. However, the PRs frequently complained about the timetable, the extensive syllabus and the class size.

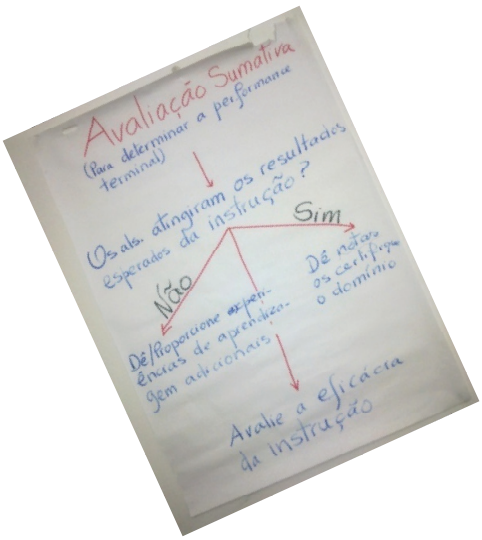
4.8.1.3 Learningshop on basic issues of assessment

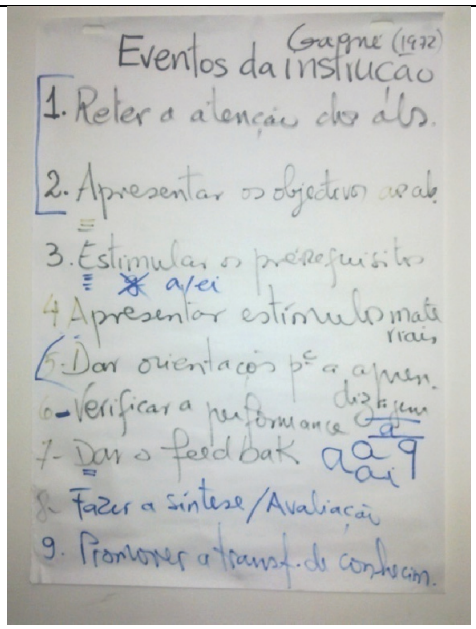
Learningshops on basic issues of assessment were also conducted by me at the primary school during the same school holiday period. The results of the learningshops were used to design learning activities and assessment, with emphasis on the monitoring.
The outcomes of the learningshop were identified in order to:

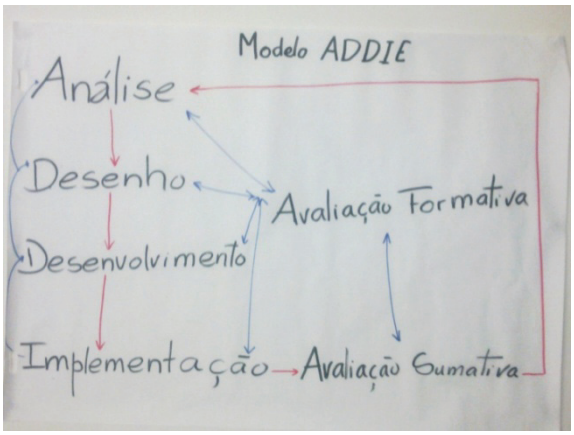
- describe practical and common learning problems among learners in Grades 1 and 2
- try ways for better understanding of the problem from a psychological point of view and knowledge of specific subject methodology
- design learning activities and monitor strategies to solve the problem
- discuss the working group's role in lower primary education with specific emphasis on Grades 1 and 2.

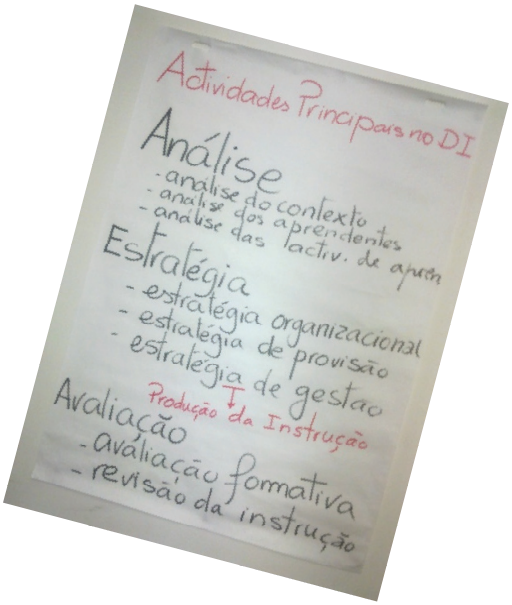
The results of the learningshop reflected the teachers' commitment to monitor their learners' achievement. The teachers would pay particular attention to those who show insufficient skills in language and Mathematics. Another result was the design of lesson plans, including monitoring activities.

Photo image 4: Flip-chart notes









4.9 OVERVIEW OF THE REPORT FINDINGS OF THE SECOND CYCLE OF THE ACTION RESEARCH PROCESS

This section summarises the main findings of Cycle B of this PAR study. In this cycle each PR designed and developed ideas for her/his action research project as a practical implementation

of the knowledge and skills acquired and/or developed during the learningshops. Thus, this cycle includes a set of cycles carried out by me and the PRs from July 2008 to April 2010. The length of the cycle had to do with the aim of this PAR study as stated in Chapter 1. My intention was to provide opportunities for TCPD based on individual teacher planning. Therefore, as indicated in Chapter 3, each teacher was approached as a single case study. This strategy basically consisted of:

- the design of individual projects;
- the provision of information related to facilitating learning process;
- the discussion and suggestions of innovative learning tasks;
- classroom observation;
- reflection after a two month period.

I launched the practitioner-researcher AR projects after the activities carried out throughout classroom observation and learningshops in Cycle 1 of this PAR study, expecting that the PRs would reflect on specific parts of their learning facilitation and/or the learners' learning. Consequently they would introduce innovations in the process of learning facilitation and in the learning tasks assigned to the class. Although the PRs reported that they had learned and improved their knowledge and skills, the period which followed the learningshops did not provide significant evidence in terms of a written AR project. At this time I continued with the administration of the questionnaires in the Northern provinces and the PRs continued with the process to try to accommodate the new experiences.

In an attempt to overcome the hesitation among the PRs to write the AR projects, I designed one page scaffolding so that the PR would complete it with possible content for the desired project. I designed the form in order to provide ideas of basic components in a simple AR project related to a single issue that could be performed in a short period of time. In addition the form aimed at both improving and exemplifying the hand-outs provided during the learningshops. The provision of the form was immediately followed by a discussion of the components of the form. To develop the discussion with each PR, I took the risk of having a less participative approach. In this case the discussion mostly followed a "mentor-centred" approach due to my urgency of completing the projects and the time the PR would need to finalise them. The delay on designing the research projects, gave me the impression that the

PRs did not have so much time to dedicate to written work out of the joint session. Hence, to overcome this difficulty I decided to plan a joint session for whatever written outcome or design of learning material.

The account of the observation and reflection during Cycle B is presented in the following sub-sections.

4.9.1 The Practitioner-Researchers' Participatory Action Research Projects

As stated earlier, the PRs were provided with a form that indicated basic issues to be taken into consideration in an AR project. Following this procedure each PR and I scheduled the activities for classroom observation. We selected and planned specific parts of a learning opportunity to be observed and produced learning material for learning of vowels and diphthongs. The learning material aimed at providing learners a diversity of visual representations of the letters to be studied. Additionally, the use of learning material was an innovative way of presenting the learning content as aligned with learning objectives. Due to the shortage of paper at school we used the back of paper already used, provided by me.

I experienced that the PRs did not have habits of producing and using learning material other than the learners' textbooks when facilitating learning of reading and writing.

To begin with, the PRs completed a short questionnaire related to their identity, academic and professional qualifications and the current class and the ones they had in 2007 and in 2008.

Classroom observation began to follow standardised patterns and observation sheets for self- and external assessment were introduced. The content and feasibility of the observation sheets were previously discussed with the PR. As a result one of the observation sheets was not adopted owing to its inappropriateness. It was based on technologies unavailable at school level and followed complex steps. However, the PRs were interested in the types of objectives referred to in Bloom's taxonomy in the different episodes of a learning opportunity. The purpose of structured observation was to gather numerical data in a systematic way about the facilitating of learning and learning processes in Grades 1 and 2. As a result of the structured observation each teacher carried out self-evaluation and topics for innovative practices were

identified. During the learning opportunities, as a researcher-mentor, I monitored what teachers and learners did and took notes of the practices such as supportive interventions and the routines at classroom level in order to build a picture related to monitoring of the learning process.

4.9.2 The Case Studies of Practitioner-Researchers' Continuing Professional Development

In Chapter 3 I refer to the five case studies included in this PAR. Each teacher's practice was a single case study. Consequently I developed five case studies and I numbered each one. Case Study A encompasses activities carried out with PR1, Case Study B encompasses activities carried out with PR2, and so on. The purpose of each case study was to observe the diversity of ways of continuing professional development among the five PRs involved in this exploratory study. It is of value to note that at the outset of this part of the study, I was not confident about how each case study would develop. However, from 2009 I found the interest and collaboration of all PRs more realistic. The PRs constituted an appealing group since, to some extent they represented the respondents of the questionnaire administrated in Cycle A. The group comprised mostly female teachers and held IMAP certificates, the current model of professional qualification. Additionally, the PR group included 2 out of the 3 age groups of this study and had different experiences of the learning content and classroom management.

As part of my initial planning in Cycle B, I tried to understand the context in which the PRs facilitate learning and the content of their projects. The PRs and I analysed the case study and planned the next steps. In order to support the PR project, I provided paper (A4) and one permanent marker and recommended the use of what they found applicable from the learningshop and other experiences from this PAR stuay and scheduled the classroom observation period. Afterwards we continued our journey of continuing professional development (CPD). The PR put into practice her/his project by planning and facilitating innovative learning opportunities. I, in my turn, performed the subsequent steps of this PAR.

Following the purpose towards the exploration of an intervention for improving the practice of primary school teachers through a TCPD of this PAR indicated in Chapter 1, I did not intend to work on methodologies of facilitating learning in a specific subject. My intention was to provide opportunities for the acquisition and/or development of knowledge and skills, and to observe each case study afterwards. In describing the activities carried out by a certain PR with her/his learners, I would interchangeably use the term teacher to refer to the PR. I launched the five case studies informed by transformative learning theory and case study method within a self-directed professional development context.

The environment which I worked in was a challenge to me since the PRs had:

- overcrowded syllabi
- only three hours per day in the class
- no schedule, during the week, for other pedagogical tasks other than facilitating learning
- school activities or professional development programmes assigned by the ZIP or the school for the break of the trimester
- planning sessions only every two weeks.

This being so, the time available extended the case studies despite the interest demonstrated by the PRs. The following sub-sections summarise examples of the steps and the respective activities performed in each case study.

4.9.2.1 Case study A

Context

Case study A includes my AR cycles with PR1. This PR was the youngest teacher of the group and also the least experienced one. Her participation in 2008 activities was limited since she had given birth and stayed out of the class on maternity leave for three months. Her class comprised sixty learners who were in Grade 1, starting their academic journey. She loved first-graders and said that "*according to my experience many learners enter school with no notions and they will learn everything with me*". Additionally, commenting on what to be in a classroom meant to those learners, she said that it was important to be aware "*that it is the first contact with reality*", the school environment. PR1 felt confident in what she was doing and

could do in order to guide the process of the acquisition of reading and writing skills that her learners were initiating in 2009. Thus she added, "*Therefore, as I am experienced, I have to use my tools very well*".

The important issue in this case was the fact that PR1 was aware of her limitation concerning methods of facilitating learning and showed willingness to learn. She preferred participating in a working group and support sessions with fellow teachers before guiding innovative learning tasks in her class. In this regard she: "*In my intervention, I talked to my colleagues and we found that the learner does not have yet ability to hold the pencil. Thus I have to closely work with the learner on his/her site using the appropriate material. Then I improve the work. However it is not easy .....) I want to learn how to improve learning and find strategies in order to facilitate learning to other learners in other classes*".

Problem

PR1 identified as first problem to be the following: "*The concrete problem of my learners is to join the consonants to the vowels, the diphthong and syllables. The learners do not have many problems in reading them separately*". Once the problem was clear for PR1, she identified the research objective and said that "*I want to investigate in the field of reading*".

Challenges

In this research study, the PR included the participation of fellow teachers and discussed with them the challenges she was facing and would continue facing throughout the research, and listed them as follows:

- the learners did not know to handle a pencil
- some learners did not have the appropriate learning materials (pencil, rubber, textbook and exercise book)
- the time established for each learning unit (section of content) was short
- the class size (60 learners) complicated following-up all learners.

Probable solution

In an attempt to solve the problem, PR 1 prepared learning material and suggested: "I *want to bring posters to write the letters on. If I do not have so many materials, I can even use coal to*

write the letters. Later on the learners can write with their fingers on the desks". The use of learning material other than the learner textbook was not frequent in her classroom practice. Producing and using alternative learning material to present learning content and tasks would mean an innovation for PR1 and, in this respect, she commented saying, "*It is more difficult element to me*" than the usual practices "*and I like the challenge very much*". I encouraged her to persist in experimenting with innovative ways of supporting the learning opportunities for reading and writing. Having decided to produce learning material, she thought that "*to solve the problem, first of all, when distributing the learners in the classroom, I have to put the low achieving learner with the intelligent one, assign more copies and working groups*".

She had many expectations from this study and listed more probable solutions and continued saying that "*I have to praise those who are performing well in order to encourage the underachieving learners by talking in the class. To assign to learners more learning tasks in the exercise book. To provide remedial tasks during the free period or on Saturdays at school. To maintain informed the parent and the pedagogical deputy.*

Cycle 1

Action

I performed the *Action* step by suggesting and engaging PR1 in the production of types of learning material for acquisition and consolidation of reading and writing skills to be used with the learners. I used direct teaching since the activity seemed to be innovative itself and the time available was restricted. The learning material corresponded to both additional and innovative learning tasks. Thus, instead of showing the letters to all learners using the learner textbook, the PR1 used the A4 cards with letters.

Observation

During this step I attempted to determine whether PR1 had the skill of using the learner textbook and the innovative learning material she had prepared. This aim could determine what the PR1 could do with the information, knowledge, skills, attitude, values and virtues obtained from the professional development intervention and future CPD programmes. As a result I observed little evidence of knowledge and practice with respect to management and the use of the advantages of this kind of learning material. The cards were used at the beginning of the learning opportunity as a strategy for revising the learning content already studied. This strategy

was repeated with changes in terms of duration that it took and the number of learners asked for reading and writing tasks on the cards and blackboard.

The remedial learning tasks provided by PR1 to the learners did not attain the objective set since there were no specific procedures to differentiate between remedial learning tasks for those learners who had not acquired reading and writing skills yet and those provided for revising learning content. The cards were presented to the class and read by selected learners among the low achieving ones. Some of them read and wrote and others were not able to read or to write.

Reflection

Reflecting on the activities carried out during the previous steps of this cycle, mainly on those related to the observation step, I found insufficient skills with respect to the production of supportive learning material for facilitating writing and reading skills. In addition, I found a lack of knowledge of procedures when using complementary or supplementary learning material and the role they play in a specific part of the learning opportunity. These weaknesses mainly refer to the use of the cards in remedial tasks and in a large class context. Furthermore, the cards were not used to support individual or groups of learners. The conciliation of both, the textbook and the cards, was one of the weaknesses and suggested a practice that should be an issue to be re-considered in the next cycle.

I interpreted this as a direct consequence of an excessive concentration on the learning tasks indicated in the learner textbook. PR1 was particularly concerned with the accomplishment of the learning tasks indicated in the textbook. Therefore, in our joint planning step, apart from suggesting learning material, PR1 and I approached the use of cards with letters as part of the methodology of facilitating learning of vowels and syllables. In so doing the part of the learning opportunity related to remedial tasks would be approached as an introduction and initiation to the study of vowels and syllables, paying special attention to the sound identification and its graphic representation. The learning tasks for low achieving learners would be carefully guided as an initial one in order to provide appropriate learning pace and confidence in this group of learners. This procedure could allow the learners to master and acquire reading and writing techniques.

I hoped that the discussion of my reflection with PR1 would provide elements for self-directed professional development (SDPD). I confirmed what I had observed during my previous classroom observations in other schools with respect to low achieving learners – actually the learners lack effective opportunities for learning. My own professional learning at this stage also included the need for significant support of SDPD as the short teacher professional development intervention did not provide sufficient knowledge and pedagogical skills to form both a base for classroom practices and the subsequent reflection on that. PR1, like many other teachers, is not aware of the limitations of their classroom practice. Therefore, she does not know what to do towards the improvement of the learners' achievement and her own professional learning.

Cycle 2

Action

In this step I focused on the production and use of cards with letters and on ways to improve reading and writing skills. I concentrated on remedial learning tasks in an attempt to deal with the weaknesses of the previous cycle. Thus the learning tasks specifically addressed those underachieving learners who could not read nor write all vowels yet. The cards included only small, coloured letters in handwriting. Afterwards we planned the part of the learning opportunity that would include the use of the cards.

Observation

At the outset of the learning opportunity the learners were seated in the usual groups of two and three. To begin with, PR1 reorganised the groups in the class and moved some learners in order to have groups with different levels of achievement. The mixed groups aimed at providing support for the low achieving learners. These learners were permanently encouraged by the teacher and supported by fellow learners who could already read and write. In this learning opportunity the cards were used in remedial tasks and revisions. As a remedial task, PR1 followed procedures of the initial study of vowels and syllables.

I found in general an intensive enjoyment among all learners during the use of cards with letters since they were frequently asked to read and/or to write on the blackboard. Sometimes they went to complete the task assigned by the teacher. This strategy took 15 minutes of the 45 minute class time scheduled by the school. The positive outcome of the strategy is that I

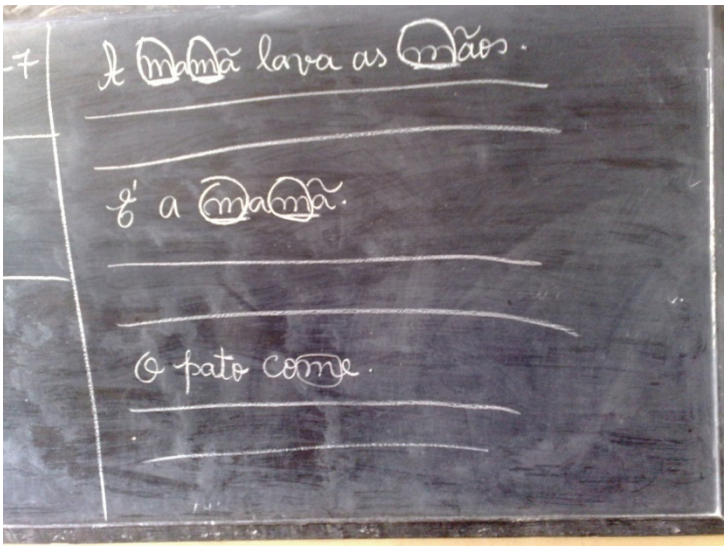
observed that more and more learners could read and write at least the vowels, diphthongs and syllables. As innovative procedure, the cards were maintained on the wall of the classroom.

Reflection

The experience I gained from the process followed in Cycle 2 suggests that PR1 could design her continuing professional development (CPD) based on short action research (AR) cycles. PR1 demonstrated interest and engagement in starting from the analysis of what she was doing and what she could do better in order to promote learning. At the end of the cycles I also noticed that the emphasis was on learning instead of teaching and the learner was placed at the centre of the overall process of facilitating learning. According to my observations, the interest and the engagement demonstrated by PR1 from 2007 to 2010 are important factors for CPD. However, it is important to note that it is necessary to follow up to improve the methods of facilitating learning she used and to strengthen the willingness to learn she showed. This follow-up will be important since PR1 was the less experienced among the PRs and she demonstrated insufficient ability on identifying the weaknesses of her learning opportunities and the probable remedial tasks. To do so she needed significant support from me. Although she was able to identify problems in learners' learning she needed indications on what to do in order to improve the situation. To some extent she had been supported by fellow teachers from the same grade during the planning sessions. However, I found that the support that they had provided did not solve the main constraints she had as the group also had limitations in terms of pedagogical knowledge and skills relating to the model of initial teacher education attended. The probable solution could be a support from outsider expertise that would present a set of sessions to fill the gaps from the model used.

I believe that PR1 can develop SDPD as it is based on individuals willing to learn and improve. However, as in SDPD she has to reflect on what she is doing and find out or look for support to improve the situation; a follow-up will play a significant role. Chapter 5 details the support to be provided to primary school teachers at school level.

Photo image 5: Teacher's writing on board



The image above represents a remedial learning task on the letter "m".

4.9.2.2 Case study B

Context

Case study B includes my AR cycles with PR2. In 2008 he had 65 learners. In his class five learners were repeating Grade 1. He was the coordinator of Cycle 1 (Grades 1 and 2). In 2007 and 2008 he was responsible for all teachers facilitating learning during the 2nd shift (from 10:30 to 13:30) and acted as football referee in the teachers' championship. This extra-curricular activity took place on Saturdays and, sometimes, delayed his participation. He was convinced that "*in order to attain good learner achievement it was necessary to know about the learner's sociability, by conversing with the parents or other people of the family*". The class size was one of the constraints faced by PR2. However, he thought that "*the teacher should find time to have to better know his learners and assure learning material, textbooks, pencils, and notebooks are available*". Thinking of learning material he added by saying that "*the teacher should not forget his own learning material*".

As part of his CPD, PR2 traced objectives related to monitoring of reading and writing with respect to vowels and reading and writing skills in Grade 1. With respect to his professional learning he said that "*in this study I hope to improve my skills concerning monitoring learners' learning, by using several activities and strategies and applying innovative pedagogical*

practices." More precisely, he hopes *"that at the end of cycle the learners can read and write vowels and diphthongs; read and write consonants and phonetics combinations; read and interpret small texts.*"

Problem

Practitioner-researcher 2 considered that reading and writing in Grade 1 are the basis of learners' reading and writing skills. He identified two main problems, namely that "*the learners confuse the vowels; the learners memorise the letters.*"

Challenges

No challenge was presented by PR2.

Probable solution

The probable solution raised by PR was to assign diversified learning tasks on reading of diphthongs, syllable and short words.

Cycle 1

Action

From the beginning of the study, PR2 was the most critical teacher. The AR cycle began in April 2009 when he actually realised that my work was not about observing what the teachers are doing in the classroom as an external control measure, but that it was about creating opportunities for his professional development. The class had already studied the vowels. However, there were learners who could not read and write them. The remedial tasks assigned to learners took place at the beginning and during the learning opportunity. As others PRs did, PR2 used the blackboard with letters like the following:

a	*o i*	*o i*	*p*	*Maputo*
	u	*u a*	*a t m*	*Beira*

The learners read the letter "a" in different positions:

- the "a" were presented in isolation

- the “a” were presented among other vowels
- the “a” were presented among consonants
- the “a” were presented in words

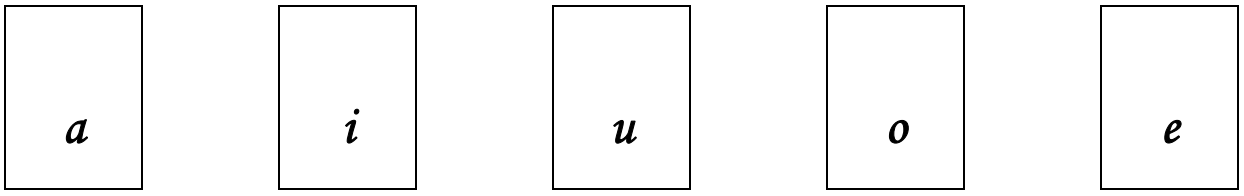
Observation

The learners enjoyed the new organisation of the learning opportunity, since at the beginning of the learning opportunity they were invited to read and write on the blackboard. However, taking into consideration that the objective was to assign remedial tasks to the class, the number of letters was too large for those learners who were not able to read at the time.

Before the reflection step of this cycle, I proposed to PR2 to facilitate another learning opportunity. I found that he had very sound communication with the learners and this fact should be explored more.

Action

The second learning opportunity was only related to vowels. Since the learning tasks were remedial PR2 invited the learner to sing a song which text had vowels. The learners sang with enthusiasm. It was a song that they learned at Kindergarten. After the song the PR showed the letters by writing them on the blackboard and showing them on cards. The learners read them individually. He then involved more learners by distributing the cards to 5 learners who were standing in front of class. The other learners were invited to read the letters. To end the learning opportunity the class wrote the letters in their notebooks.



Observation

The learning opportunity took place in a different environment. Practitioner-researcher 2 employed the use of cards with letters to encourage low achieving learners to read with fellow colleagues and alone. He also got the class to improve learning among those learners who

already had acquired the reading skills of vowels. In doing so he invited alternatively both groups to read the vowels. The learners were eager to read and/or to indicate the letter indicated by the teacher. At the end of this learning opportunity I did not notice how many of the low achieving learners could read; however, I found that all learners enjoyed the way in which they participated in the classroom.

Reflection

The reflection was an important part of this cycle. In his reflection PR2 stressed that "*I observed my pedagogical practice through the learning tasks carried out by my learners. I used a sheet to indicate the underachieving learners in order to support them*". According to my observation, PR2 would continue supporting his learners. PR2 was content and his reflection showed a positive feeling: "*Indeed there is a slight difference on the work. I thought that it was an activity aimed at investigating the teacher's work. Conversely the purpose was to improve the work in order to attain the learning objectives*". In concluding he said that "*There is lack of these types of conversation. There is no debate on regulations coming from decision-makers. The seminar to justify (...) took two days*". To end his reflection PR2 talked about the lack of incentives and materials.

Due to the level of poverty in suburban Maputo-Cidade he lamented saying that sometimes the learners did not achieve well, since they came to school without having eaten.

4.9.2.3 Case study C

Context

Case study C includes my AR cycles with PR3. PR3 had a powerful discourse when talking about the CPD process which she was participating in. In 2009 she had a Grade 2 class consisting of first-graders she had in the previous year. She started teaching in 1997 and in 2007 was appointed as delegate of the grade group. She started with two broad objectives related to two subjects, Portuguese and Mathematics, by saying that "*the fundamental objectives which I would like to attain are: my learners must be able to write and read very well; my learners should be able to do calculations, to sum, to subtract, and to multiply*".

Then she limited the project objective by saying that "*one of the areas which I would like to investigate and achieve improvement in is reading and writing, since reading and writing are the basis of everything*".

The classroom was full of desks organised in rows separated by a narrow corridor between them. A significant percentage of learners did not engage in learning tasks assigned by PR3 as they did not know how to do them. The difference of learning pace among the learners was perceptible as there were learners performing the learning tasks, others talking with peers, and others just looking at their textbooks.

Problem

In identifying the problem PR3 said "*my problem is the large class I have*". PR3 was not confident about the skills she had in supporting low achieving learners in a large class context. The classroom was overcrowded, as other classes are, and the desks allowing for two learners each were occupied by three of them.

My interpretation of the problem she had identified was that she needed to look into her classroom management skills.

Challenges

When referring to the challenges in her project she stressed the large class she had, saying that "*the main challenge I face is the large number of learners*". Her concern was explained in the following terms: "*The large number of learners raises difficulties for me to support my learners regularly*". However, she concluded saying that "*Even so, I do as much as possible. I need to know my learners better, to know who they are living with*". There was a group of learners whose reading and writing skills were below the expected standard at that stage of the term of the academic year. They could not read or write the syllables and letters.

Probable solution

"*As a teacher I hope to improve the control of my learners, paying more attention to the learning tasks and homework I assign to them*". In addition, PR3 intended to:

- improve the follow-up of her learners when performing learning tasks on the blackboard

- introduce innovation in the learning tasks
- organise study groups among neighbour learners. These groups should include learners with different levels of achievement.

In order to show evidence of her project on improving her pedagogical skills in following up and supporting low achieving learners in a large class, she intended to show better achievement, a better accomplishment of the learning tasks in the textbook. In addition she intended to share her progress with the principal, the delegate of the grade, fellow teachers and parents.

Cycle 1

Action

The action step in this cycle consisted of supporting PR3 in large class management to follow-up her low achieving learners. PR3 had already identified the number of learners who would need additional attention and support to improve their reading and writing skills. Therefore the first activity that we carried out was to organise them into groups of three in which the learners could get more support from fellow learners, to know exactly what letters and kind of syllables they could not read nor write and then prepare the correspondent supportive learning tasks. The groups included only one low achieving learner and were randomly distributed in the classroom to avoid connotation of achievement in class. The learners were told that the new class arrangement aimed at improving their study conditions and, from that date the new group would study and perform the learning tasks together in the classroom.

Observation

I noticed that PR3 knew the composition of the learner groups and where each learner was sitting. Therefore, each learning opportunity started with the verification of the composition of the groups at each desk. As a result of the new arrangement in the class, PR3 started going around in the class and groups of learners with more persistence. This class group needed specific interventions and remedial learning tasks. I observed that in spite of PR3's engagement both in organisation of the new groups and all classes combined with individual follow-up, the process of supporting low achieving learners was slow. This slowness was brought about by class size and the established calendar for the subject. However, I found in general, that the low achieving learners felt motivated to complete the activities indicated in the textbook and spent more time engaged in learning tasks in comparison with what they did in previous learning opportunities. The motivation seemed to be due to the fact of being close to a fellow learner

who is busy with her/his learning task. As the activities progressed in this stage of my AR, I observed that, in spite of the difficulties PR3 had in following up the learners' achievement, she continued and found enjoyment in doing what she had planned towards her CPD. She remarked that she was enjoying working with the learners and expected to improve the learners' achievement.

Reflection

At this stage of the PAR process I considered large classes and classroom organisation combined with permanent follow-up of the learners' achievement in the early stage of the academic year as part of the issues to be addressed by all teachers. I felt that classroom management, follow-up of the learners' achievement and the immediate remedial learning tasks should be a pedagogical priority in the weakly learning unit. Therefore I reflected on how the deputy principal in each school should support the individual teacher in her/his CPD. I had observed only four learning opportunities and participated in the planning of three of them; the results show that the PRs were aware of the need to change and showed willingness to innovate their practice. Reflection on the positive outcomes of this cycle led to a more focused guidance regarding remedial tasks.

Cycle 2

Action

Following the class arrangement, we prepared the learning content to verify weaknesses in reading and writing among the selected group. To begin with, the learning content included only vowels and later on was combined with diphthongs. The lines of the vowels and diphthongs were presented in different colours written on large pieces of white paper. During the correction of the learning task other learners than those from the selected group were asked to read and write vowels and diphthongs on the blackboard. In doing so, two or three learners went to the blackboard at the same time to perform the same or different learning tasks.

Observation

The vowels and diphthongs presented on the blackboard are represented below. Reading and writing vowels and syllables were learning content to be worked on since 25% of the learners did not acquire the skills needed. Apart from vowels and diphthongs, others vowels combinations were introduced. Some of the major challenges were as follows:

- Knowing what the teacher was talking about; how to read or write.
- Reading or writing exactly what the teachers asked.
- Following the recommended trace when writing a letter or linking letters to form a vowel.
- Using the appropriate lines and spaces indicated for writing in the textbook.

i u e a o ai eu oi ui au

Reflection

According to the syllabus, at this period of the academic year the learners should read and write vowels, diphthongs and all consonants like *p, m, t, d, l*. However, a significant number of learners was already in Grade 2 without the reading and writing skills specified for the grade. This was allowed under the automatic promotion introduced in primary education as referred to in Chapter 1. What was lacking was a systematic follow-up on what the underachieving learners could or could not do and the appropriate remedial learning tasks to overcome their difficulties

PR3 appears to be aware of the need for both additional and specific remedial tasks. However, the main problem was what exactly to do and how to go about doing it in order to offer learners another opportunity to master pre-knowledge that should have already been in place. Despite this evidence, in general, the learners benefited from more time for individual learning. PR3 tried paying more attention to underachieving learners when verifying the pre-requisites. Another aspect that came to the fore was the nature of the learning tasks assigned to that group of learners. These tasks were designed and timed specifically to prevent underachievement.

4.9.2.4 Case study D

Context

Case study D includes my AR cycles with PR4. PR4 was the eldest teacher of the group. As a teacher, he was responsible for sport at school level in 2007, 2008 and 2010. He had extensive experience in facilitating learning in Grade 1 and permanently took into consideration the

learners' social condition. In this respect he said that "*I need to know better my learners*." In 2008 he had 60 learners. In his class only one of the learners was repeating Grade 1. When dealing with his classes he permanently took into consideration the learners' social background and used to say "*my learners have social problems, since some of them leave with grandparents in environments with low social conditions*". Usually, some learners were in the class without note pad, pencil or rubber. However, he indicated: "*with respect to the facilitating learning process, I think that I know how to deal with various types of learners: learners with difficulties in understanding the learning content and behavioural problems*".

With reference to the experiences he obtained in the context of this study, he was convinced that he would "*obtain good results by applying the additional knowledge acquired ... which will not finish after this study. I will carry forward and look for more knowledge in order to guarantee my work as professional educator*". In addition PR4 viewed this study as an opportunity for his professional growth. Therefore he concluded his comments by saying that "*in this investigation I intend to assess myself in order to verify my performance and my learners' learning. This will allow me to look for techniques to overcome eventual difficulties among the learners*."

Practitioner-researcher 4 referred to the area that he was more interested in by saying that "*the area that I have more interest in is to bring my learners to efficiently acquire reading and writing skills*". This PR was concerned with reading and writing as he thought that "*this topic is the key for the learning in the next grades*". PR5 frequently used to ask for support concerning the reading and writing skills in Grade 1.

Problem

The problem indicated by PR4 had to do with writing and reading skills. He said that "*the concrete problem is the large class I have, difficulties on communication, since some learners do not speak nor understand Portuguese. The learners' socio-economic situation sometimes affects and demoralizes them and has influenced the learning process.*"

Challenges

The challenge pointed out by PR4 was the class size. For that reason he stressed that

The challenges I will face with respect to the topic I selected is to always look for resources, methods to induce learners on attaining the foreseen learning objectives. Another challenge is the distribution of learning content within the syllabus and in the exercise book (or textbook). The time available is too diminished to care for learners with more difficulties. (...) I need to know better my learners and to maintain periodic and planned contacts with the family in order to know my learners' situation.

Probable solution

With respect to the probable solution of the problem, he said that "*it is necessary to work a lot at class level, what means to follow-up the learners' learning. If some learners need more attention, I will meet the family in order to jointly analyse the problem*". Talking about solutions, PR4 also mentioned his engagement in looking for more learning materials, other methods of facilitating learning in order to bring the learners to attain the learning objectives.

Action

Before the beginning of the learning opportunity, PR4 decided to pay more attention to learners who entered late in class. There were 2 learners who used to be late. Thus, PR4 decided to have a meeting with the learners' parents. After having a class he would verify whether or not they have the minimal material, such as books, notebooks, pencils and rubbers. There were problems with the material. Some forgot their books at home. Others did not have a notebook – the reasons being that some learners had lost them and others had not bought them at the time. PR4 tried to minimise the problem providing pieces of paper to those who did not have a notebook. The learners who did not have pencils borrowed from fellow learners who had more than one pencil. After the provision of pencils all learners performed the learning tasks.

The learning opportunity was concerned with writing and reading vowels and diphthongs. The question that PR4 ask was: "*How can I promote learning in order to allow my learners to acquire writing and reading skills of vowels, diphthongs and some consonants at the end of Grade I*"?

To be committed to the class he said that "*I will have all learners reading at least vowels and diphthongs at the end of the academic year*".

Observation

PR4 asked permission from the principal to use one of the Physical Education hours for recovering lost time for learning. Thus, the class had one more hour to study Portuguese. Apart from this additional hour, PR4 indicated learning tasks to be performed collectively and individually. The learning task comprised the following examples:

a e i o u	*a i e*	*ai ei ia*

Reflection

At the end of this cycle I was convinced that PR4 could continue paying attention to each learner achievement. My argument was based on my observation throughout the cycle and the period when I carried out un-structured interviews. At the outset of the study PR4 showed ability on dealing with learners in Grade 1 and on providing diversified learning tasks. However, the constraints concerning learning materials and the pedagogical knowledge and skills acquired during teacher education still biased his practice.

4.9.2.5 Case study E

Context

Case study E includes my AR cycles with PR5. She used to be appointed for Grades 1 and 2. PR5 had a class of 60 learners in Grade 2. In 2007 and 2008 she was the delegate of Grade 1 teachers and in 2009 was coordinating the activities of all teachers facilitating learning in Grade 1 and 2. Concerning her participation in this study she referred to her objectives, namely to "*investigate better my pedagogical practice on improving reading and writing skills of my learners; to apply other methods of facilitating learning and other ways to improve the learners' understanding of the learning content.*"

Referring to Portuguese as a subject she said that "*my learners do not assimilate the contents in the same way*". In addition she said "*my learners should at least read vowels, joint vowels, read syllable, diphthongs and short texts*." PR5 was a confident teacher and was aware of the

challenge involved in the traced objectives and said that "*for this purpose I have to design diversified learning tasks and to ensure active participation of all learners in order to give opportunity to underachieving learners*."

Problem and challenges

The learners did not have Portuguese speaking skills. They always speak in their mother tongue.

Probable solution

PR5 identified the underachieving learners and put them in groups with those who achievement well.

Action

The learners were revising the vowels and four consonants. During the learning opportunity the underachieving learners were frequently given opportunity to answer. During this procedure I took notes concerning the learners' performance; and at the end the learners could see that their fellow learners could divide words in syllables by clapping hands.

PR5 introduced the learning opportunity with a conversation about what the learners did during the weekend and invited them to continue studying the letters. Then she wrote capitals letters in her own handwriting as follows:

m **m** *ma* **ma**

p **p** *pa* *P* **P**

t **t**

The learners read on the blackboard individually and were invited to do handwriting in the air. She also used a big poster with letters provided by the school.

Observation

Pr 5 knew very well all the learners' names and the underachieving ones. She walked around between the learners in order to follow what they were doing. Some constraints appeared with the writing since there were learners who could not write properly. She was trying to involve all learners in the process of reading and writing.

Action

Three months later PR5 selected multiplication as the learning content in order to apply innovative ways of presenting learning tasks. The learning content was indicated in the Mathematics' textbook and she guided the task using the learners themselves. She called six learners and they stood in groups of two.

Observation

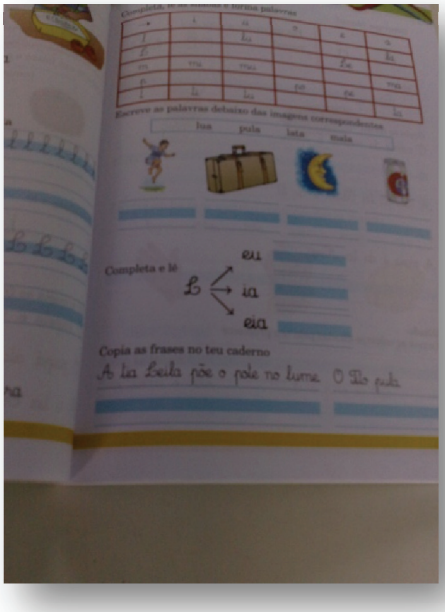
According to my observation, PR5 can continue paying more attention to what she needs to know in order to improve her pedagogical knowledge and the learners' performance.

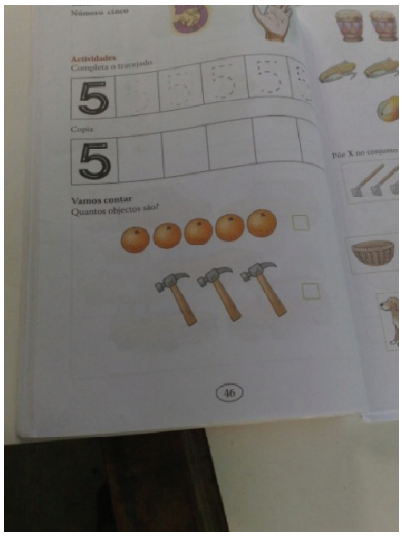
Reflection

PR5 talked about what she did to solve the learners' problems regarding reading syllables and vowels. She asked support from her colleague PR4 in order to have a better understanding in relation to her class and they found that the main constraint was Portuguese speaking skills. "*I could work with my class in order to surpass the problem,*" she said. In addition she said: "*I as a teacher ..... started working with the learners themselves by explaining the problem and what we should do to recuperate those who could not understand and read. After working in that way I tried to confirm whether or not I have achieved the objectives related to my investigation relating to my learners*."

To conclude the reflection she said that "*I will continue with my pedagogical practices in the next grades*".

Photo image 6: Learning material





4.9.2.6 Reflection on the case studies

In the context of the exploratory research I performed in this PAR, the five case studies predictable followed the features of exploratory case studies (Yin, 1994; Winston, 1997) in the sense that I consider that my study might be an initial step of more comprehensive studies (Berg, 2007) in Mozambique.

In lower primary education (PE 1st level – Grades 1-5), Mozambique had 52 998 Mozambican primary school teachers in the academic year of 2007 (Ministry of Education and Culture – Directorate of Planning and Cooperation, Education Statistics, 2007). Out of this number, according to the data I obtained from all provincial directorates of education, in the context of this PAR, in the same year, there were 33 797 facilitating learning in Grades 1 and 2. This number means 63,77% of the total number of learning facilitators. For this reason, having focused learning facilitators appointed to Grades 1 and 2 may confer significance to this study Moreover, learners in Grades 1 and 2 are the most attended grades. The significance of the case studies also derives from the need to deal with the deficient reading and writing skills in lowest PE1 (Grades 1 and 2), as referred to in Chapter 1. This deficient reading and writing skills

among the learners in lower Grades 1 and 2 became a "general public interest" and an issue "nationally important" (Yin, 2009:185).

Working in this context, my experience from the five case studies suggests that the teachers' continuing professional development (TCPD) initially derived from learners' achievement. Teachers very often think about what learners do not know and the skills they do not have at a specific point in time. In addition they are to some extent confident about their methods of facilitating learning. However, when faced up to innovative methods of facilitating learning and presenting learning tasks they were aware of the limitation in their pedagogical practices. For instance PR2 said: "*It was worthwhile to participate in this study and I thank the opportunity I had ..... the learner had profit and I improved my classroom practices."*

In her turn PR3 said: "*I am happy with the work. There were learners who could neither read nor write, but now they do. Because if someone is not engaged she will not succeed. It was worthwhile to wager on this way of working.*"

Reflecting on my experience with PR3, I realised the positive teachers' endeavour on facilitating learning in Grades 1 and 2 and supporting learners on the acquisition and development of reading and writing skills. She expressed his professional learning in the following way: "*The change in my work is that I gained more skills concerning my practice with underachieving learners and even with those who are performing well. I did not have many ideas with respect to methods of facilitating learning and learning tasks for underachieving learners. I found that putting these learners in front and directly monitoring their work now and then are valuable procedures.*"

In addition, my experience and the findings regarding these 5 case studies indicated the importance of self-directed professional development for permanent teachers' motivation and follow-up, supported at school level. This could improve the appropriateness of the TCPD programme for individual teachers, minimise costs resulting from such programmes and moreover to avoid the teachers' embarrassment deriving from the fact of being observed by unfamiliar people. In this respect, PR1 said: "*At the first time, when you told me that you want to work with me, I felt a little afraid and I thought 'now she comes here in order to control us. She almost knows everything'. Then as the time was passing I saw that it was not true. It was to*

improve me. After that I felt well. Now I know that I have to work in that way in order to allow the learners to understand well. Every day I see that I am improving. I thought that I do not know, but now I know that I can."

In these case studies I applied the self-directed professional development (SDPD) model. As a facilitator of TCPD of the PRs, I should have promoted the fulfilment of the set of principles of SDPD described by Clark (1992). However, I did not. This limitation was due to insufficient pedagogical knowledge and skills provided by the 10+2 teacher education model they have attended. At the outset of the study, the PRs had limitations in identifying their learning needs and in planning they journey of learning. The pedagogical references they had, on the one hand, did not sufficiently yield for neither wide nor deep understanding of the difficulties showed by the learners and the ways to improve the situation, on the other, offered a reasonable degree of confidence as they had attended an initial teacher education programme. Therefore, SDPD has to be supported by previous approach of specific methodology of facilitating reading and writing in Grades 1 and 2.

After my professional practice in these case studies, I learnt more with reference to learning facilitation in a particular group of primary education – Grades 1 and 2. Despite the fact that the study only comprised five teachers did not diminish its contribution for the existing knowledge and the quality of TCPD carried in specific context like Mozambique and other developing counties. I am aware of the significance of both the study process and the knowledge emerged from it. A clear evidence is the change of PRs assumptions with respect to the learning opportunities they provided after having reflected on their and my practice. By the end of this experience, PR5 was concerned with the low learners' achievement and said: "*This process should be continuous and if possible we should have the same class from Grade 1 to 5, since I know the difficulties of each learner.*" From this feeling, I believe that this study will be valuable to inform practise in Mozambican primary education as a whole and, particularly, in Grades 1 and 2.

According to my observation, I feel that apart from more extended initial teacher education programmes, the syllabus should deepen methods of facilitating learning and appropriate remedial learning tasks for underachieving learners.

In designing the PRs feedback and the mentor-researcher evaluation for quality assurance purpose, the reflection on the case studies was taken into consideration.

4.9.3 Feedback on the Intervention

The feedback on the intervention was part of the quality assurance (QA) in this PAR. I began the QA process by observing learning opportunities. This observation was used to evaluate whether the PRs use the new knowledge and skills acquired and to find out issues to be included in the questionnaires. Preceding classroom observation I took part in one planning session in which the PRs planned biweekly sequences of unities, learning content and tasks. My participation in that session helped me to observe how they deal with issues of learners' recovery and self-directed professional development. At this stage of the study I observed that they planned the learning tasks recommended and the remedial tasks in the textbook.

To conduct classroom observation I used a different approach to observation than the one I had used during the intervention. I piloted the observation schedule observing two teachers in order to find out "that the schedule affected my ability to observe" (Radnor, 2001:52). The observation schedule mainly included items relating to the use of innovative ways for presenting learning tasks and the PR's awareness of improving their professional learning. I used an open-ended approach to allow me to gather more qualitative data than the frequency of the events during the learning opportunity.

The feedback process was performed by means of two semi-structured questionnaires with open-ended questions. The first questionnaire aimed at obtaining the PR's feedback with respect to their participation and the second one was to obtain from PRs the feedback on my role as mentor-researcher evaluation. Both questionnaires were discussed with three critical friends and the comments and suggestions were taken into consideration. Following this process I analysed the questionnaires with the PRs and verify the contents covered, the language, terminology used and the relevance of the questions. Before administering the questionnaires related to the QA, I asked permission from the Unidade 18 Primary School and invited the PRs for a meeting on April 23, 2010.

I considered the design of the questionnaires for QA purpose a crucial stage in my journey of learning in this PAR. I tried to avoid the usual questions asked to workshop participants which essential comprises topics regarding the organisation of the event, provision of handouts stated and do not provide substantial results. Therefore, informed by the literature reviewed, I applied a more comprehensive evaluation in order to verify the way in which it was innovative approach of TCPD. The evaluation also aimed at determining the significance of the intervention to my own practice and my professional growth, to the CPD of the PRs, to the knowledge of other learning facilitators and educators and TCPD providers in Mozambique. In addition the QA carried out yielded to my knowledge claim.

In taking into consideration the levels of evaluating the impact of continuing professional development described in Table 2.10, the following table summarises the questions asked to PRs and the purpose of each question in the context of the evaluation I performed.

Level	Question	Purpose
Level 1: Rationale for the CPD programme	Do you think that this intervention could be used as part of continuing professional development? How do you assess the intervention on promoting innovative ways of presenting learning tasks?	To verify the attainment of the goals of the CPD
Level 2: Participants' reaction	To what extent do you think that the content of this intervention was relevant?	To verify possible prerequisites of PD
	To what extent do you think that the hand-outs and material used, in general, were useful in contributing to the reflection on your practice?	
	Had your questions and doubts been answered by the mentor?	
	To what extent do you think that the period of the academic year in which the activities were carried out was appropriate to your needs and practice?	
Level 3: participants' learning	To what extent do you think that the intervention, in general, was useful in providing space for acquiring knowledge and developing skills to better understand your learners' learning needs? As a practitioner-researcher, to what extent do you think that the intervention was useful in contributing to your own continuing professional development? Do you think that you experienced any growth or development in your professional learning? To what extent do you think that you can be both a change and innovation agent within the grade group,	To renew commitment of teachers as change agents To renew or extend teachers' morale

Level	Question	Purpose
	school and zone of pedagogical influence? The activities carried out provided knowledge and skills to better follow-up individual learner's achievement?	
Level 4: Organisational support and change	To what extent were the objectives and activities of this investigation aligned with those of the class, the school and zone of pedagogical influence? What was the most enjoyable issue/activity in your participation in this intervention? What was the least enjoyable issue/activity in your participation in this intervention? If you would have to change an issue in this intervention, what would it be? Is there anything else you would like to comment on or to say?	To raise motivation To sustain change To promote organisational change
Level 5: Participants' use of new knowledge and skills	Do you feel motivated on continuing to be responsible for your own continuing professional development by investigating your classroom practice? Did the intervention provide opportunities to you to carry out the teacher's roles indicated below?	To evaluate whether participants use the new knowledge and skills acquired
Level 6: Teacher reward	Do you see any reward in participating in this intervention?	To evaluate personal reward
Level 7: Cost-effectiveness	What is your perception regarding the cost-effectiveness of this intervention?	To evaluate the cost-effectiveness of the CPD programme
Level 8: Learning outcomes	Do you think that your learners had learnt more and better? To what extent do you think that your participation was useful in improving your learners' learning?	To assess the impact on learner learning

Table 4.55: Purpose of the questions (adapted from Guskey, 2002:48)

In the following tables (Table 4.55 & Table 4.56) some of the qualitative feedback obtained from the PRs regarding their experience of the PD intervention and specifically their implementation of related principles in their teaching practice is captured. The focus was on me and the PRs and the feedback served a self-assessment purpose.

	Question	PR1	PR2	PR3	PR4	PR5
1	Did the planning of the learning opportunities take into consideration the learning needs of the learners?	*Always*	*Always*	*Not always*	*Not always*	*Not always*
2	Did the planning of the learning opportunities promote my own continuing professional development?	*Always*	*Not always*	*Always*	*Always*	*Always*
3	Did I use innovative ways in the presentation of the learning tasks indicated in the book?	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
4	Did I consider the different learning styles of my learners?	*Always*	*Not always*	*Always*	*Always*	*Always*
5	Were the learning opportunities appropriate to the level of the majority of the learners?	*Always*	*Always*	*Always*	*Not always*	*Not always*
6	Was the fact that I followed-up the learners' achievement useful to identify the learning needs of underachieving learners?	*Very useful*	*Very useful*	*Very useful*	*Useful*	*Useful*
7	Did I provide learning tasks to improve the learning of underachieving learners?	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
8	Did I raise my expectations of my learners' learning?	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*

	Question	PR1	PR2	PR3	PR4	PR5
9	How many learners did I remediate/recover in this academic year?	*52*	*10*	*19*	*25*	*41*
10	What was the most significant change in my learners' achievement?	*The most significant change was that they could read a short sentence, to formulate and even to organise (subject, predicate) without too much effort.*	*Reading and writing of numbers and doing calculations.*	*The most significant change in my learners' achievement was in reading and writing.*	*It was the fact of the learners being able to read, to write and to identify different numbers, syllables, vowels.*	*The pedagogical achievement.* *The majority of the learners can read and write.* *How specific learners will work with low achiever learners.*
11	Comments and/or opinions about the tasks for remediation of learners with low achievement	*The comments are: I have to work more during the day; I will have other subjects like Handcrafts, Physical Education in order to engage them more.*	*It is an activity that demands greater effort from the teacher but it provides fulfilment.t*	*Particularly myself, in my class; I gave different learning tasks because I felt that they did not assimilate well certain content, and then I did revision.*	*I think that to remediate the learners with low achievement it is always necessary to use new tactics, techniques to make them to be in touch with the teacher, placing them in front for better follow-up, always giving activities to them and incentives by asking them to go more often to the blackboard.*	*Organising groups.* *Joining learners with difficulties and working with each one.*
12	Do I feel rewarded apart from not receiving material incentives or promotion in my career?	*Amply*	*Amply*	*Amply*	*Amply*	*Amply*

	Question	PR1	PR2	PR3	PR4	PR5
13	What might prevent me from paying attention to my learners' learning after this intervention?	*The aspects which may prevent me from having more learning opportunities with Mrs Tembe in order to present the difficulties which I could have.*	*The working conditions. Class size, textbooks for all, parents collaboration and effort of the teachers.*	*The large class size.*	*I do not see any aspects that might prevent me from paying attention to my learners since I had acquired innovations on my work as a teacher.*	*Maybe the conciliation of my work and the unity sequence school from the school.*
14	Comments and/or opinions about the model of continuing professional development?	*Without much comment I would like all schools to have a group of able teachers in order to help the other teachers, instead of waiting on the District Director or ZIP. This was a positive idea.*	*Probably the model does not have problems; what counts most is the continuing professional development. But this model is acceptable.*	*What I have to say about the continuing professional development is: It is adequate.*	*The opinion is that it should happen at local level, school, ZIP and district for updating and ideas sharing in order to develop our work as educators.*	*It should be organised in groups of teachers in order to motivate others for this pedagogical practice.*

Table 4.56: Practitioner-researcher feedback

4.9.3.1 Comments on the Feedback of the Practitioner-researchers

The practitioner-researchers (PRs) completed the questionnaire at their school in Apr 22, with my presence, apart from having participated on one meeting discussion on the questionnaire. This strategy had mainly two objectives. The first objective was to give to the PRs the possibility to promptly ask me what was not sufficiently clear. The second one was to ensure that I would have all questionnaires completed on time.

The questionnaires comprised question/items related to issues on

- Appropriateness of the planning of the learning opportunities
- Design/use of innovative practice towards their contribution for their own CPD and learners' recovering
- Changes on learners' achievement and feeling regarding their future ownership of their practice
- The model of CPD

Appropriateness of the planning of the learning opportunities

At the outset of this PAR my commitment with the PRS was to not disturb normal classes and, as much as possible, to follow the learning objectives foreseen for the learning objectives foreseen for the learning opportunities as recommended in the syllabus and exercise books. This will fundamentally support the thought that the PRs could attain the objective prescribed by doing different learning tasks.

Practitioner-researchers 3, 4 and 5 referred that the planning of learning opportunities *not always* take into consideration the learning needs. This had to do with the pressure on following the prescribed sequence of learning unit, even with the significant number of learners who, early in the academic year, did not follow the learning objectives and showed not satisfactory achievement. In the context of the study, the main activities was to analyse and monitor the learning of that group in order to identify areas which simultaneously contribute for the PRs CPD and the improvement of the learners learning. In doing so, at the end of the intervention, all PRs indicated that they had recovered from 10 up to 51 learners. PR1 was the one who recovered more learners. Since she was the less experienced from the group, she felt a significant support in this study and tried to use for her CPD and follow-up and monitoring of low achieving learners.

Design/use of innovative practice towards their contribution for their own CPD and learners' recovering

All PRs indicated they designed innovative learning tasks, starting from those recommended in the exercise book in order to provide different ways to learn and/or exercise the same contents. Innovative practices were one of the activities used in this intervention to promote our SDPD and the enjoyment of the learners in the class. Designing both innovative and remedial learning tasks were the more referred to as new learning and contribution for SDPD and the activities which raised their awareness on being responsible for their CPD and for ownership of their practice.

Changes on learners' achievement and feeling regarding their future ownership of their practice

With reference to changes on learners' achievement all PRs indicated that the learners made improvement on reading and writing skills. Two out of the five PRs also mentioned improvement on Mathematics with particular emphasis in terms of identification of numbers and doing calculation. This information confirms the positive impact of follow-up and monitoring of learners learning, sustained by the endeavour of permanently asking question related to "what" can be improved and "how" could be improved.

The PRs felt confident on the experiences acquired in this PAR. The only exception is PR1 who thought that do not have the research-mentor available might prevent her practice as she will not have one to present her difficulties. The other four PRs indicated issues like class size, textbooks and the prescribed learning units.

Large classes and the distribution of the learners in the classroom were the challenges faced by the PRs. During the study we paid attention to this phenomenon, for instance, by means of

- grouping learners with different levels of achievement
- changing the composition of the groups
- ensuring that the learners do not frequently sit on the back or in front
- circulating more times around the learners
- avoiding responses in chorus
- avoiding to carry out activities that can be done by the learners
- giving equal opportunities to all learners to answer and write on the blackboard.

Having improved the way in which the PRs understood learning, the responsibility they have on introducing changes to attain better learners' achievement as part of their SDPD, I believe that the study promoted AR practise and awareness concerning ownership of elementary research and classroom practice.

The model of CPD/SDPD

The PRs had a positive impression regarding the model of CPD adopted at school level instead of waiting from pedagogical support from the ZIP or District Directorate of Education. In these sense they thought that all schools should have one group of learning facilitators which could motivate and support the colleagues on this practise, taking advantages of the all periods allocated for the arrangement of pedagogical matters throughout the academic year. In addition, the overall feedback on the intervention indicated the appropriateness of SDPD since each PR was approached as a unique situation to be understood and supported in order to analyse what she/he is doing and find ways to improve and innovate the classroom practice towards a responsible CPD. Apart from this individualised approach a collaborative work among the PRs as a way to share experiences on their practice and instruction for all PRS had a positive impact on the SDPD.

	Question	PR1	PR2	PR3	PR4	PR5
1	To what extent do you think that the content of this intervention was relevant to your professional knowledge?	*Very relevant*	*Very relevant*	*Very relevant*	*Very relevant*	*Relevant*
2	Does the content correspond to your own interests as a teacher?	*Always*	*Always*	*Always*	*Many times*	*Always*
3	Who selected the learning content?	*The promoter*	*The promoter*	*The promoter*	*Myself*	*Myself*
4	To what extent do you think that the hand-out and material used, in general, was useful for the reflection on your practice?	*Very useful*	*Very useful*	*Very useful*	*Very useful*	*Useful*
5	To what extent do you think that the period of the academic year in which the activities were carried out was appropriate to your needs and classroom practice?	*Very appropriate*	*Very appropriate*	*Appropriate*	*Very appropriate*	*Appropriate*
6	Was the methodology used appropriate for adult learning, allowing for reflection and discussion about issues concerning your practice and the learning of your learners?	*Very appropriate*	*Very appropriate*	*Appropriate*	*Very appropriate*	*Appropriate*
7	Did the methodology used provide you space for reflection about your learners?	*Appropriate*	*Appropriate*	*Appropriate*	*Appropriate*	*Appropriate*

Question		PR1	PR2	PR3	PR4	PR5	Question
8	Did the methodology used allow discussion on aspects of your practice with the mentor?	*Always*	*Always*	*Always*	*Many times*	*Many times*	
9	Was the intervention useful in providing space to acquire knowledge and to develop skills to better understand your learners' learning needs?	*Very useful*	*Very useful*	*Useful*	*Very useful*	*Very useful*	
10	How do you assess the intervention with respect to the promotion of innovative ways of presenting learning tasks?	*Very good*	*Good*	*Good*	*Very good*	*Good*	
11	Did the activities that were carried out provide you with knowledge and skills to better follow-up individual learners' achievement?	*Always*	*Many times*	*Always*	*Many times*	*Always*	
12	How often did you feel the need to investigate and search for more information about issues regarding facilitation of learning?	*Once a month*	*Every day*	*Every day*	*Every day*	*Every day*	
13	Have your questions and doubts been answered by the mentor?	*Always*	*Always*	*Always*	*Many times*	*Many times*	
14	Were the objectives and activities of this investigation aligned to those of your class and your school?	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	

	Question	PR1	PR2	PR3	PR4	PR5
15	Did the participatory action research contribute to your own continuing professional development?	*A lot*	*A lot*	*A lot*	*A lot*	*A lot*
16	Did you notice any development in your professional learning?	*A lot*	*A lot*	*A lot*	*A lot*	*A lot*
17	Do you feel motivated to continue to take responsibility for your own continuing professional development by investigating your classroom practice?	*A lot*	*A lot*	*A lot*	*A lot*	*A lot*
18	Did the intervention provide you with opportunities to perform the teacher roles as indicated below?					
	- Learning mediator/facilitator	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
	- Interpreter and designer of learning programmes and materials	*Yes*	*Yes*	*Yes*	*No*	*Yes*
	- Leader, administrator and manager	*No*	*Yes*	*Yes*	*Yes*	*Yes*
	- Scholar, researcher and lifelong learner	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
	- Community, citizenship and pastoral role	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
	- Assessor	*No*	*Yes*	*Yes*	*Yes*	*Yes*

	Question	PR1	PR2	PR3	PR4	PR5
19	To what extent do you think that you can be a change and innovation agent within your grade group?	*Fully*	*Fully prepared*	*Prepared*	*Prepared*	*Prepared*
20	To what extent do you think that you can be a change and innovation agent within your school?	*Fully*	*Fully prepared*	*Prepared*	*Prepared*	*Prepared*
21	To what extent do you think that you can be a change and innovation agent within in the Zone of Pedagogical Influence?	*Fully*	*Fully prepared*	*Fully prepared*	*Prepared*	*Prepared*
22	How do you assess the usefulness of the intervention with respect to the improvement of your learners' learning?	*Very useful*	*Very useful*	*Very useful*	*Very useful*	*Useful*
23	Can you describe what you learned most about your practices during this intervention?	*I learned how to plan well my lessons; to orientate the learners regarding the activities in the classroom; to use that role that is not usual nowadays by giving some exercises.*	*Centre the learning on the learner; to notice the learners difficulties; to support the learners with more needs.*	*What I learned is that during this period I could be mediator and facilitator of my learners.*	*I learned how to deal with weak learners and what to do to remediate them, also various practices to present content, materials as a way to motivate them.*	*I learned many intervention strategies for change and growth in my field; innovations; new way for providing work to my learners.*

	Question	PR1	PR2	PR3	PR4	PR5
24	Do you think that this intervention can be used as a way of continuing professional development?	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
25	Do you think that action research is applicable for teachers teaching Grades 1 and 2 in Mozambican schools?	*Yes, I do. Because on its basis, children in the 1st Cycle can read and write well.*	*Yes, I do. Because it reflects the teacher/learner demand.*	*Yes, I do. Because it improves the learners' learning.*	*It is applicable because it allows to seek ideas, change of opinions for the best development of our educational work.*	*Yes, I do. This is because these grades are the foundation where the learners must dedicate themselves more to the learning of sounds, syllables, vowels, diphthongs, structuring words, joining syllables, etc..*

	Question	PR1	PR2	PR3	PR4	PR5
26	What were the challenges you met in being a practitioner-research?	*The challenges were very weak learners, without taking pleasure in learning, but I overcame all difficulties.*	*To make myself available; to present the difficulties that I have in class; to give opinion about the study; implementation of the innovative ideas in the classroom.*	*The challenges I had as a practitioner-research were: large number of learners; improving the learning (mainly in reading and writing).*	*The challenges were: Looking to find or overcome the difficulty that the learners with more problems in reading and writing.*	*My learners left Grade 1 already knowing to read the vowels, to form words with given syllables.*
27	Enumerate three aspects or activities that you liked more from your participation in this intervention.	*I liked: The explanation of the contents by Mrs Tembe; our interventions as persons; good instruction.*	*Approach of contents with the learners; elaboration of games; to notice the learners' difficulties.*	*To present the same learning task in different ways; to organise groups and develop the follow-up in order to identify the weak learners; to assign specific work to weak learners.*	*Experience sharing; methodology to deal with the learners with more problems on reading and writing; new learning.*	*Debates; experience sharing among the classes; to work with learners with different dispositions.*
28	Enumerate three aspects or activities which you liked less from your participation in this intervention.	*I do not have reason for complaints.*	*There are no aspects that I liked less.*	*The fact that it did not apply to larger numbers, that is to say, in my opinion it should be applied to more elements.*	*I did not notice aspects that I did not like.*	

Question		PR1	PR2	PR3	PR4	PR5	Question
29	If you would have to change something in this intervention, what would it be?			*Nothing*	*In my point of view everything is in order; I only want to say that the teacher wishes to investigate but sometimes feels limited because of lack of resources.*	*It would be to allow me to carry out investigation, study group with the elements of the class in order to improve my work.*	*The programme should be elaborated with those new interventions (innovations for better understand-ing by the learners).*
30	Is there anything else you would like to say?		*No*	*It was very good and I would like to study more in the future.*	*What I would like to say is the following: If it were possible all teachers should have the opportunity to participate in participatory research.*	*Just to applaud and thank the researcher because it makes me increase knowledge that will improve my work.*	*I would like this intervention to be applied not only to initial grades but also other teachers.*

Table 4.57: Mentor-researcher evaluation.

4.9.3.2 Comments on the Research-mentor Evaluation

The question/items included in the questionnaires summarises issues like

- Relevance of the contents, methodology and material used in the intervention
- Evaluation of the intervention
- Motivation to continue taking responsibility for their own CPD
- Teachers roles
- PAR for PD
- Challenges as PR

Relevance of the contents, methodology and material used in the intervention

In general the PRs evaluated positively the contents, the methodology and the material used in the intervention. The main merits of this PAR is that the PRs regularly had my participation and support whatever in the planning sessions for planning learning opportunities and designing learning material, in classroom practice and analysis. Therefore, they experienced, on the one hand, changes on their usual routines as learning facilitators and, on the other hand, a new paradigm of research and their role on their CPD by means of self-directed professional development (SDPD). In addition, I observed the learning material used in the classroom was only the one I provided.

Evaluation of the intervention

The evaluation of the intervention was seen in terms of its impact on promoting innovative ways of presenting learning tasks and the PRs progressively noticed concrete results in their learners achievement. Besides individual learner assessment and monitoring and the design of innovative learning tasks were activities in which the PRs concentrated their responsibility for their own CPD.

Motivation to continue taking responsibility for their own CPD

The responses give indication that the PRs will continue being responsible for their CPD by investigating they classroom practice. In this respect, likewise the previous PRs feedback the challenges could be the large class they use to have and both prescribed and overcrowded syllabus and exercise books

Teachers roles

In general, the PRs consider that the intervention developed in this PAR provided occasions for performing the teachers roles. However there were two exceptions. These are regardin the role of interpreter and designer of learning programmes and materials (PR4) and the role of assessor (PR4). Both responses have to do with the Mozambican practise in primary schools. The former role is consider as one of the Ministry Education attribution, since the syllabus, the exercise books and complementat learning material are centraly selected and provided to all schoolls. Another reason is that the learning programme understood as a learning unit is designed at each grade group level. In addition the design of a set of learning tasks and material aiming at solving learning difficulties was not seen as a learning programme. However, the PRs designed a set of remedial tasks. In relation to the last role the reason is that assessment tests are designed by each grade group level and the learning facilitators do not assess their learners from their own iniciative.

Challenges faced as PR

As PRs the challenges are related to the their availability and participation and implementation of the innovative ideas (PR2) and the process of analysing the situation and looking for solutions (PR4) the class size (PR2) and guiding the acquisition of reading and writing to low achieving learners (PRs 1 & 5). My understanding here is that the PRs are aware of what to do, however they do not have enough skills to deal with the constraints they mentioned.

	PERIOD	ACTIVITIES	PURPOSE	OUTCOMES	PARTICIPANTS		
					RM	PRs	RM and PRs
2007 COMPREHENSIVE CYCLE A	Feb-Nov	Literature review and text analysis	To situate the study within the existing understanding of teachers' continuing professional development. To build a holistic theoretical framework to inform this study. To support the issues being investigated.	Review of TCPD practices in Mozambique and understanding of TCP within the context of the Mozambican strategies for teacher education and upgrading. Review of TCPD practices in developing and Western countries. Understanding of my topic in the accessible literature on TCPD, The theoretical framework which allowed me to discuss the topic of the study.	√		
	Feb 15 – Apr 19	Collective and individual meetings with the six teachers from Unidade 18 Primary School	To inform the PRs about the objectives and nature of the study. To invite the PRs to participate in this study.	The teachers obtained information about the project and their voluntary participation.			√
		Sending letters to PRs	Formalisation of the teacher willingness on participating in this study.	The teachers receive my ethic statements. Informed consent from the six teachers.	√	√	

Legend
RM = Research mentor; PRs = Practitioner-researchers

	PERIOD	ACTIVITIES	PURPOSE	OUTCOMES	PARTICIPANTS		
					RM	PRs	RM and PRs
2007 COMPREHENSIVE CYCLE A	Feb 02	Requesting informed consent from Provincial Directorate of Education, Culture and Technology of Maputo-Cidade for developing the study at Unidade 18 Primary School.	To negotiate access and obtain informed consent of education sectors.	Written permission and informed consent from provincial directorate of education, district directorate of education and school principal to administer the questionnaire.	√		
	May -Sep	Conducting unstructured and semi-structured classroom observation at Unidade 18 Primary School.	To get information to answer my research questions. To understand the process of facilitating and monitoring of CPD. To identify topics for PRs CPD.	The PRs and the class felt familiarised with my presence in the classroom. Awareness of both the teachers and school pedagogical routines. Understanding of the monitoring of CPD and areas for PRs CPD and improvement of my own practice.			√
	Mar-Apr	Design of the questionnaires.	To build the baseline analysis of this study.	First draft of the questionnaires taking into consideration the information got from unstructured classroom observation in terms of monitoring TCPD and follow-up of learners' achievement.	√		
	Mar-May	Requesting information about the number of teachers in Grades 1 and 2 to the six provinces included in this study.	To obtain the number of teachers facilitating learning in Grades 1 and in Mozambican public schools.	Population of the study comprising 33 797 teachers. First proposal of sample size of 1 500 teachers from all provinces.	√		
	Apr	Analysis of the questionnaire with the promoter.	To verify the content and relevance of the questions.	Second draft of the questionnaire.	√		

Legend
RM = Research mentor; PRs = Practitioner-researchers

	PERIOD	ACTIVITIES	PURPOSE	OUTCOMES	PARTICIPANTS			
					RM	PRs	RM and PRs	Resp Map-Cid
2007 COMPREHENSIVE CYCLE A	May 10	Discussions on the draft of the questionnaire with the promoter and STATOMET.	To refine the formulation of the questions. To establish the structure of the questionnaire.	Third draft of the questionnaire. Second proposal for the sample size.	√			
	Jun	Asking critiques from critical friends.	To verify the appropriateness of the formulation and content of the question.	Forth draft of the questionnaire. Comments and some questions and statement reviewed.	√			
	Jun	Revising the questionnaire	To include the suggestions proposed.	Fifth draft of the questionnaire.	√			
		Asking critiques from critical friends.	To verify the appropriateness of the questionnaire.	Sixth draft of the questionnaire.	√			
	Jul	Piloting the questionnaires.	To test the questionnaire to get feedback regarding the time needed to complete, understanding of the language and questions. To obtain comments on the questionnaire.	Comments and indication of professional qualifications to consider and questions to be excluded. Information about terminology that is not used,	√			√
	Aug	Definition of the sample size with STATOMET and the promoter.	To adjust the population and the sample size to limitation of time and financial resources to travel to the provinces. To select two provinces from each of the three regions.	Definition of the feasible population on 19 609 from the Northern, Centre and Southern Zones. Sample size of 1 028 teachers. Definition of the provinces by region.	√			

Legend
RM = Research mentor; PRs = Practitioner-researchers; Resp Map-Cid = Respondents from Maputo-Cidade

	PERIOD	ACTIVITIES	PURPOSE	OUTCOMES	PARTICIPANTS			
					RM	PRs	RM and PRs	Resp Prov
2007 COMPREHENSIVE CYCLE A	Aug	Revising the questionnaires.	To examine the questions.	Final version of the questionnaire.	√			
	Apr 19 - Sep 20	Requesting informed consent from Provincial Directorate of Education, Culture and Technology of Sofala, Zambézia, Nampula and Cabo Delgado for administering of the questionnaire.	To negotiate access and obtain informed consent from the provincial directorates of education of the provinces to be involved.	Written permission and informed consent from provincial directorate of education, district directorate of education and school principals to administer the questionnaire	√			
	Sep	Asking critiques from experienced primary school teachers.	To get comments on the questionnaire.	Uncertainty whether the respondents will be honest when answering the questionnaire due to the professionalism embedded in some of the questions.	√			√
	Sep 21- Oct 8	Delivery of letters inviting the teachers from 117 schools from Sofala Province to respond voluntarily to the questionnaire. Administrating the questionnaires	To negotiate access. To administer the questionnaires.	Informed consent.	√			√

Legend
RM = Research mentor; PRs = Practitioner-researchers; Resp Prov = Respondents from the provinces

	PERIOD	ACTIVITIES	PURPOSE	OUTCOMES	PARTICIPANTS			
					RM	PRs	RM and PRs	Resp Prov
2007 COMPREHENSIVE CYCLE A	Sep 21-Oct 8	Delivery of letters inviting the teachers from 270 schools from Zambézia Province to respond voluntarily to the questionnaire. Administering the questionnaires.	Negotiate access. Administering the questionnaires.	Part of the questionnaires completed.	√			√
	Oct 12 – Nov 02	Delivery of letters inviting the teachers from 146 schools from Cabo Delgado Province to respond voluntarily to the questionnaire. Administrating the questionnaires	Negotiate access. To administer the questionnaires.	Part of the questionnaires completed.	√			√
		Delivery of letters inviting the teachers from 336 schools from Nampula Province to respond voluntarily to the questionnaire. Administering the questionnaires.	Negotiate access. To administer the questionnaires.	Informed consent	√			√
	Dec	Capturing data from the questionnaires.	To gather data from the questionnaires.	Preliminary data of the baseline study.	√			
2008 COMPREHENSIVE CYCLE B	Jan-Dec	Capturing data from the questionnaires.	To gather data from the questionnaires.	Preliminary data of the base line study.	√			

Legend
RM = Research mentor; PRs = Practitioner-researchers; Resp Prov = Respondents from the provinces

	PERIOD	ACTIVITIES	PURPOSE	OUTCOMES	PARTICIPANTS			
					RM	PRs	RM and PRs	Resp Prov
2008 COMPREHENSIVE CYCLE B	Apr 16-17	Learningshop on Action Research carried out by the promoter with my support.	To introduce AR as a method for investigation. Promote reflection on the need for innovative practice. Discuss with the PRs practices towards their own PD.	Introduction of Action Research as tool for professional development. Commitment of RM and PRs in the study process.			√	
	Apr 21-Jul 20	Individual work with the class towards integration of the new experiences, innovative practices and the lessons learnt.	To allow the PRs opportunities to apply the knowledge and experiences from the learningshop on AR.	The PRs worked on their own and did not design the AR project as they were not confident.		√		
	Apr 28	Requesting informed consent from Provincial Directorate of Education, Culture and Technology of Maputo and Maputo-Cidade for administering of the questionnaire.	To negotiate access and obtain informed consent from the provincial directorates of education of the two provinces.	Written permission and informed consent from provincial directorate of education, district directorate of education and school principals to administer the questionnaire.	√			
	May	Delivery of letters inviting the teachers from 76 schools form Maputo Province. Administering questionnaires.	To negotiate access. To administer the questionnaires.	Questionnaires completed.	√			√

Legend
RM = Research mentor; PRs = Practitioner-researchers; Resp Prov = Respondents from the provinces

	PERIOD	ACTIVITIES	PURPOSE	OUTCOMES	PARTICIPANTS			
					RM	PRs	RM and PRs	Resp Prov
2008 COMPREHENSIVE CYCLE B	May	Delivery of letters inviting the teachers from 83 schools form Maputo-Cidade. Administering questionnaires.	To negotiate access. To administer the questionnaires.	Questionnaires completed.	√			√
	May 25-Jun 01	Gathering the questionnaires in Cabo Delgado Province.	To collect the remaining questionnaires.	Questionnaires completed.	√			√
	Jun 02-20	Gathering the questionnaires in Nampula Province.	To collect the remaining questionnaires.	Questionnaires completed.	√			√
	July 21	PRs report on the learningshop on AR.	To obtain impressions of the learningshop. To obtain information on what the PRs did after the learningshop on AR.	Report on the Learningshop on AR.			√	
		Learningshop on Instructional Design and Assessment.	To identify common problems in learning. To understand learning problems. To design learning tasks. To discuss the role of working group in lower primary education.	The PRs were familiarised with basic Instructional Design issues mainly with respect to instructional analysis.			√	

Legend
RM = Research mentor; PRs = Practitioner-researchers; Resp Prov = Respondents from the provinces

		PERIOD	ACTIVITIES	PURPOSE	OUTCOMES	PARTICIPANTS			
						RM	PRs	RM and PRs	Resp Prov
2008	COMPREHENSIVE CYCLE B	Jul 30	Writing handouts and forms to be used by the PRs in designing the projects.	To provide support to PRs on AR.	Handouts on Principles of AR. Forms for individual project design.	√			
		Aug -Sep	Designing the projects.	To design the first draft of the projects.	First draft of the PRs projects.		√		
			Refining the projects.	To design the final version of the projects paying attention to the research question and the probable solution.	Final version of the projects.		√		
			Planning of learning opportunities.	To pay attention on innovative learning tasks and the supportive learning material.	Innovative learning tasks and learning materials.			√	
			Classroom observation.	To observe innovative remedial learning tasks and the use of the learning materials.					
			Reflection.	To identify issues to be improved.	Selection of learning tasks and strategies that could contribute to the PRs PD and the learners' learning.			√	
		Sep 25 – Oct 05	Gathering questionnaires in Sofala Province.	To collect the remaining questionnaires.	Questionnaires completed.	√			
		Mar 26	Classroom observation.	To observe how the PRs used the learning acquired and/or developed during the learningshops.	Promotion of innovative practice.				
2009		Apr 25	Discussion on Chapter 1 with critical friends	To obtain comments on the background of study and the research questions	Comments on Chapter 1	√			
		.	Planning of innovative learning tasks and production of learning materials.	To pay attention to issues that could contribute to PRs CPD and improve my own practice.	Specific learning tasks and material different from those included in the learners' textbook.			√	

Legend
RM = Research mentor; PRs = Practitioner-researchers; Resp Prov = Respondents from the provinces

		PERIOD	ACTIVITIES	PURPOSE	OUTCOMES	PARTICIPANTS		
						RM	PRs	RM and PRs
2009	COMPREHENSIVE CYCLE B		Reflection.	To monitor the PRs learning and their CPD and my own practice. To identify practices and issues to be improved.	Comments on the learning opportunities and the use of the learning materials. Selection of learning tasks and strategies that could contribute to the PRs PD and the learners' learning.			√
		Oct	Capturing data from the questionnaires.	To identify the code from the questions to the answers.	Data capturing from the questionnaires.	√		
		Oct 29 Dec 20	Data entry from STATOMET.	To process the data from the questionnaires.	Data from each respondent.	√		
		Nov 23	Asking critiques from critical friends on the questionnaires for PRs feedback and the questionnaires for RM evaluation.	To obtain comments and suggestions for the questionnaires.	Improved questions of the questionnaires.			
2010		Jan 29 Feb 19	Data cleaning	To verify the correspondence between the information from the questionnaire of each respondent and the data processed.		√		
			Running frequencies.	To verify the frequencies of each variable and look for missing cases an consistency of the data.	Output.			
			Recodification, regrouping and recategorisation.	To find out similarities and differences between responses Identify codes for open	Codes for open questions from the questionnaires		√	

		question				
	Data analysis of the questionnaires.	To determine the frequencies of the closed questions.	Frequency and content analysis			√

Legend
RM = Research mentor; PRs = Practitioner-researchers; Stat= STATOMET

					PARTICIPANTS		
	PERIOD	ACTIVITIES	PURPOSE	OUTCOMES	RM	PRs	RM and PRs
2010 COMPREHENSIVE CYCLE B	Apr 15	Classroom observation.	To observe how the PR1 used the learning acquired and/or developed during the learningshops and previous classroom observation.	Monitoring PR1 practice on designing remedial tasks.			
	Feb 15 – Apr 19	Reflection.	To identify practices to be improved.	Identification of learning tasks to be included. Design of remedial tasks to be assigned			√

Legend
RM = Research mentor; PRs = Practitioner-researchers

	PERIOD	ACTIVITIES	PURPOSE	OUTCOMES	PARTICIPANTS		
					RM	PRs	RM and PRs
2010 COMPREHENSIVE CYCLE B	Apr 15-Jul 30	Designing of the first draft of the questionnaire for PRs feedback and for MR evaluation.	To assess the self-directed professional development and my practice.	First draft of the questionnaires for PRs feedback and evaluation of the intervention.	√		
	Aug 13	Asking critiques from a critical friend on the questionnaires for PRs feedback and the questionnaires for MR evaluation.	To get comments and suggestions regarding the questions and items of the questionnaires.	Improved questions of the questionnaires.	√		
		Refining the questionnaire for PRs feedback and the questionnaires for MR evaluation.	To include de suggestions and to take into consideration the comments provided.	Second draft of the questionnaires for PRs feedback and the questionnaires for RM evaluation.	√		
		Discussion on the questionnaires for PRs feedback and the questionnaires for RM evaluation with the PRs.	To have agreement on the content of the questionnaire.	Final version of the questionnaire for PRS and the questionnaires for RM evaluation with the PRs.			√
	Apr 22	Administrating the questionnaires for PRs feedback.	To allow the teacher to self-assess their participation on the intervention.	Feedback from PRs with respect to their participation in the study.	√	√	
	Apr 23	Administrating the questionnaires for RM evaluation.	To evaluate the intervention and my practice.	Evaluation of the intervention.	√	√	

RM = Research mentor; PRs = Practitioner-researchers;

Table 4.58: Summary of the action research cycles performed

4.10 CONCLUSION

In this chapter I have described the empirical study of this PAR as part of the progression of my aim to explore professional development intervention with a view to supporting the improvement of the teaching practice of primary school teachers facilitating learning in Grades 1 and 2 in Mozambique and improving my own practice as TCPD promoter and mentor-researcher. As an exploratory study one of the answers to be obtained is to a "what" question (Mouton, 2001). In this PAR the "what" of the sub-question was stated in the following way: *What kind of intervention could be developed to support teachers to take responsibility for monitoring their own professional development*?

The process of my journey towards the improvement of TCPD and specific knowledge emerged is further described in Chapter 6.

The empirical study was consistently informed by the outline on the latest and current practices on TCPD, the research questions and the rationale provided in Chapter 1, the theoretical framework and the research design, respectively indicated in Chapter 2 and Chapter 3.

I have shown the characteristics of the PRs and the respondents of the baseline analysis by means of a semi-structured questionnaire with open-ended questions. According to my observation throughout this part of the PAR, the sample could be considered representative of primary school teachers in Grades 1 and 2 in Mozambique in terms of opinions regarding TCPD programmes and classroom practices. From the baseline analysis, teacher education provided by teacher education colleges such as Primary Teaching Institutes (IMAP or IFP) and Danish Support from People to People (ADPP), emerged as the more attended model. Moreover, from the six provinces included in this PAR, in a descending order, methods of facilitating learning, curriculum and topics other than the pedagogical one, were indicated as the most valuable topics. In turn regular meetings, peer observation and classroom observation as the preferred models of an in-service education programme emerged.

From the learningshop, the methodology used, the activities proposed to the PRs and the reflection on the classroom practices during the learningshop on AR were learnt and applied in the next steps of this study to promote learning. The PRs and my knowledge are reflected in the reports (Appendices F & G).

The five case studies played a significant role in my progress of improving my practice as TCPD promoter and mentor-researcher and the PR's responsibility for their own PD. Throughout our practice in the AR cycles performed with SDPD were experienced and enjoyed. A non-hierarchical and empathetic relationship between me and the PRs was developed.

At the end of the empirical study I came to realise that the most significant and rewarding activities take place in the reflection steps derived from the observation one when asking questions to ourselves and looking for answers to questions like:

- What can I do better to improve my practice?
- What can I do differently and in an innovative way?
- How can the SDPD model assist underqualified teachers in developing methodologies and strategies on how to facilitate learning now and in the future?

The SDPD model I consider, having experienced in this PAR, can support primary school teachers in taking responsibility for their own CPD. Having encouraged SDPD for teachers in Grades 1 and 2, I believe that the PRs do. However, I am convinced that the model should be improved and support and follow-up will be required.