CHAPTER 1

RATIONALE

Introduction

In this chapter, I introduce this thesis and explain why I felt it was important for me to conduct research into the implementation of the school improvement project, the Mathematics, Science, and Technology College of Education, popularly referred to as the 'MASTEC project'. This chapter is divided into four sections which provide an account of the MASTEC project's historical background, research questions and the outline of the structure of this thesis. The final section is a conclusion of the chapter and serves as an introduction to the following one.

1.1 Historical background

The MASTEC project came into existence when the South African Department of Education was reviewing the Higher Education sector in terms of the transformational needs of the country. In the South African context, these needs have been documented as those that address equity and redress so as to ensure provision of quality education (South African Schools Act 84 of 1996; The Green Paper on Further Education and Training**;** 1998). The aim of the proposed national transformation was to put an end to an era of disintegrated and fragmented Higher Education, the result of the racially segregated institutions of the apartheid regime. The

department set out to address these needs by developing a single Department of Education, with only one Higher Education sector, as opposed to the previous 17 educational departments and 3 tertiary school sectors. This was to ensure provision of quality education, with strong teaching, learning, and research components. Therefore, the review of the Higher Education sector meant an end to tertiary, technical and teacher training colleges, which were located between secondary and university education and had no research component at all.

In order to bring about the development of a single Higher Education sector, the National Department of Education proposed a strategy of rationalising colleges of teacher training and technical colleges by incorporating them into the Higher Education sector. This gave rise to the following new phases of education in the country: General Education and Training (GET) formerly referred to as ‘primary school education’; Further Education and Training (FET), formerly referred to as ‘secondary school education’; and Higher Education and Training (HET), formerly referred to as ‘university education’. I am aware that this appears to be an oversimplification of the South African Education reform because GET currently includes primary and junior secondary grades, whereas FET includes senior secondary grades and FET colleges. The reason for this is that during the period of the MASTEC programme implementation, all MASTEC schools were either primary and/or secondary.

The MASTEC project began because of the then Limpopo Provincial Minister of Education's

> *dream of a college and a group of schools, which worked together as a continuum to transformed (sic) education in the Sciences, Mathematics and technology in the Northern [Limpopo] Province* (Wood-Robinson, Baloyi, Lukhele and Maoto, 2000: 8).

The MASTEC college was established in 1997 as a pilot project, which would trial a conceptualisation of an in-service/pre-service (INSET/PRESET) continuum, where initial teacher education would be interfaced with in-service teacher education.

The lecturers of the INSET arm of the project would provide continuous professional development (CPD) opportunities to experienced schoolteachers in the field by organising and running workshops at the project headquarters. This provision of CPD opportunities would address the enhancement of the different skills in which these experienced teachers lacked. The PRESET arm lecturers would ensure that student teachers were placed for their in-school teaching experience in the same schools that the MASTEC experienced teachers came from. Such placements were meant as an assurance that supervision by the experienced teachers would complement the students' initial preparation by the college staff.

This relationship of continuum between the MASTEC project and its schools was envisaged to benefit the school learners by

improving their attainment in the sciences, hence the focus on CPD intervention through workshops for science and English teachers. I outline further details of how this relationship was conceptualised and further explore the context of the current study in Chapter 2.

The MASTEC project was planned to have a life span of four years, at the end of which an evaluation would take place in order to decide whether or not to extend its life span. Four formative evaluation studies of the MASTEC project were carried out during its initial life span, but due to the change in the political landscape of the Higher Education sector at the time, the project's summative evaluation was not carried out and its life span was not extended. The initial teacher education arm of the project was incorporated into the University of Limpopo's School of Education and the INSET arm continued at the project's Headquarters until the end of 2001.

The headquarters of the MASTEC project, situated at Seshego (a township about 15km outside Polokwane, the capital town of the Limpopo province), was run as both a PRESET and INSET teacher training institution. The management structure of the project consisted of the College Head, two Deputy Heads (one for administration and the other for academic work), the Project Manager, and the INSET/PRESET Advisor. There were teams of INSET and PRESET lecturers reporting to their respective Heads of Departments.

To fulfil the Minister of Education's dream of a continuum between colleges and schools, 22 secondary and 7 primary schools were selected within a radius of 20km from the project's headquarters, and these became known as the 'MASTEC project schools'. The personnel from these schools were to receive their continued professional development from attending the MASTEC project workshops, and the MASTEC college student teachers would be placed for their in-school experience at these schools. They would receive daily supervision from the experienced schoolteachers and from time to time from the college PRESET lecturers.

I became a member of the teaching staff at the MASTEC College in April 1998, having previously worked in the secondary school sector for seventeen years, and so having gained experience in understanding the secondary schools' general needs. In my new position at the pre-service arm of the MASTEC project, I was responsible for facilitating student teachers' learning to teach science in secondary schools. This course had a great deal to do with teaching and learning theories, teaching and assessment methods, development of curricula and learning materials.

My responsibilities included organising teaching experience for our student teachers in the local MASTEC project schools. In this way, I had direct access into the schools and came to know the schools' educators and management teams. In other words, I was a link between the MASTEC headquarters and the schools. I was in a better position than anyone else in the project's PRESET element

of knowing first hand whether or not our students were practising what they had been taught, such as ensuring their lessons were learner-centred by presenting them in such a manner that they were activity-based; whether or not the experienced teachers' supervision was compatible with and/or complimented the student teachers' initial preparation; and whether or not there were any problems associated with the students' placement in their schools.

In mid-1998, various heads of the MASTEC project schools began to voice their discontent about a number of issues, amongst which was the time spent by the educators away from their classrooms, in order to attend the MASTEC project workshops; some stated that their staff was learning nothing new from these workshops. I assume that it was for this reason that three of these schools withdrew from the project, before the end of that year. It is noteworthy that these schools were the previously advantaged schools from the capital town of the province, and its nearby coloured township.

The focus of the intervention of the MASTEC project, as stated in the project aim, was the improvement of attainment in the subjects mentioned above, mainly in secondary schools. At the beginning of 1999, the focus of intervention changed from the secondary schools to the primary schools, as is evident in the following quotation:

> *[T]hough initially 28 schools were involved in the project – 22 secondary and 7 primary schools, at this time a*

> *further 16 primary schools were invited to join the Project – in most cases these new schools were among the feeders of the secondary schools already in the Project* (Wood-Robinson *et al*. 2000: 1).

Although this may be interpreted as an attempt to switch from a secondary focus to a more balanced emphasis on primary and secondary schools, more resources were allocated to the primary sector at the expense of the secondary sector, thus suggesting a change in focus. The secondary INSET lecturers who had left the project were never replaced; instead more primary INSET lecturers were employed. As a result there was a decrease in the number of secondary school workshops that were provided.

It may also be argued that since DfID were the principal funders of the programme, it could be that the shift in focus from secondary to primary education was intended to reflect a powerful ideological drive in DfID towards education for all. Be that as it may, what happened in the case of the MASTEC project did not embody a shift towards education for all.

Personnel of some of the nineteen secondary schools that had remained as MASTEC project schools stated that they had received letters from the project management to the effect that the project would no longer offer INSET workshops to the secondary school educators, but only to those from the primary schools. Reasons for the change of focus were not clear, but I assumed that the project was more successful in primary schools than in

secondary schools, as suggested by the findings of the project evaluation reports, the details of which are discussed in Chapter 3.

Three years into the MASTEC school improvement programme, school teachers from some of these 19 schools reported an increase in the attainment of their learners, notably in terms of "better Matric[ulation] results" (Ntombela, Mhlongo and Wood-Robinson, 2000). However, some of these schools reported no change at all, whilst others reported a "decline" (Ntombela *et al.*, 2000) in the same examination results. In other words, although other factors are likely to have contributed to these changes, there were indications that the school improvement programme implemented by the MASTEC College appeared (on this evidence at least) to be working for some schools and not for others. The workshop attendance started to decline, suggesting that something was amiss, and, as Ntombela puts it:

> [T]*here is a common Adult Education belief that adult learners vote with their feet, meaning that if the quality is perceived to be below expectations, attendance simply dwindles* (Ntombela *et al*. 2000: 4).

Thus the MASTEC project personnel pulled out of the relationship they had established with these secondary schools, although some had attested to having gained a lot from such association. The initially conceptualised PRESET/INSET continuum became strained, because the PRESET staff could not send their student teachers out on teaching experience to the primary schools, as they were being trained to teach in secondary schools. The

student teachers continued to be placed at secondary schools for their teaching experience.

Despite the earlier point about teachers' declining workshop attendance, on occasions when the lecturers (including myself) would visit them (either for supervision, mentoring or assessment purposes), school educators (in my experience at least) would voice their discontent at MASTEC having discontinued its support in favour of the primary schools, at the time when some of them felt that the MASTEC project was beginning to make an impact. This was a general sentiment that was conveyed by educators in most secondary schools.

As a result of the points made above, namely, change of the project focus and the programme having worked for some schools and not for others, I felt inspired to undertake a detailed investigation of the issues surrounding the implementation of the MASTEC project.

1.2 Research questions

The fact that the MASTEC schools were situated in different contexts raised a number of questions, which I thought I might be able to shed some light on through research. I considered a number of potential hypotheses or questions. For example, could it be that the project needed to have implemented the same programme in different ways to accommodate differences in the

contextual needs of the different secondary schools? Could it be that there was something wrong with the schools that were not benefiting from the programme? Could the manner in which the programme was implemented be one of the reasons for the attrition of some secondary schools?

In order to begin to address these questions or to consider whether or not they were the right questions to ask, I formulated a number of research aims, which were embedded in a relevant theoretical framework. I have outlined these in the methodology chapter of this thesis. The general aim of my research, however, was to find out from the project participants what their own perceptions of their experiences of the project were, including how the programme was implemented, their understanding of the programme, and their ability to apply their newly acquired skills in their own classrooms, as well as whether or not in their opinions, such experiences would translate into an improvement of their particular schools. In the next section I provide an outline of the subsequent chapters and briefly state what each entails.

1.3 Outline of the thesis structure

Chapter 2 is an account of the MASTEC project in context, and provides an overview of its contextual background, highlighting the many different contexts in which its programme was implemented. It also discusses the theoretical basis of this project, which was intended to play an important part in influencing the professional

development of the project staff, student teachers, and the schools' educators.

Chapter 3 surveys the relevant literature, and includes a critical review of the previous evaluations of the MASTEC project. It also makes reference to studies conducted into school improvement initiatives in other countries, so as to find out how other people have carried out their research in contexts which I have deemed similar to that of the present study.

In Chapter 4 I provide an outline of the research aims and objectives. I also provide an account of a pilot study which I conducted in order to trial the methods which I intended to use to achieve these aims and objectives. In this chapter, I outline lessons drawn from the pilot study and their implications for the main study. It is here that I also provide an outline and justification of the research design adopted for the main study as it has been informed by the results of the pilot study.

In Chapter 5 I address issues of sampling, and data generation. I also consider ethical issues that should inform my research design as guided by the principles of the British Educational Research Association (BERA).

Chapter 6 provides an account of data analysis methods, and also an outline and justification of my choices in these areas.

Chapters 7, 8 and 9 are the findings chapters: each deals with a set of findings which emerged from related themes. Chapter 7 relates to the MASTEC project participants' perceptions of how the MASTEC programme was implemented. Chapter 8 relates to their perceptions of the project benefits and/or limitations. Chapter 9 relates to the participants' perceptions of the extent to which the context of programme implementation is important.

Finally Chapter 10, the discussion chapter, addresses each research question in turn by comparing the findings of the present study with those of the reviewed empirical studies. This chapter includes accounts of the limitations of this study as well as its contributions to the evidence base. I also discuss some possible implications of my research for policy making and teacher education practice, as well as opportunities for future research.

1.4 Conclusion

In this chapter I have provided the background of the MASTEC project and juxtaposed it with a brief account of the recent historical background of the South African education system as well as the change in the political landscape of the Higher Education Sector, which ultimately led to the disruption of the project. I have highlighted the initial intent and focus of the project, the different impacts it had on different schools and the change in the initial intent and focus midstream before the initial life span was over. I have identified a number of questions which inspired in me

the urge to investigate the implementation of this project, so as to find out more about its differing impacts on different schools, and about the project participants' perceptions of its implementation and differential successes.

In the following chapter, I provide a detailed account of the context of the MASTEC project and the theoretical underpinning which influenced the implementation of the MASTEC programme.

CHAPTER 2

THE MASTEC PROJECT IN CONTEXT

Introduction

In this chapter, I provide an account of the contexts and sub-contexts in which the MASTEC project existed and was implemented. I also provide an account of the theories which supposedly drove the implementation of the MASTEC programme in the different contexts and sub-contexts.

2.1 The MASTEC project context

The MASTEC project was implemented at three different levels, namely the level of the schools, the project headquarters level and the level of the Provincial Department of Education and the Donors. The last two I shall treat as one level, due to their status as the “employers” of the project personnel, who were accountable and answerable to both bodies. The three levels of implementation are depicted below in Figure 2.1. The acronyms which are used in the diagram due to the limited space are written out in full below:

LPDE - Limpopo Province Department of Education

OSF - Open Society Foundation

DfID - Department for International Development

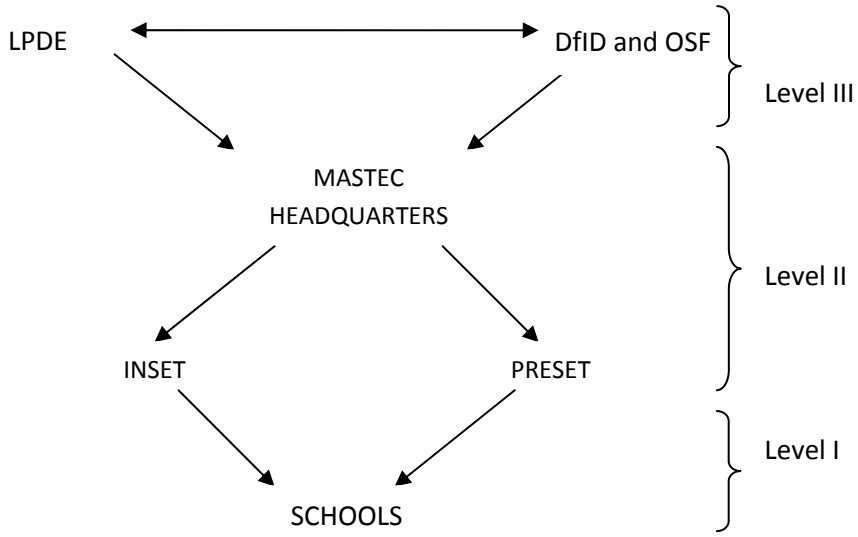

Figure 2.1 Different levels of the MASTEC project implementation

I address each of the levels in turn in the sections below, starting at the bottom of the figure with level I, the schools' level.

2.1.1 The schools' level

As has already been mentioned, the project initially worked with 22 secondary and 7 primary schools, which were selected for the project due to their proximity of within a radius of 20km from its headquarters. There were many other schools situated within the 20 km radius which were not selected as MASTEC project schools. Failure to select these was in part due to limited resources and also because it was a pilot project, whose life span was four years. At the end of this pilot period, and subject to evaluation results, it was intended that the project would be rolled out to include a wider selection of schools. Unfortunately, the project lasted for four years and was never rolled out.

As members of staff associated with the project, we were aware that one criterion of selection was on the basis that schools were representative of the four educational districts within this radius. However, the exact sampling method of determining which schools would be selected and which would be left out was not to be found in any of the project documents that I had access to. The schoolteachers themselves did not know why and/or how their schools were selected into the programme.

The result of the way in which the participant schools were selected was that the MASTEC schools were situated in four broad and quite different locations. Some were in the same township as the MASTEC headquarters; some in Polokwane, the capital town of the province; some in other townships around the town, and some in the rural parts of the province.

The Polokwane schools were the most advantaged schools, followed by the ones in the previously ‘coloured’ township. These differences were due to the differential per capita spending of the previous apartheid government, as shown below in Table 2.1 (adapted from Kahn, 1993). I am aware that this is a rather dated table, but it is important to note that 1993 was the last year that educational resource allocation was conducted in racial terms. From 1994 onwards allocation was carried out per province and depended on the provincial population of school-going children.

	White	Indian	Coloured	Black
Pupil-Teacher Ratio	16:1	21:1	25:1	41:1
% of Under Qualified Teachers	2	4	42	87
Student Capitation (Rands, 1989)	3600	2600	2100	750
Fraction of Entry Cohort Passing Matriculation (= UK Year 12)	.85	.84	.30	.14

Table 2.1: Expenditure per capita of learners in South Africa during the apartheid era

Table 2.1 above, shows marked differences between the numbers of pupils that each white teacher would be faced with in his/her classroom, against the almost tripled number of pupils that a black teacher would be faced with. In addition, when it came to teacher qualifications, most of the white and Indian teachers were better qualified than their black and coloured counterparts. The same disparities were experienced in terms of per capita funding. Each white child's education had approximately five times more funding than a black child's.

Such high differences in terms of teacher qualifications, teacher: pupil ratios, student per capita funding and matriculation pass rates per racial groups seem to suggest that the differences were not limited only to the infrastructure, but applied also to the human resources (two under-qualified white teachers, compared to eighty seven under-qualified black teachers - in the South African education system prior to 1994, teachers belonging to racial groups other than white needed to complete a 3 year secondary education programme in order to qualify for entry in a 2 year teacher education programme, whereas their white counterparts

needed a junior degree, hence the reference to ‘underqualified’ teachers). This could explain why, at that time, the situation was such that the black and coloured children had low academic achievement, compared to those of other races. For example, according to Table 2.1, only 14 percent of black children successfully completed their high school education, compared to 85 percent of their white counterparts.

One might hypothesise that this diverse nature of the contexts existing within the MASTEC project schools, might have posed a challenge to the project’s implementation of the programme.

2.1.2 The project head-quarters level

The MASTEC project had a unique dual nature in the then South African context, in that it was a new teacher training college set up just for the purposes of the project to deliver initial teacher education, the PRESET, as well as to provide experienced schoolteachers with continuing professional development (CPD) opportunities, the INSET. The project therefore had a distinctive management structure which differed markedly from those of other colleges of teacher education and CPD centres that existed in the province.

As described in the previous chapter, this broad management structure was supposed to work in collaboration to establish a

“PRESET-INSET continuum” in pursuance of the achievement of the project and national aims of educational transformation.

The project pre-service and in-service personnel respectively provided an initial teacher training programme, spanning 4-years, and weekly in-service teacher training sessions for the experienced teachers, at the headquarters of the project. During the last three years of their programme (from the second year to the fourth year), the student teachers would carry out their bi-annual teaching experience in the MASTEC project schools for two blocked periods of six weeks.

The project pre-service personnel would spend an average of three to five days at a school to which they were allocated, depending on the number of student teachers placed in each. They would supervise these student teachers at the schools, during the teaching experience periods, and were also supposed to act as resource persons for the experienced teachers. As ‘resource persons' they were meant to help the teachers and student teachers, whenever there was need, as co-planners in terms of developing lesson plans, learning aids and/or assessment activities, and as co-facilitators or team teachers.

2.1.3 The LPDE and donor level

The MASTEC project arose from an agreement between the Limpopo Province Department of Education (LPDE) and two principal donors – the United Kingdom Department for

International Development (DfID) and the Open Society Foundation (OSF). Therefore, it is a logical expectation that the Provincial Department of Education would want to pursue the National Department of Education's newly identified educational reform needs, namely transformation and the provision of quality education to all (Green Paper on Further Education and Training, 1998), which as previously stated, in my view, became the overarching aims of any South African school improvement initiative. The donors would also want to ensure that their funding was utilised adequately towards the achievement of the project's agreed aims. Because of these stakeholders' expectations of the project personnel, this level provides a context within which the project was conceptualised and implemented.

In the South African context, the

> transformation of educational systems translates into redressing the historical inequalities that were built into the educational dispensations under apartheid and promoting the commitment of institutions to a new social order which reflects the social structures more accurately (Chand and Misra, 1999:1).

Provision of quality education to all is underpinned by "a development of quality management and quality assurance systems to promote continuous quality improvement" (Green Paper on Further Education and Training, 1998: Chapter 3).

The South African Educational reform needs, as stated above, are contextual and therefore have different meanings for different people within the country, depending on where they are geographically, what their political standpoint is, and whether the

local communities have the resources to transform and provide quality education.

Given the history of education in South Africa, the national initiative becomes quite complex, and for a school improvement programme to be able to begin to address the issues, these have to be understood in context according to the experiences, values, attitudes and perspectives of the people who were tasked with implementing the programme. It is therefore the intention of the current study to explore the contexts in which the MASTEC project was in order to make an informed decision about whether or not these can have an impact on the implementation of projects such as the one under study.

The LPDE was the major employer of the Project Management teams, and of teaching and non-teaching staff, except for the Project Manager and the INSET/PRESET Advisor, both of whom were British citizens and employed by the DfID. The LPDE was therefore the custodian of the MASTEC project. This meant that the implementation strategy that was to be designed and implemented by the MASTEC project had to meet with the approval, requirements, and standards of the LPDE, and would therefore probably have to address the previously stated national transformation issues such as redress, equity and provision of quality education to **all**. Accordingly, the MASTEC project aim has been stated as being “to increase the attainment in Mathematics, Science and Technology by groups of previously disadvantaged pupils of the Northern [Limpopo] Province, especially girls”

(Constable and Rice, 2000: 8; Wood-Robinson *et al*., 2000: 1; Payne, 2000: 1).

2.2 The MASTEC project's sub-contexts

In this section I provide a description of the sub-contexts which existed within the MASTEC project's headquarters, which are more ramified than the obvious INSET and PRESET contexts. I also reveal that the programme which was being implemented by the project personnel was an import from another continent and might not have been completely suitable for use in the different contexts of the schools of the South African Limpopo Province.

Within the context of each level of project implementation (mentioned in Sections 2.1.1 and 2.1.2 above), existed further 'sub-contexts'. This may appear obvious when one looks at each section as consisting of two different parts (notably the PRESET and INSET elements of the Project), but in reality there were hidden contextual differences even within each of these components. For instance, most of the teaching staff of the PRESET component of the MASTEC project were not the people of the province and in my experience, could not understand the local languages, the local people's way of life, their values, and attitudes. Some of them came from as far afield as India, the United Kingdom, the Netherlands, and Belgium. The same applied to the composition of the INSET personnel.

The MASTEC project was a single school improvement programme, imported from the United Kingdom by the British Project Manager and the INSET/PRESET advisor, who were both employed by the DfID (BOND Networking for International Development, 2003). Whether or not this programme was customised for use in the Limpopo province and especially in the MASTEC schools, is one of the questions to which the current study hopes to find an answer.

The importation of the MASTEC programme raises an important question about the project: whether or not the project planners and implementers had determined what the transformation needs of the participant schools were and designed its implementation strategy accordingly; and whether or not that then resulted in the single school improvement strategy that was implemented? This question also adds to those which I hope to address at the end of the research project.

In the following section, I provide an account of the historical context in which the MASTEC programme was implemented and how this context shaped the manner in which this implementation was carried out.

2.3 The historical context

As stated in Section 2.1.2, the MASTEC project had a dual nature, namely the PRESET and the INSET elements, and was

implemented at two levels, the headquarters and the schools levels. The former element of the Project, in educator training, was preparing the student teachers to be able to teach a new National Curriculum, Curriculum 2005 (the curriculum for the 21st century). It was envisaged that this would be an Outcomes Based Curriculum, popularly referred to as Outcomes-Based Education (OBE), the elements of which had not yet been developed by 1997, nor in fact would they be by the time the first college graduates would have qualified, that is, by 2001. Thus, in essence, the MASTEC project PRESET curriculum was largely based on an integration of old teacher training curricula and what the staff understood by an OBE-oriented curriculum, notably that it was learner-centred and activity-based with rigorous assessment strategies and methods.

In preparation for the new curriculum, the PRESET staff had to develop the MASTEC project's own unique and innovative curriculum. They did not have any ready-made resources; therefore, they had to develop their own teaching-learning support materials. This they could only accomplish by researching outcomes-based education in countries like Australia, which were amongst the fore-runners in outcomes-based education (Killen, 2002).

As a means of ensuring that members of staff were operating on the same wavelength as one another and sharing their discoveries, innovation strategies and the way they worked in their individual classrooms, from 1998 to 2000 staff development

sessions were held every week on a Wednesday afternoon when classes were over. All personnel from the headquarters level of the Project, both INSET and PRESET staff and the management teams, attended these sessions.

The Science Education Department staff was tasked with the responsibility of organising these sessions for both PRESET and INSET, and to run some of the sessions that dealt with teaching-learning theories. In this manner, it was expected that the Science Education Department lecturers would teach both the student teachers and the staff – although in the case of the staff the 'teaching' took place through discussions about theories and how these can inform the teaching and learning activities, including assessment activities. These sessions thus provided the staff with opportunities to reflect on their work and experiences.

In the following sections, I provide an overview of the underpinning theoretical framework of the MASTEC project. These are the theories that informed and influenced the existence of the project and its implementation strategy, as often affirmed in these staff development sessions.

2.4 Theories underpinning the MASTEC project

As stated before, by its very nature the MASTEC project was governed and managed at two levels: the policy-making level

where the project was conceptualised and the implementer or teacher - educator level. Thus, the two levels of governance, as far as I could assess, were influenced by macro (policy-making level) and micro (implementer level) theoretical underpinnings, as illustrated in the following sections.

2.4.1 Theories influencing the macro contexts

In this section I provide an account of the theories that were seen to be influencing the policy making level of the MASTEC project, as espoused in the project aims as well as in the manner in which most of the formative evaluation panels carried out the evaluation of the project. These are the **transformative theory** and the **programme theory**. I address each of these in turn below.

Transformative theory

The project implicitly subscribed to the transformative theory**,** because, embedded in its statement of aims, is that it was striving towards "increasing attainment in Mathematics and the natural Sciences and technology **in the previously disadvantaged pupils** of the Limpopo province, **especially girls**" (Wood-Robinson *et a*l., 2000: 1). The deduction that this project subscribed to a transformative theory can be made because the target population of the project was 'previously disadvantaged pupils ... especially girls' and because the transformative theory, according to Mertens (1999), "places central importance on the

lives and experiences of marginalised groups…" (Mertens, 1999: 3).

Ever since the advent of the new South African democratic government in 1994, the country has been claiming to strive towards a transformed education system, fully representative of the country's demographics in all spheres. This claim is embodied from the 1995 Budget Vote Address of the then Minister of Education, his honour the minister SME Bhengu (MP) where he says:

> *I have to re-affirm that the transformation of the education and training system has only begun. Our task is to bring redress, establish quality, open the doors of opportunity, enable a true culture of learning and teaching to take root, strive for even higher levels of performance…* (Mayet. 1997: 1)

Echoing this need for the South African education system to strive towards addressing transformation and the provision of quality education, the South African Schools Act number 84 of 1996 states that:

> *…[T]his country requires a new national system for schools which will redress past injustices in educational provision, provide an education of progressively high quality for all learners and in so doing lay a strong foundation for the development of all our people's talents and capabilities, advance the democratic transformation of society, combat racism and sexism and all other forms of unfair discrimination and intolerance, contribute to the eradication of poverty and the economic well-being of society, protect and advance our diverse cultures and languages, uphold the rights of all learners, parents and educators, and promote their acceptance of responsibility for the organisation, governance and funding of schools in partnership with the State* (South African Schools Act No. 84, 1996).

The Green Paper on Further Education and Training (1998), also in support of the Act and the then Minister of Education's Budget Vote Address of 1995, succinctly suggests that the newly identified needs for South African education reform are "transformation and provision of quality education", as stated in Chapter 1.

The MASTEC project, through its espoused aim, also seemed to subscribe to this objective of bringing about transformation in education, although this had not been clearly spelt out in any of the project documentation accessible to me. The question is, therefore, how the Project personnel put together an implementation strategy that was geared towards addressing or achieving this implied objective.

Programme theory

Both the Tripartite Evaluation Review Report of 1998, and the DfID Review of 2000 made use of a logical impact model to evaluate this project, and it is in these documents that the MASTEC project **programme theory** is implied. This is a theory that is concerned with understanding the effects expected of a programme: it consists of a set of statements that describe a particular programme, explain why, how and under what conditions the programme effects occur, predict the outcomes of the programme, and specify what needs to be done to bring about the desired programme effects (Sidani and Sechrest, 1999: 229).

A programme theory **defines** the presenting problem that it has set out to address and the target population for whom the program is designed. It **specifies** the causal processes underlying the programme effects, and **identifies** its expected outcomes and factors that affect treatment processes. This programme theory is useful for the project personnel to carry out their own self-evaluation, and therefore monitor their progress and/regress. Since the MASTEC project personnel were supposedly implementing a school improvement programme, it would appear as though the project was, by default, underpinned by programme theory, according to the logical framework used by two of its formative evaluation panels.

Whilst these two theoretical frameworks (transformative theory and programme theory) appeared to be the underlying theories driving the MASTEC project at the macro level, I am aware that other conceptual tools were influencing some of the staff members who were implementing the project at the micro level. These are socio-culturalism; psycho-socialism; constructivism; conceptual change and the meaningful learning theories (according to Vygotsky, Piaget, Beeth and Hewson, and Ausubel, respectively). In the following section, I briefly explore these theories in turn.

2.4.2 Theories influencing the micro contexts

In this section, I provide accounts of the five theories that formed part of the MASTEC PRESET curriculum, under which the

personnel were operating, and through which they, in turn, attempted to influence the practice of both the would-be and the experienced teachers. I acknowledge that the boundaries between the five theoretical influences on the teacher educators and the curriculum are not as clear-cut as this suggests.

These learning theories were taught to the student teachers, in order to provide them with a sense of how children's learning is said by their different proponents to occur. Each of the theories would then be taught by the PRESET lecturers in line with what they (PRESET lecturers) depicted as the best way for children to understand new learning material. In so doing, these theories influenced the teaching and learning activities undertaken by the PRESET lecturers, even when other sections of the curriculum were being dealt with. For example, the topic "teaching diverse populations," would be taught by modelling one of the theories as agreed upon by the lecturer and his/her students.

Socio-Cultural learning theory

According to Vygotsky's theory, children's learning is based on socio-culturalism. By this, he meant that children learn in association with others, in social participation and with assistance from others. Children's learning is never in isolation, but is supported by others whose development is more advanced, by what is referred to as 'scaffolding'. Vygotsky believed that more experienced or knowledgeable peers always, or most effectively, help the learning of the less experienced peers by helping them

through their “zone of proximal development”, which is defined as the

> *…distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined by problem solving under guidance or in collaboration with more capable peers* (Vygotsky, 1978: 86).

From my observations during the time I was teaching at this college, the socio-cultural theory was very evident in the MASTEC project teaching and learning environment. The theory was simplified by most teaching staff from both INSET and PRESET, as meaning that all children come into the teaching and learning environment with their cultural tools, ready to use them according to the demands of the construction of their cultural reality. They come into this environment at a certain level of development, yet with a potential to develop to a higher level. It was further explained by staff from both components of the project to their learners (experienced schoolteachers and student teachers), that what the socio-cultural theory entailed, was a conversation amongst learners at the same and/or different levels of development, sharing their cultural backgrounds’ similarities and differences, and so assisting one another to understand and thus influence their development.

Piaget’s learning theory

Piaget’s theory is often referred to as ‘psycho-social’, which, as far as I understand it, means it leans towards being both an individual and a social learning process. My understanding of this theory has always been that children learn as individuals, and that this

learning is taking place internally in the cognitive structures of the child, as manifested by perception and habit for example. This view closely corresponds to the explanation of intelligence provided by Piercy and Berlyne (2002), in that “the individual acts only if he (*sic*) experiences a need, that is, if the equilibrium between the environment and the organism is momentarily upset, and action tends to re-establish the equilibrium” (Piercy and Berlyne, 2002: 4).

As a means of trying to interpret and make this theory relevant to the MASTEC project teaching/learning situation, an agreement was reached by the project personnel, both INSET and PRESET, in which it was suggested, that in order to facilitate learning according to this theory, the facilitators needed to create a disequilibrium in the environment of their learners, where they would then see the need to ‘act’ in such a way as to bring back the status quo. What this entailed was an identification of the state of equilibrium in their classrooms pertaining to the concepts they were to teach. In other words, the teachers were to find out from their learners what their existing level of knowledge and/or understanding was and how ‘comfortable’ the learners were with the state of being of those concepts. Following such diagnosis, a state of disequilibrium would then be created, together with an opportunity for the learners to reverse this. Thus, according to Piercy and Berlyne (2002), the learners would find it comforting to maintain the

> newly established state of equilibrium, by ensuring that they aim at the assimilation of the whole reality and the accommodation to it of action, which it thereby frees from its dependence on the initial learning or beliefs (4).

Meaningful learning theory

Ausubel, the proponent of this theory, stated that the single factor that has most influence towards learning is what the learner already knows. He asserted that if teachers were to ascertain 'what the learners already know' and teach them accordingly, making use of their prior knowledge as 'advanced organizers,' they can "bridge the gap between what the learner already knows and what he needs to know before he can successfully learn the task at hand" (Ausubel, 1968: 148).

This theory, like the theories discussed in the sections above, as well as the constructivist theory, which I discuss in the next section, also suggests that learners do not enter learning situations as 'empty vessels', into which knowledge must be poured, in a similar fashion to Paulo Freire's (1973) 'Mug and Jug' theory. Rather, this theory suggests that learners interpret new knowledge and events in relation to their existing knowledge.

Ausubel has made clear the distinction between 'rote learning', where new knowledge is arbitrarily and non-substantively incorporated into cognitive structure, and 'meaningful learning', where the learner chooses consciously to integrate new knowledge with what he or she already possesses (Novak, 2002: 549). According to this theory, meaningful learning occurs on a

continuum, depending on the quantity of relevant knowledge possessed by the learner and the degree of her/his effort to integrate new knowledge with existing relevant knowledge.

Constructivist learning theory

As its name implies, constructivism emphasises the building that occurs in people's minds when they learn. This suggests that learning from our environment is an active, rather than passive, process. In a way, we seem to project onto phenomena what we already know about them. An expansion of this explanation of constructivism is that we each construct a unique mental image by combining information in our heads, with the information we receive from our sense organs. In many ways, this is self-assuring. Each of us is an individual, viewing the world in ways like no other person does.

The manner in which this theory was combined with the MASTEC project PRESET teaching/learning activities was that learners (student teachers) would be provided with opportunities to approach each lesson using skills that they had gained from prior units or from experiences in their own lives. Scientific principles and concepts would be introduced following exploration with hands-on activities and investigations. Students would then build their confidence by exploring increasingly complex ideas on successive levels.

In line with this theory and the other three discussed above, the MASTEC project lecturers believed that what students learn is

influenced by what they already know about the world around them; that existing ideas regulate the connections they make to new information and concepts; that students must be given opportunities to process incoming information using the ideas that they have already formed for themselves; and that in-depth explanations of content do not help them learn. An understanding of this theory was communicated to the experienced school teachers through the INSET component of the project.

Conceptual change learning theory

This theory considers science learning as a process of conceptual change, in which children reorganise their existing knowledge, in order to understand concepts and processes of science more completely (Havu-Nuutinen, 2005: 259).

According to Beeth and Hewson (1997),

> [T]he process of conceptual change is a slow and multidimensional process in which the changes involve different aspects of learning; is both an individual and a social process, where metacognition has an important role; and occurs when there are changes in the status of a conception (275).

These researchers emphasised the significance of social interaction and collaborative knowledge construction in the facilitation of learning through conceptual change.

The MASTEC project PRESET and INSET lecturers introduced this theory by testing it out on the experienced school teachers and student teachers themselves. For example, their alternative

conceptions were identified, in as far as their understanding of the kinetic theory of matter and the velocity of particles in the process of changing water into ice was concerned. Group discussions and challenging questions from the facilitators ultimately led to the change of status of their previous conceptions. It was then easy for the facilitators to use that changed status in introducing an alternative conception which was more plausible and intelligible. The teachers and student teachers could see that the “new knowledge” made better sense than their previous one. This method was thus translated to other learning areas where learners may be thought to have alternative conceptions.

In the following section I make an attempt to provide a synopsis of the learning theories I have referred to in the present section. I try to argue that although they were developed with children’s learning in mind, they can be utilised as well in adult learning, especially if the adult learners are learning to teach children.

2.4.3 Synopsis of the theories of learning

It will be noticed that the theories I have mentioned above, with the exception of the Programme Theory and the Transformative theory, are all learning theories, and, as argued earlier, were developed primarily from studies performed on children (Ausubel, 1960; Piaget, 1962; Vygotsky, 1978; and Hewson, Beeth and Thorley, 1998; Bransford, Brown and Cocking, 1999). In other words, they are theories about how children learn.

It could be argued that using the same theories in relation to the learning of adults (that is, student teachers and the more experienced school teachers who were participants in the PRESET and INSET, respectively) may not be appropriate. This is because adult learning is said to be different in some respects from children's learning (Kapp, 1833, cited in Reischmann, 2004; Knowles, 1984; Davenport, 1993; Burns, 1995; Tennant and Pogson, 1995; Bransford *et al*., 1999).

In response to such an argument one has to agree, because adults have wider experiences that children have yet to go through. Thus, when adults learn, they tap into these experiences to make sense of the new information. However, though I agree with the argument I also wish to emphasise that the adults whose training was based on these theories were being trained to understand how children learn. In addition, some authors (Bransford *et al*, 1999) argue that "[C]hildren differ from adult learners in many ways, but there are also surprising commonalities across learners of all ages (67)." This being the case means that, as adults learn about how children learn, they "get a dynamic picture of [children's] learning unfolding over time" (67). Therefore, understanding these learning theories would help both these experienced school teachers and the student teachers in developing lessons, teaching aids, learning aids and assessment activities, which could be easily accessed by the children because their teachers had taken into account how they learn.

I now proceed to show (in Section 2.5 below), how all these theories infused with each other produced what came to be popularly referred to as 'the MASTEC approach' to teaching.

2.5 The MASTEC project approach to teaching

The management of the MASTEC project, especially the Deputy Head and the Project Advisor, espoused a strong constructivist philosophy, which they aspired to transfer to the lecturing staff, through staff development sessions that were usually run by the Deputy Head. This was strongly contested by the whole staff complement, who argued that if everybody were to buy into this belief, which even its 'followers' (the management) were not practising, then this would lead to the end of professional debates within the college.

The lecturing staff argued that the teacher educators associated with the programme needed to have healthy philosophical debates, based on individual, independent beliefs, where they openly critiqued one another's opinions. These kinds of debates were usually not welcomed by the management and this led to an environment of frustration, where the lecturers felt that they were being forced into adopting the theoretical framework without intellectually engaging with it *vis a vis* other theories. In the Science Department's staff meetings, a resolution was taken, though not recorded in the minutes for fear of victimisation, that it was the duty

of the department to expose the student teachers to all theories of learning, without showing any particular bias towards one theory.

This resolution was also ‘sold’ to the INSET staff, who after a heated but fruitful debate, bought into it. This decision by the INSET to adopt the resolution strengthened the continuity of practice amongst the PRESET and INSET staff. A general belief amongst the PRESET staff members was that whatever theories were taught to the students, the experienced schoolteachers needed exposure to those, as well. The results of such exposure would be helpful in initial teacher training during the teaching experience blocks, when the PRESET staff would largely rely on these experienced teachers to supervise and guide the student teachers.

This resolution led to what then became popularly referred to as the ‘MASTEC Approach’ to the training of both student teachers and the experienced teachers. This approach was what I choose to term ‘an eclectic approach’ to teaching and learning. The learners were exposed to all five learning theories. Debates ensued during the teaching of each and comparisons were made with how the learners (student teachers and experienced teachers) themselves learned certain things as children. Children’s games were discussed and how children would teach one another how to play these games. Analogies would be made with how learning is assumed to take place according to each of the theories. At the end it was advocated that since circumstances, resources and even cultural practices usually differ, teachers should be free to prepare their lessons by

tapping into any of the theories as would be relevant to their circumstances.

My current thinking is that theories which complement each other may be utilised together for an achievement of common goals, what Brocklesby (1993) referred to as a ‘complementarist notion’, defining it as the adoption of multiple theoretical perspectives which are rooted within different paradigms, because of their being compatible, rather than being competitive.

Ernest (1994) used the notion of complementarity in relation to social constructivist learning theories offered by Piaget and Vygotsky, respectively. This notion can be extended, in my view, to the other theories of learning which were influential to the MASTEC project approach, as has been outlined in the previous sections of this chapter.

2.6 Conclusion

In this chapter, I have attempted to paint a picture of the MASTEC project and its many contexts, including the historical and sub-contexts. I have also provided an account of philosophical and theoretical tenets that informed and influenced the implementation of the school improvement programme as it strove towards the achievement of the project’s implicitly and explicitly stated aims. These included the different learning theories into which the

lecturing staff tapped for the purposes of their teaching and student teacher supervision.

In the next chapter, I provide a detailed account of the literature reviewed. This review deals with prior evaluations of the MASTEC school improvement programme as well as empirical studies whose research aims relate to those of the present one. I briefly discuss the scope of the review and examine others' research findings with the view to later comparing these with those of the current study and exploring possible reasons for any similarities and/or differences between them.

CHAPTER 3

LITERATURE REVIEW

Introduction

In this chapter, I provide a critical synthesis of literature relating to research into school improvement, school effectiveness and effective school improvement. I also review formative evaluation studies of the MASTEC project and discuss the findings of the latter as well as those of the previous empirical research of the last ten years. This review relates to the aims and objectives of the current study, which were introduced in Chapter One and will be further explored in the next chapter. As previously stated in the rationale chapter, the aim of this review is to provide guidance to the present study as well as a basis for comparison between its findings and those of previous research.

As stated in Chapter One, the present study hopes to address or shed some light on the question of programme implementation, in order to find out the extent to which different contexts need to be considered when developing and implementing school effectiveness, improvement and/or effective school improvement programmes.

The studies reviewed were therefore selected on the basis of how closely they addressed, in different studies and contexts, questions

similar to those addressed by the current study. Thus, in selecting these, I included those studies that had investigated how in-service and/or pre-service teacher education was being implemented in different contexts or for different contextual needs.

3.1 The scope of the literature review

This review is not just limited to South African research. It includes studies from other developing countries as well as developed countries, and is confined to studies conducted over the past ten years (1998-2008). This is a period coinciding with the inception of the MASTEC project, which was implemented between 1997 and 2001.The decision to include studies from both developed and developing countries was made in order to widen the diversity of contexts where school improvement programmes are implemented, so that I could investigate the influence that context may have on the implementation of such programmes.

I conducted a thorough search of databases, including published journal articles and conference papers, relating to the studies mentioned above. Three databases were searched, namely Australian Education Index (AUEI), British Education Index (BREI) and Education Resources Information Center (ERIC). These yielded a combination of results amounting to 4320 references. I examined the titles of these, in an attempt to filter relevant material.

I discarded many of those whose titles proved deceptive because upon scrutinising their abstracts (where available), I found that they did not address the aims of the current study. Because this study has taken a very long time to complete, I also discarded some of the material which I later realised had become dated over time. I then updated my search by specifically looking for current material in the same databases. The preliminary search yielded 1178 potentially relevant articles, of which 998 were discarded, for example because their focus was more on teacher leadership rather than pre-service and in-service teacher education programmes and their evaluations. I therefore had a result of 180 research articles, which I retrieved successfully. Of these I filtered those which had research aims similar or close enough to those of the current study, and ended up having reviewed a combination of 60 pieces of literature, from sources that included journals, web-based books and conference papers.

In the following section I present a summary of the findings of these studies. In Section 3.3, I provide a summary of the findings of the MASTEC Programme Evaluations and in Section 3.4 an account of their limitations, with respect to sampling, methods of data generation and analysis, as far as these could have influenced the findings that emerged from them. Lastly, in the concluding section I provide an account of some general and specific issues which emanate from these works. I highlight the main implications for the development, implementation and/or evaluation of school improvement programmes or school

improvement practice in relation to earlier more foundational work in South Africa, especially in the Limpopo province.

3.2 A summary of findings from literature

I begin this summary by outlining the broad findings which emerged from empirical studies in the research and practical fields outlined above, including teacher education, both pre-service and in-service. I categorise these broad findings as matters relating to implementation and the importance of context in programme implementation and locate them in two different sections. I hasten though to add that the boundary between these two themes is not as clear-cut as this might suggest.

3.2.1 Implementation matters

In most of the studies on teacher in-service programmes, I have noticed that in the developed countries, there are two kinds of programmes (Earl, Torrance, Sutherland, Fullan, and Sidiq Ali, 2003; Brouwer, 2007; Brown and Medway, 2007). These are referred to as 'school-based' and 'centre-based' programmes and they differ in the manner in which each is implemented. In most studies conducted in the developing countries, in-service teacher training tends to be conducted by external agents such as non-governmental organisations (NGOs). These are referred to as 'centre-based in-service initiatives,' as they take teachers out of school to attend training workshops on practice which they have to implement when they return to their schools (Galabawa, Obeleagu,

and Miyazawa, 2002; van der Werf, Creemers, de Jong, and Klaver, 2000; Moswela, 2006). In most of the studies from developed countries, improvement programmes were school-based although there were a few studies that reported on centre-based ones.

Regardless of the location of the programmes in both contexts, research findings do not indicate any difference in their successes or failures as being due to their being school or centre-based (van der Werf *et al.*, 2000; Moon, 2007; Harvey and Peacock, 2001; Tatto, 2002; Hustler, McNamara, Jarvis, Londra and Campbell, 2003; Earl *et al*., 2003; Moswela, 2006; Nir and Bogler, 2007; Sun and de Jong, 2007; Maandag, 2007; Brouwer, 2007; Wong and Tsui, 2007). For example, in a study by Maandag, Delium, Adriaan, and Buitink (2007) on the school-based INSET programmes which had been implemented especially in England, France, Germany, Sweden and The Netherlands, they found

> a substantial variation between countries on matters of integration between the institution and the school, the emphasis on academic or practical training, embedding of teacher education and duration of teacher education" (Maandag *et al*., 2007: 51).

This variation manifested itself in France, Germany and Sweden. The French programme emphasised academic training for teachers, whereas the other two countries put more emphasis on practical training, which took place in schools. Other researchers have found that school-based INSET programmes may not necessarily yield positive results across the board for all schools or

kinds of schools (Brouwer, 2007; Wong and Tsui, 2007; Maandag, 2007).

Having said that, contexts in which such programmes are implemented do more often than not emerge as being of utmost importance (Young, 1998; Galabawa *et al*., 2002; Hustler *et al.*, 2003; Dyer, Choksi, Awasti, Iyer, Moyade, Nigam, Neetu, Shah and Sheth, 2004; Levačić and Jenkins, 2005; Luo and Dappen, 2005; Moswela, 2006; Khamis and Sammons, 2007). For example, a number of school-based programmes have been reported as having been perceived by their participants to be fraught with implementation problems (van der Werf *et al.*, 2000; Wong and Tsui, 2007), whereas outsider implementation of school effectiveness and school improvement programmes has also been cited as being problematic for the teachers, who have in some cases so fully depended on these outsiders that when they withdrew from the programmes, the programmes collapsed (Sun and de Jong, 2007).

In other instances, implementation by outsiders did not seem to augur well with the teachers, because they felt that their professional development was left in the hands of “outsiders, who may not be familiar with the actual problems the teachers experience” (Moswela, 2006: 628). Similar views have been shared by participants in other studies, citing that programme implementation was not particularly addressing their needs and/or

expectations but was “one size fits all” (Hustler *et al*., 2003; Nir and Bogler, 2006; Moswela, 2006).

Several studies generally maintain that school improvement and effectiveness initiatives need to satisfy certain conditions, such as the teachers’ needs and expectations, to succeed in the contexts where they are implemented (Hustler *et al*., 2003; Dyer *et al*., 2004; Moswela, 2006). In the case of developing countries, contextual issues that originate in the country of programme implementation rather than from the developed countries have also been argued as a dire implementation need for initiatives to succeed (Young, 1998; Wrigley, 2006; Khamis and Sammons, 2007; Palardy; 2008). I provide examples of these contextual issues in the following section.

3.2.2 The importance of context(s)

All studies were in agreement that consideration of the context in which a programme was to be implemented was very important in its development, implementation and evaluation. A number of researchers in the fields of school improvement and school effectiveness argue that contexts in which schools are situated have an important influence on how they may be susceptible to initiatives aimed at increasing their effectiveness (Scheerens, 2001; 2004; Dyer *et al*., 2004; Young, 2008). According to Scheerens (2001),

> reviews on school effectiveness research in developing countries indicate that between-school variances are much

> larger than in industrialised countries …. Local contexts may shape and interact with conditions that are expected to enhance effectiveness (359).

It is in line with this observation that Scheerens (*ibid.)* came to the realization that "developing countries form a setting for school effectiveness research that highlights the relevance of, partly culturally embedded, contextual conditions" (360).

As a follow up to Scheerens' observation about the importance of context in school effectiveness research in the developing countries, I examined a number of school effectiveness and improvement projects across a number of different industrialized countries, especially from the eight European countries that were involved with the development and implementation of ESI programmes. My aim was to verify or refute Scheerens' assertions, and to investigate the "between schools variances [being] much larger in developing countries than in industrialized countries". Scheerens (*ibid.*) argued that the schools' contexts influence their ability to improve. The same has been found in some of the other studies, both continentally and internationally (Young, 1998; van der Werf *et al*., 2000; Harvey and Peacock, 2001; Galabawa *et al*., 2002; Wrigley, 2006; Khamis and Sammons, 2007; Ylimaki, Jacobson and Drysdale, 2007; and Palardy, 2008).

Below I present summarised findings from three international studies with a view to supporting the assertion made in this paragraph.

In a study of one of the UK school improvement programmes, for example, the specialist schools, it was found that context had been influential to the outcomes of the programme, in that gender and individual characteristics effects were related to differences in value added to those pupils who attended these schools, although the difference in value addition was of a minimal statistical significance (Levačić and Jenkins, 2005).

A study on the US Magnet schools found that these schools were influenced by other school improvement initiatives which they were also involved in developing and implementing. The pressures that these “multi-tasked improvement programmes” brought onto the teachers’ shoulders also influenced the impact that the programme had on these schools (Luo and Dappen, 2005).

The political context appears to have worked both for and against the curriculum reform in the Netherlands: while it led to its legalisation, “the government did not attain sufficient political support” for the kind of targets that the programme was set out to achieve (Sun and de Jong, 2007: 3). Thus, although the curriculum reform became legalized, it did not succeed due to lack of political support for the nature of its targets (highly academic achievement targets).

The situation seems to be similar in the developing countries. For instance, a number of studies report in varying degrees the impact

of a consideration or disregard of contexts in the implementation of school effectiveness and improvement initiatives.

In some instances programme implementers ignored the changing political context of the country in which the programme was implemented and this "brought about a crisis for the programme, which led to [its] demise" (Harvey and Peacock, 2001: 221). For example, the Primary Maths Project (PMP), which was implemented in South Africa, only succeeded for a while and with the change in the political landscape of the country and its education system, it did not survive because the implementers did not adjust with the change (Harvey and Peacock, *ibid.*).

This was a negative finding, related to the disregard of context, but there are some instances where consideration of contexts manifested itself in yielding positive results, such as the case of the Tanzanian school mapping project (Galabawa, *et al.*, 2002).

Having provided a review of a number of empirical studies into school effectiveness, improvement and effective school improvement initiatives, I proceed to provide in the next section a review of evaluation studies which were conducted on the MASTEC project in the year 2000.

3.3 A review of the MASTEC project evaluation research

This section of the chapter seeks to provide a summary of the findings which emerged from the evaluation studies of the MASTEC project. These evaluations had different foci in their findings sections, but they all generally found the project to have been successful in implementing the INSET arm, especially in primary schools, while the PRESET arm of the project was unanimously found to be unsuccessful. The studies stated as one of the reasons for this, the change in the South African National Education Policy, as explained in Section 1.1 of the first chapter, the implementation of which resulted in the PRESET being transferred to an institution of Higher Education, the University of Limpopo. The implementation of the INSET in secondary schools was found to be unsuccessful and, as a result, as previously stated in the previous chapter, was terminated prematurely.

The rest of the specific findings can be categorised into three broad sets, which I refer to as the successful and unsuccessful aspects as well as perceived limitations of programme implementation. I discuss each of these in turn.

3.3.1 Matters relating to programme implementation

The title of this section refers to those findings of the evaluation studies of the MASTEC project which focused on how the project was implemented, the quality of such implementation and the

number and frequency of the implementation services (such as the number of in-school support visits, workshops and responses to calls for help). These are the broad sets of findings and relate to the successful and unsuccessful aspects as well as perceived limitations of the MASTEC programme implementation. Below I briefly provide an account of each.

Successful aspects of programme implementation

In this section I provide an account of the successful aspects of programme implementation claimed as part of its reported benefits. These include benefits for the MASTEC Headquarters' staff, namely the INSET lecturers and the PRESET lecturers, and for the participating schools (management teams, teachers, learners and schools' communities). I address each of these below in turn.

1. Benefits for the MASTEC project lecturers

The INSET lecturers were reported as having expressed that being involved with the project had helped them develop workshop facilitating and materials development skills. They were also reported as having been enthusiastic and highly motivated (Ntombela *et al*., 2000, Wood-Robinson *et al*., 2000).

The PRESET lecturers were reported as having expressed that the acceptance of the MASTEC curriculum, which they had developed from its inception, by the University of [Limpopo] for its initial teacher preparation programme, was very beneficial to their morale and confidence (Ntombela *et al.,* 2000).

2. Benefits for the participating schools

The MASTEC evaluations highlighted a number of benefits of the project for participating schools, including specific benefits for schools' management teams, for educators, learners and the schools' communities. The Ntombela Report stated that some schools benefited from their association with the project, in one way or the other. This report goes on to say that some of these benefits had to do with the improvement in relationships between the schools and their communities, whilst others had to do with special workshops which were specifically designed for school leaving pupils. These assertions are attested to by the following citations extracted from the Ntombela Report.

> One principal acknowledged that the security requirement had helped to kick-start a previously non-existent meaningful relationship between the school and the parent community (Ntombela *et al.*, 2000: 24).
>
> Some schools have benefited from tutor-run workshops for Matric learners. It appears that all schools would welcome this help (Ntombela *et al.*, *ibid*: 25).

Echoing the same findings, the DfID Review stated that schools benefited from this programme through improved parental and community involvement in school matters:

> Parental and community involvement has increased. There seems to be a sense of high morale and purpose in many schools, especially primary schools, where the project seems to be working more successfully than in the secondary school" (Constable and Rice, 2000: 3).

The MASTEC Impact Study (2000) reported that the inclusion of principals' workshops in the project alongside the educator training workshops, was mainly to get their buy-in and support for their schools' participation in the project.

> As well as providing workshops and in-school support in the target subjects of Mathematics, the Sciences, Technology, English and Computing, the Project has also run workshops in school management for Principals and other senior staff members of the Project Schools. This was done because it was felt that changes in classroom practice were more likely to occur if Principals fully understood and supported such changes (Wood-Robinson *et al*., 2000: 2).

Below, I address in turn each of the specific benefits for the different schools' stakeholders, starting with the schools' management teams (SMT), followed by the schoolteachers, then the learners and finally the school communities.

All the MASTEC evaluation reports reviewed have suggested that the SMTs had developed important and empowering skills which they stated they could apply in their own schools, especially administrative, organisational and recording skills. This sentiment is well articulated in the Ntombela Report, as follows:

> All principals who attended the Management workshops enthused about the empowering new skills they had acquired, skills that are immediately applicable in their schools. They were all eager to show their schools' mission statements and to relate how they had involved their staff and other stakeholders in the development of these (Ntombela *et al*, 2000: 23).

According to these reports teachers said that they collaborated more than they did before and that their attitudes towards their subject and the OBE had changed positively. Though there were reports of problems, there were also positive attitudinal changes which were reported on the educators' side, such as the culture shifts regarding classroom visits from fear of inspection to welcoming in-school support (Wood-Robinson *et al*., 2000). This report also stated that teachers felt more empowered to be

innovative in their classrooms, because of the workshops and most importantly the provision of equipment and in-school support by the project lecturers. The Ntombela Report also portrayed the same sentiments, as shown below;

> Almost all educators interviewed claimed that their teaching had become more learner-centred. Principals concurred (Ntombela *et al.*, *ibid.*: 21).
>
> During school visits undertaken by the Evaluation Team there was ample evidence that the computers were being utilised. Each school has a Big Red Computer Log Book where in users enter the date, name and purpose. All the computer work-stations that we saw had the telephone numbers of the MASTEC Computer Staff conspicuously displayed (Ntombela *et al.*, *ibid*.: 24).

Although none of these evaluation studies had any learners participating as data sources, the learners' benefits were reported as perceived by the principals and educators. Teachers and some principals reported that there was a better cognitive grasp of Mathematics, Science and Technology, as well as an improved language competency in learners. The school ethos was also reported as having been improved (Wood-Robinson *et al*., 2000).

As in the case of the learners, no members of the schools' communities participated as data sources in any of the MASTEC evaluation research reports. The benefits for the communities were reported in terms of the educators' and principals' perceptions that there was an improvement in parental and community involvement in the school matters. The project's evaluation reports stated that this increased parental involvement could be seen specifically in the building of extra classrooms or laboratories for the keeping of computers and/or Science equipment, as well as putting into effect

extra security measures and installation of electricity in the schools.

The Ntombela Report mentioned the different ways in which schools in different contexts benefited from participating in the project. Some schools benefited because of the similarity of methodologies used in the project to their own. This affirmed their methods as justified and therefore, 'good'. On the other hand, those who were not used to these methodologies did not benefit. Other schools benefited because of the upgrading of the infrastructure by the parents and the school community. This therefore, led to increased parental and community involvement in school matters.

The DfID Review also affirmed the Ntombela report, in terms of differential benefits that the schools received from being participants in the project. Parental and community involvement in school matters seemed to be the core benefits reported, as well as the project success in primary schools (Constable and Rice, 2000: 3).

Unsuccessful aspects of programme implementation

All evaluation reports stated that all project stakeholders displayed a shared understanding of the project aim. This statement leads one to wonder which project aim these reports were referring to since, as previously stated in Section 2.1.3 of the previous chapter, three of them (Constable and Rice, 2000: 8; Wood-Robinson *et al*.,

2000: 1; Payne, 2000: 1) stated a project aim which was different from that stated in the Ntombela Evaluation Report (2000). In the latter report, the aim is stated as that of "improvement of teaching and learning in schools by helping educators adopt more learner-centred approaches in their teaching" (Ntombela *et al.*, 2000: 9). Although the two aims implicitly have a similar meaning it is puzzling why they had to be stated differently by the different evaluation panellists, especially because each of the panels of the Ntombela Evaluation and the Wood-Robinson Impact Study Reports included a member of the MASTEC project management, the Project Manager and the INSET Advisor respectively. This being the case one can only assume that the aim of the project was not clearly stated in the project documents, even for the understanding of the management team.

Ordinarily a programme is implemented so as to achieve its aims and to realise its conceptualisation. To implement a programme that does not have a clearly stated aim, as is implied by the conflicting aim statements in the MASTEC project evaluation documents, may lead to a limited success of the said programme.

The same applies to a conceptualisation not clearly stated and presumably poorly understood, as is implied by the varying accounts in the different evaluation reports, which seems to suggest a potential lack of agreement. For example, as cited in Section 1.1 of Chapter one, the Wood-Robinson Impact Study stated that the MASTEC project was conceptualized as

> *a dream of a college and a group of schools, which worked together as a continuum to transformed (sic) education in the Sciences, Mathematics and technology in the Northern [Limpopo] Province* (Wood-Robinson *et.al*., 2000: 8).

In the Ntombela Evaluation Report, the same project is reported as having been conceptualised as

> *a PRESET – INSET continuum, an excellent idea that has not been exploited to the full. The idea was that the two would inform and enhance each other. Information from student-teachers' practice teaching would raise the awareness of PRESET lecturers about the prevailing state of teaching and learning in schools. PRESET staff would assist in the running of in-service workshops and the provision of in-school support whilst the INSET staff would also be involved in offering PRESET lectures* (Ntombela *et. al*. 2000: 9).

While Wood-Robinson *et al* (2000) present the project very much in terms of the subjects on which the improvement aims were focused, these are not even mentioned in the extract from Ntombela *et al.,* where the emphasis is solely on the PRESET-INSET continuum.

However, the INSET/PRESET continuum of the project was reported by all reports as being unsuccessful, especially in the secondary school sector. Ntombela goes on to nullify any form of synergy between the INSET and PRESET in as far as the [teaching/learning] offerings were concerned. Seemingly, according to Ntombela (2000), this was never part of the planning for the project: this is attested to by the following extract from the Ntombela Report: "In the Science subjects INSET offerings did not neatly match the PRESET offerings" (10).

Just as in the case of the Ntombela Report, the DfID Review also had conflicting reports in the different parts of the document.

The authors report INSET-PRESET synergy as being near non-existent in the secondary schools; however they found a different scenario in the primary school sector, where the programme seemed to work more successfully. The following extract from the DfID Review articulates this assertion very well.

> "The project seems to be working more successfully in the primary schools, where there is a more open attitude towards change and support, than in secondary schools" (Constable and Rice, 2000: 14).

A different reason posited for this discrepancy elsewhere in the same report is that for the primary school sector, the project management had appointed a permanent full-time INSET/PRESET coordinator, whose function was to bring about synergy between the two elements of the project in primary schools.

However, elsewhere the authors state that although the idea of an INSET/PRESET continuum was a conceptualisation of how this project would be developed and implemented, this idea was not able to be realised in practice:

> The vision of a PRESET/INSET continuum has not been achieved because of the change in national policy which has separated the two (Constable and Rice, *ibid.:* 4).

This refers to the change in the national education policy which kick-started an early end to this continuum, as the PRESET was

separated from the INSET and relocated to the University of [Limpopo] by the end of the year 2000.

Besides the project INSET-PRESET continuum, the accessibility of the teachers' workshops was cited as a problem which could have led to strained relations between the two arms of the project. Both educator and school management teams' workshops were said to be mainly conducted at the MASTEC headquarters. This venue was reported as not being easily accessible to all school educators and management teams, due to long distances they had to travel. The location of the venue therefore had negative implications in the sense that although schoolteachers would leave their schools and pay for transport to the venue, they would be so late that they would end up not attending the workshops. In the Ntombela Report (2000), for instance, it was mentioned that:

> From interviews one gathered that some teachers leave their schools purportedly for the workshop but fail to turn up at the workshop. Though obviously rare, this phenomenon was mentioned by tutors and some teachers (Ntombela *et al*, 2000: 17).

In the DfID Review Report (2000), the relatively poor workshop attendance of some experienced teachers was reported as having impacted negatively on the teachers' progress in that some would not be at par with others whose attendance was more regular. This might have negatively affected the realisation of the project aim of "increasing attainment" in Science subjects in the province.

It was also reported that more primary schools (16 additional schools) were added to the MASTEC schools and more primary schools' INSET lecturers were appointed at the expense of workshops for secondary schools, which were reduced. This shifted the focus of the programme from secondary schools to primary schools. Evidence of this shift in focus and emphasis is borne by the fact that the impact study conducted in 2000 had only primary school principals as "respondents" (Wood-Robinson *et al.*, 2000).

Although the experienced schoolteachers were also reported as having expressed gratitude for the usefulness of the in-school support in providing help with the innovative teaching methods, planning and problem-solving, all three evaluation reports stated that there were implementation problems in so far as this was concerned (Constable and Rice, 2000; Ntombela *et al.*, 2000; Wood-Robinson *et al*., 2000). Some of these problems included the unavailability of vehicles for the INSET lecturers' transportation to the schools, as well as the distances between the schools, especially in rural areas. The Ntombela Report articulates these difficulties in the following extract:

> The number of [in-school support] visits is constrained by (a) the ratio of Tutors to schools, (b) the number of vehicles available to Tutors which requires careful planning and a lot of sharing, and (c) the distance between schools (Ntombela *et al.*, 2000: 18).

Thus, although the idea of in-school support was a noble one and well received by the educators, not all MASTEC schools could benefit from it due to lack of resources both human and material.

In addition to the above-mentioned unsuccessful aspects of the MASTEC programme implementation as stated in its evaluation reports, I present in the section below the project participants' perceived limitations of the project, as reported in the same sources.

Perceived limitations of programme implementation

It has been stated in literature that when programme participants report on how they perceive the implementation of the programme, especially when the evaluation team asking such questions includes some of those implementing the programme, they tend to give a favourable account (Visser, 2003). However, in the case of the MASTEC evaluation studies, although some studies included programme implementers, the programme participants did point out what they perceived as the programme limitations. In this section, I provide an account of these perceived limitations.

Three out of four project evaluation documents analysed, highlighted as a limitation of the MASTEC project the lack of a clear and consistent strategy for communication with all stakeholders, and as such put forth recommendations regarding this concern. These recommendations ranged from advocating better communication channels between the provincial Department

of Education and the project staff, as well as staff of other school improvement programmes in the province, to communication between the members of staff of the two arms of the project, the INSET and the PRESET, as illustrated below:

> The Project and the Department of Education should continue to work towards improved communication and collaboration, especially at District level. Through the Project Steering Committee the Department should be asked to clarify its commitment to the future of the INSET wing of MASTEC, and ensure that this commitment is communicated to all stakeholders before their morale is sapped (Ntombela *et al.*, 2000: 28).

> Motivation for any project needs to come from within the Department, be situated within it and have its full backing; any project needs to be located within the broader educational framework for the province and closely linked to similar projects such that duplication and fragmentation is avoided; districts and subject advisors operating at district level need to be fully integrated from the inception of any project; and Departmental systems need to ensure that the continuity of projects is not compromised by the redeployment of key departmental personnel (Constable and Rice, 2000: 17).

The INSET lecturers reported that they experienced difficulties in providing regular in-school support to all schools on a weekly or even monthly basis, due to a shortage of staff and unavailability of vehicles to travel to the schools (Wood-Robinson *et al*. 2000).

The PRESET schedules clashed with the INSET schedules and therefore, these lecturers could not be fully involved in the workshops. This resulted in a lack of synergy between the two elements of the project. This was exacerbated by the fact that, unlike in the primary sector, the secondary sector did not have an INSET/PRESET coordinator.

The MASTEC evaluation reports stated that the project lecturers and school teachers associated the limitations of the project and its programme, firstly with the issue of needs analysis, secondly with workshop attendance by teachers, thirdly with differential success amongst secondary schools and between primary and secondary schools and fourthly with the ability of the teachers to apply the newly learned skills. I address each of these in turn.

According to the Ntombela Evaluation Report (2000), a needs assessment exercise was to be put into effect at the onset of the programme, but the tool was developed only for the response of the school teachers. It is reported that the teachers' response was minimal and subsequently, the exercise was abandoned. The reason for the teachers' non-response is stated as being due to their "not [being] used to articulating and prioritising their needs" (Ntombela *et al.*, 2000: 11).

The needs assessment exercise was therefore not followed through and, as a result, the new MASTEC programme was not needs-based. This resulted in a single school improvement programme developed for a number of schools in different contexts. The other two reports made no mention of a needs assessment exercise. Abandoning such an exercise, which, in my opinion, would have informed the project aims, was a huge limitation for this project. For instance, part of the stated project aim is to ensure participation of girls in the project, but none of the

project evaluation reports even mentions how that participation was ensured and therefore measured.

Both the Ntombela Report and the MASTEC Impact Study 2000 made no specific or particular reference to efforts by the teachers to influence more girls through the project. Neither is it reported what efforts, if any, had been made to recruit more female staff into the project, with the view of providing the girls with role models. Therefore, it is safe to assume that this was not investigated or evaluated, although it was a major aim of the project.

According to Wood-Robinson *et al*. (2000), the programme implementers reported that not all schools could be represented in all workshops, due to the distance from the workshops venue and therefore the financial implication of attending these workshops.

The MASTEC school improvement programme was implemented across a number of different contexts and seemed to work more successfully in some schools than in others, specifically more successful in primary schools than secondary schools (Constable and Rice, 2000; Ntombela *et al*., 2000; Wood-Robinson *et al*., 2000).

All reports stated that the project was more successful in primary schools than in secondary schools, and this perceived success was attributed to the “play and games” methods of primary school

teaching being more learner-centred than the traditional secondary school teaching (Ntombela *et al*., 2000: 12).

Another contextual challenge affecting some schools more than others was space. Teachers expressed difficulties in implementing the programme in big classes, as this often entailed adaptation in school time-tables and furniture removals within the schools. Most teachers were reported to have stated that activity-based OBE lessons worked well in the workshops where there was space and a small number of 'learners', and that in reality this was hard to achieve, due to the numbers of pupils in their classrooms. They reported that the learner-centred activity-based teaching methods were not suitable for implementation in their big classes.

The importance of context in all the reports mentioned above is only implied, where most of them draw contrasts between the different specific contexts and never actually say that it is the failure to allow for variation between the contexts. For instance, as previously stated, the needs assessment tool that was implemented at the onset of the programme was teacher-oriented, and seemingly no consideration of other stakeholders' needs was taken into account, and therefore no attempt was made at assessing these.

3.4 Limitations of the previous evaluation studies

In this section I provide an account of the limitations of the MASTEC evaluation studies reviewed, as assessed according to the African Evaluation Guidelines and Programme Evaluation Standards.

> When conducted at the right time, and when they focus on key issues of concern to policy makers and managers, and when the results are presented in a user-friendly format, evaluations can provide a highly cost-effective way to improve the performance and impact of development policies, programs and projects. But evaluations that fail these criteria may produce no useful results – even when they are methodologically sound (The World Bank OED, 2005: 5)

It is in line with the quotation above that, in providing a critical evaluation of the previous work that has been done in the area of the present study, I have decided to break up this evaluation into two parts. Firstly, a critical evaluation of the theoretical framework used and, secondly, a critical evaluation of the quality of the evaluations, making use of Programme Evaluation Standards (PES) (a document which was developed by a joint committee on standards for educational evaluation in 1994), and the African Evaluation Guidelines (AEG). The PES was later developed by African evaluation specialists in 2002. The AEG was developed in response to concerns that the American developed PES was not addressing the African contexts and needs.

3.4.1 Research approach and methods of data generation and analysis

In this section I attempt to carry out a meta-evaluation exercise of the MASTEC formative evaluation reports. I am aware that it may seem as though I am addressing the quality of the evaluation reports rather than the studies *per se*. This is because I have relied on these as a means of accessing how the evaluation research may have been conducted.

In two of the MASTEC evaluation reports (Constable and Rice, 2000; Payne, 2000), the evaluators made use of the Logical Framework Approach (LFA), which "is an instrument for an objective-oriented planning … analysis, assessment and evaluation of projects" (Örtengren, 2004), as an instrument of evaluation. This framework has been a subject of high praise by programme developers and evaluators alike, as being one of the best instruments for planning, implementing and evaluating projects and programmes (Payne, 2000; Odame 2001; BOND Networking for International Development, 2003; Örtengren, 2004; Middleton 2005). These researchers have praised the LFA, because:

> [T]he systematic application of the method, with good judgement and sound common sense, can help improve the quality and hence the relevance, feasibility and sustainability [of the project] (Örtengren, 2004: 3).

In neither report was there a description of the MASTEC project features, or of the stakeholders and their roles in the project. Therefore, it was not clear from the reports, whether or not there

was an indication of project "ownership" in the stakeholders interviewed (if there were such interviews). This is a crucial issue in making use of a logical framework (logframe), because, according to Örtengren (*ibid.*), "recipient 'ownership' of projects is recognised as a key issue in the strategy for sustainable development cooperation" (Örtengren, *ibid.*: 3). Having omitted such a crucial aspect of the logframe, one wonders how the evaluators would account for the project's sustainability in their report, and indeed this is addressed in the key issues of both reports, as an issue of concern.

The two evaluation panels, namely, Constable and Rice, (2000) and Payne, (2000) independently utilised the LFA in their evaluation of the MASTEC project, and this suggests that the same approach may have been utilised in the MASTEC project planning, development and implementation. This assumption is strengthened by the statement that "it is more difficult to use the LFA to review and/structure ongoing activities, which were not designed using the LFA principles and practices" (AusGUIDE, 2005: 1). The commissioning of the Constable and Rice (2000) evaluation and the Payne (2000) review by DfID (one of the project's major donors), adds additional weight to the plausibility of this assumption.

The framework of both evaluations lacked a section addressing the factors important for goal fulfilment, but outside the project's scope, normally referred to in the LFA as "important assumptions".

This is a serious omission, because it limits the evaluation's assessment of the project's sustainability, that is, "whether the project can continue by itself without external support, and [that it is] sustainable in the long-term (Örtengren, 2004: 19). I would have expected these evaluators, in particular, to have been interested in the assessment of the project's sustainability, given that their work was commissioned by the major donor, the DfID.

These evaluation reports had no description in their logframe of data sources; as a result, it is difficult to tell whether or not the evaluation was what is referred to as a "desktop evaluation". This lack of data source description was more the case in the Payne Tripartite Review (2000). The Constable and Rice DfID Review (2000) was more thorough in terms of completeness than the Tripartite review, though it lacked information on some essential components of a sound report, as described and laid out in the PES and AEG.

The Ntombela Evaluation Report (2000) did not articulate the theoretical framework it purported to be informed by. This framework was mentioned only in passing as "the responsive approach" (Ntombela *et al.*, 2000: 5). What the report did was to define and explain the terms related to the study, namely the following: (i) evaluation; (ii) evaluation strategy; and (iii) INSET. The report then proceeded with enumerating the methods employed, and additionally the data sources per data set. Because of this, the report did not convincingly justify the choice of the

stated theoretical framework, and how it informed and underpinned the evaluation.

The evaluation carried out by the Ntombela panel (2000) included the project manager of the programme under evaluation (although the report mentions that she was playing an administrative role). The inclusion of a member of the project management team in the evaluation panel seems to be in line with their use of the responsive approach, because of its sympathetic nature to the cause of those that run the project. Supporting this view, Visser (2003) describes responsive evaluations as "…[A]n approach that is less objective and more tailored to the needs of those running the program[me]" (Visser, 2003: 2). He goes on to cite Stake (1973):

> [Responsive evaluation] sacrifices some precision in measurement, hopefully to increase the usefulness of the findings to persons in and around the program …responsive evaluation draws legitimacy from endorsements by a majority of important stakeholders (cited in Visser, 2003: 2).

The list of stakeholders could have been extended by including the schools' non-teaching personnel, the pupils and their parents, to be more inclusive in its approach and therefore expose the evaluator to a wider range of the project's participants, rather than the "chosen" and maybe "important" ones that were.

I found the Wood-Robinson *et al*. Impact Report of 2000 to be relatively sound methodologically compared to the three reports I had examined thus far, even though I had judged that the nature

and scope of its research was suspect in a number of ways as shown below.

Impact evaluations, according to Visser (2003), "are somewhat different from traditional evaluations …impact evaluations examine eventual results of [the] outputs" (2). This statement by Visser places this evaluation in the category of summative evaluations, which is quite strange given the timing of this particular impact study…it happened in early 2000 (between March and April), a full year and eight months before the life span of the project would come to an end. One would have expected a more formative evaluation at that stage, an exercise at informing practice with a view towards improvement. In addition to the point made above, this impact study was carried out with only the principals of schools as "respondents" (Wood-Robinson *et al.,* 2000). I see this as a problem, because, out of so many programme stakeholders, why only the principals had been chosen as respondents remains unclarified. This is puzzling, because the impacts of the programme could have been examined from at least four levels within the schools, that is, the principals, the heads of departments, the teachers and the learners. This is an observation that is supported in the literature. For example Reed and Brown (2001) attest to the problematic nature of impact studies, as portrayed in the following:

> [T]he intended outcomes are often either complex, intangible or both …impacts occur at various levels (individual, family, agency, interagency system and community) that are systemically linked (cited in Visser, *ibid.: 4*).

Likewise, Mohr (1999) has been cited in Visser (*ibid*.) as having "argued against trying to deliver a single, composite score when different kinds of impacts are involved" (Visser, *ibid.*: 4), stating: "[T]he proper way to evaluate is to use an impact profile, where each impact is presented and analysed on its own terms and merits" (Visser, *ibid*.: 4).

Whether the report was prepared according to the standards of programme evaluation, so as to qualify to be referred to as a "quality report," is stated in the following section. It is noteworthy, however, to mention that this impact study seems to be a "one-shot assessment," and according to Dunnagan, Duncan and Paul (2000): "[T]he problem with one-shot assessments is that they usually do not do justice to a program[me], regardless of how comprehensive they are"(cited in Visser, *ibid. :* 4*)* This implies that, regardless of the outcome of the assessment of this study by making use of the said PES and/or AEG criteria, it would still not have done justice to the programme under its evaluation.

Although, some of the reports reviewed from the developed and developing countries showed that the researchers utilised mixed-methods as a research methodology for conducting their studies (van der Werf *et al*., 2000; Harvey and Peacock, 2001; Galabawa, *et al*., 2002; Luo and Dappen, 2003), some stuck to a single methodology, namely quantitative (Levačić and Jenkins, 2005; Sun and de Jong, 2007).

The limitations of using a single methodology, especially quantitative, include the fact that the data collected may be limited and may not provide explanations and/or clarifications, whereas the use of qualitative methods of data generation reduces this shortcoming. The utilisation of methods from both methodologies, in a mixed-methods design “address[es] some of the weaknesses of objective-based approach in the process of evaluation” (Luo and Dappen, 2003: 1).

3.4.2 The Quality of the Evaluations

In this section, I present an account of the limitations associated with the quality of research evaluations. I limit this discussion to the evaluation research reports of the MASTEC project, because of the tools I have used in assessing this quality, that is, both the American and African programme evaluation standards (PES and AEG). The project had earlier been evaluated by using a logical framework and, as such, this is a meta-evaluation of those exercises.

I have so far conducted this assessment in terms of the methods and methodologies used in such evaluations, but then even sound methodological evaluations may not represent good quality. Therefore I continue to assess the quality of these evaluations utilising the PES and AEG quality criteria as an assessment tool.

None of the MASTEC evaluation reports were organised into the sections identified by the PES or the AEG as necessary for sound

evaluation reports. All reports lacked sections on project description and evaluation overview. The Ntombela and Wood-Robinsons' reports had a section on research design, although the former did not provide full details of its design. None of these reports except the Wood-Robinsons *et al*. (2000) impact study provided a detailed section on the data analysis process. Only two reports had a section on results or findings and provided project improvement-orientated recommendations, and these are Ntombela *et al*., 2000 and Wood-Robinson *et al*., 2000.

Thus, from the statements above, and from the viewpoint of the PES and AEG criteria, all of the MASTEC evaluation reports, which are the lenses through which one can assess the quality of the research, may be labelled as 'unsound' and of a low quality, which would imply their representation of low quality research.

3.5 Conclusion

Having reviewed the relevant literature, I have found that the findings from the MASTEC evaluation studies show some similarities to, as well as some differences from the findings that emerged from the empirical studies which were conducted over the past ten years, South African studies included. Although there were some contextual differences, which impacted differently on the programme participants from study to study and from country to country, the main issue is that all findings from these studies could be categorised in a manner that addresses the two broad

areas discussed above in Section 3.2, that is, implementation and context.

Since the MASTEC project's sites of implementation were varied and in different contexts, it might be that the problems identified for solutions by the project's intervention programme, were superficial ones. Only the people living with those problems could articulate the deeper lying causal problems that seemed to present themselves as effects to the other stakeholders.

This is an observation which has its roots in the literature reviewed, especially the argument by constructivists that "the cultural context of research is an important determinant of its outcomes" (Visser, 2003). Expanding on this argument, Stanfield (1999) stated that

> [T]raditional evaluation draw[s] legitimacy from white male hegemony. In other words, since scientists are predominantly white and male, white males design and carry out all traditional evaluations – including those of program[me]s serving African… populations (Cited in Visser, *ibid. :* 6)

Visser (*bid.*) continues to concur with Stanfield, that "it is crucial to achieve compatibility between the researcher's culture and that of the programme to be evaluated" (7).

This is especially true for the MASTEC project evaluations that have been reviewed above, because, although these have not all been designed and carried out by white middle class males, the instruments used have been those of "traditional research" and

had been used by “distanced, outside experts who wrote a final report …that [has ended] up in a drawer” (Visser, *ibid*.: 7). All these were supposedly formative evaluation reports, but none of them, except the Wood-Robinson *et al*. (2000) and the Ntombela *et al*. (2000) had recommendations for improvement of implementation, maybe because implementation problems had been superficially examined without necessarily finding out more about their nature?

Such findings suggest that for the logframe to have worked for all concerned, a thorough identification of all the stakeholders and their total involvement throughout its developmental stages might have had to precede it. The Tanzanian study is a good example of how stakeholder identification and involvement worked well to yield positive impacts of the programme for its participants (Galabawa *et al*., 2002). The same applies to the US Magnet schools programme (Luo and Dappen, 2005).

The next chapter will be an account of the research aims and objectives of this study. In the same chapter, I will provide details of a pilot study which was conducted in order to trial the design proposed for the main study, and elicit some practical lessons which might have implications for it.

CHAPTER 4

RESEARCH DESIGN

Introduction

This chapter is divided into seven main sections. The first is an account of the research aims and objectives. This is followed (in Section 4.2) by an account of the pilot study. In Section 4.3, I give an overview of the research design employed in the main study in which I provide a summary of methods employed in data generation and a link between the aims of the study and the methods. Section 4.4 is an account of the methodological framework underpinning the main study. In Section 4.5, I provide a justification for the choice of the design, its limitations and how I have made an effort at compensating for such limitations. Lastly, in Section 4.6 I discuss the main ethical issues encountered in the study and the ethical protocol I employed in relation to these.

4.1 Research aims and objectives

This study aimed at investigating whether or not the MASTEC project, a so-called school improvement programme, which was implemented in very different school contexts, was, according to its participants' perceptions of their experiences, implemented in a manner which was beneficial, and appropriately suited, to all the contexts of its participating schools. In developing and exploring this aim, I hoped that, from the outcomes of this study, lessons

could be drawn which could be used in the development and/or improvement of school improvement programmes which have similar contexts to the MASTEC project.

I broke down this broad aim into a number of research objectives, so as to concretise it. These objectives were to investigate:

1 Whether or not the MASTEC project programme implementers and the teachers in the schools had similar or different understandings of the aims of the MASTEC project;
2 The stakeholders' perceptions of the extent to which implementation processes of the programme were varied or adapted to meet the participants' needs and/or contexts; and
3 The stakeholders' perceptions of whether or not the teachers could implement or apply their newly acquired knowledge and/or skills in their day to day classroom activities.

I decided to conduct a pilot study, so as to test the field, as well as to help me decide on an appropriate design for the main study. I present an account of this pilot below in Section 4.2.

4.2 The pilot study

Prior to the beginning of the main study I decided to conduct a pilot study whose aim was to test the field and the instruments which might be chosen for use in the main study, to test the contexts in which these instruments were going to be used, and to make decisions relating to an appropriate choice of a research design in the reality of the schools' contexts.

I chose a school in a rural part of the Limpopo Province as the pilot school, because it was, in my opinion, in need of improvement from a number of different angles. It was under-resourced, was being governed by a single person, the Principal (unlike most schools, this was one of the schools with no school management team). This school lacked adequate infrastructure which could ensure that the learners would be academically taken care of.

In the following part of this section, I have tried to paint a picture of the school's context, by providing a description of its infrastructure, the personnel, the pupils and the resources or lack thereof. I also provide an account of the data generation methods utilised in this pilot study.

In conclusion, I set out the lessons learnt, including the implications of this pilot for the main study, as well as proposed action plans I would put in place to implement the decisions I took in order to address such implications.

4.2.1 The pilot school

As has been stated above, this school was situated in the rural part of the Limpopo Province. It was quite a small school, with an enrolment of less than 700 pupils. The school management consisted of just the Principal, (there were no Deputy Heads or Heads of Departments). There were 15 teachers at the school, 6 ladies and 9 gentlemen including the principal. All but one of the Mathematics and Science teachers were male.

The school building consisted of three blocks, two with three classrooms and the third with two, making a total of eight classrooms. One of these was being used as a multi-purpose room, as a staff room and the principal's office, as well as a laboratory equipment and library storeroom. This left seven classrooms for teaching and learning use; therefore, at any given moment, there were seven free teachers in the multi-purpose room.

The junior classrooms were without doors and there were numerous broken windows and desks within the school. Some classrooms were without chalkboards, and an improvisation of 'portable chalkboards' had been imposed. Several of these were supported by broken desks and drums. The junior classrooms were especially filthy, with signs that they had not been swept in quite a long time. These classrooms were overcrowded, with an average of 87 pupils in each.

This was one of the most under-performing schools in the province, as evidenced by the Grade 12 year-end examination (matriculation) results. These poor results had been the norm in this school, with no improvement over a long period. The MASTEC Project sought to address this non-improvement of the matriculation results, especially in the Science subjects, and for female students. At the time of this pilot the MASTEC programme was no longer of service to the school. As in all the other secondary schools, ties had been cut at the end of 2000, for reasons which were not clearly stated,

either to the schools' management or in the MASTEC documents accessed.

I chose this school as a pilot school because it was fraught with problems of different natures, making it a likely representation of a number of different schools. Thus it would be interesting for me to find out how the MASTEC programme was implemented in this school in particular and whether or not those implementing it were doing so successfully.

4.2.2 Methods of data generation

I spent two weeks in the pilot school. During this period, an unstructured interview was carried out with the Principal. This was audio-taped, with his permission. Informal chats were held with five Mathematics Science and Technology (MST) teachers, and all information that emerged was recorded in a fieldwork notebook. An audio-taped session of focus group discussions was held with the same MST teachers, because recording would not distract from the discussions, unlike when the discussions were recorded in a notebook. This was an unstructured discussion on their methods of teaching and the methods gained at the MASTEC workshops, and basically their feelings about their experience in participating in the project and how they thought the project could be of value to them in their situation. I used the same teachers as I was interested in any confirmation of or divergence from what they said in the individual informal chats.

Grade 12 learners were randomly selected as respondents to structured self-complete questionnaires. This was done in a 'test format', and the number of respondents was 13, (7 boys and 6 girls). I made use of this method in order to gather data pertaining to the learners' experiences and opinions, regarding whether or not they perceived the MASTEC programme as being of benefit to them and their academic progress. This would help me decide whether to use the learners as a data source in the main study. I decided not to replicate this feature in the main study due to these learners' difficulties in expressing themselves, thus leading to data I could not use even for the pilot study.

I carried out classroom observations of the MST teachers and other educators in the school and examined the school records, such as the previous matriculation results schedules and staff profiles amongst others. In Section 4.2.5 I present the findings that emerged from the pilot study.

4.2.3 Methods of data analysis

I transcribed all the audiotapes and converted the transcripts into an Atlas ti file for analysis. After doing the preliminary coding I identified consistent themes throughout and developed networks of these, so as to be able to link them up with other related codes and/or nodes. This exercise resulted in a set of findings, which I present below.

4.2.4 Findings

The following two major findings emerged from the data generated during the pilot study, namely, the participants' perception of a 'good school,' and what a school improvement programme should address in making 'good schools'. These findings relate to the aims of the main study, in the sense that the programme implementers at the pilot school's level defined a good school differently from the manner in which the project aim purportedly sought to 'improve schools.' This, according to the project's aim would be achieved through "increasing the attainment in the Sciences …" It seemed, from the pilot participants' definition of a 'good' school, that increased attainment would not, for these participants, necessarily yield a 'good' or improved school.

Below, I provide an account of the perceptions of the pilot study's participants. In doing so I start with their concept of a 'good school' and then later, what school improvement programme personnel should address in their programmes to change schools into 'good schools'.

Participants' perception of a good school

These participants' perceptions of a 'good school' are that it is one that displays a school ethos where there is mutual respect for one another, and the resources, especially time and material. A good school, according to them is that which is part of the local community to an extent of visible communication and involvement of the important stakeholders (the school community) in all school

matters. According to them, a good school will have a school ethos which motivates and encourages a culture of teaching and learning; it will be a school where parental involvement is valued to an extent of sharing the same values and norms. The participants reported their feelings that academic achievement should be a by-product of such a positive school ethos, rather than being the focus of school improvement.

Participants' perceptions of what a school improvement programme should address

This finding relates to what the pilot school participants in the study perceived as of importance for the improvement of their school in particular. It, therefore, speaks of the contextualisation of school improvement programmes in order to enable implementers at both levels of implementation to vary or adapt the programme accordingly.

I decided not use the data from learners as they had left many questions unanswered. I also found out that in most of those that had been answered, the learners could not express themselves well in English, and therefore felt that this data would not be useful.

It may be argued that the questions could have been asked in the learners' first language, which would have enabled them to respond with greater ease. However the language barrier between the learners and me would imply that I write the questions in English, have them translated to sePedi and the answers retranslated into English. This process would impact the accuracy of the data

generated because there are some sePedi words, nuances and meanings which do not exist in the English vocabulary and vice versa. Therefore, having data generated in this way would allow for a great margin of error because it might falsify the learners' views.

The school staff collectively shared the following four issues of concern, which they felt any school improvement programme should address, in order to be of assistance in their context:

Physical resources and poor infrastructure

The teachers reported that without proper school buildings with laboratories and a library, they could not implement the new learning approaches and skills they had acquired from attending the MASTEC project workshops. The latter emphasised learner-centred activity-based teaching and learning, which could be better achieved in a better school infrastructure than they had.

1. *Staff training in OBE and Curriculum 2005 methods of teaching*

   The main concern that these teachers expressed about their ability to implement the MASTEC programme in their classrooms was that the workshops were not providing them with what they perceived as proper training in outcomes-based education and in Curriculum 2005. They, therefore, felt inadequately prepared to implement these on their own. In the same breadth they applauded the in-school support that the project lecturers were providing for them. They also

expressed their wish that these in-school support visits could be more frequent and regular than they were at the time.

2. *Synergy between LPDE and MASTEC initiatives, as well as teachers' professional support from the LPDE*

   The teachers reported that in their opinion, for a school improvement programme to be effective, it needed to synergise its activities with those of the Department of Education. It was their assumption that there was no synergy between the Limpopo Department of Education and the MASTEC project and this translated into clashes of timing between the two institutions' workshops. This they raised as a concern that, although they valued the lessons of the MASTEC workshops they found it very difficult not to attend the department's, as this, they felt, was their employer. Their irregular attendance at the MASTEC workshops, which resulted from these clashes, had a negative impact on their ability to implement the MASTEC programme or at least on the skills they would have acquired had they been attending regularly.

3. *Parental and community involvement and support*

   One of the concerns that these teachers raised as an impediment to the implementation of the MASTEC project, was the lack of parental and community involvement in school matters. They alluded to the factors outside the school that were influential to what was happening inside the school. They reported that the MASTEC project could have

been better implemented if it had been introduced to the community to solicit its input, involvement and support.

From the list of concerns of the participants in the pilot study, it seemed as though they viewed the context for school improvement from a much broader perspective than that of the MASTEC project personnel, as suggested by the project's goals, which focussed on increasing pupils' attainment in the Science subjects, especially that of girls.

It would appear at least from the list of concerns generated by these participants that the programme was not catering for the needs of this particular school. The participants attributed the non-improvement of the Matriculation (secondary school qualification) results to all the problems listed above, rather than just lack of qualified educators and lack of equipment. Thus, the feeling of the staff was that the MASTEC project would only help if the culture of the school was that of a 'good school' (according to their understanding of a 'good school'), and the problem of the school's under-performance was due only to lack of equipment and books, poor management and lack of qualified MST educators.

4.2.5 Implications for the main study

In this section, I explain what lessons I learned from the pilot study and how these shaped my thinking about my approach to the main study. Below, I provide an account of such lessons and then go on

to discuss the implications that each had for the main study, and what I proposed to do in response to such implications.

Some of the lessons learnt through this pilot study were that, according to the pilot study participants:

1 *This project operated on the philosophy that one size fits all, because the same school improvement programme was provided for all the 22 MASTEC schools, although they had very different contexts and needs;*
2 *The participants had their own definition of a 'good school' and therefore, a list of features for that kind of a school, which in many respects were somewhat different from what Mortimer (1991) had put forward as features of a school that has a potential to improve. In their view, a school improvement programme which would serve their needs, would be one that would help them strive towards achieving most, and at best, all, of their identified features of a 'good' school, which their school lacked; and*
3 *They had their own expectations of what a school improvement programme should do **in their context** to bring about improvement in their school.*

Realising the nature of these pilot participants' concerns suggested to me the possibility that MASTEC schools may all be quite different in their school improvement needs, as they were all situated in different contexts. Some, like the pilot school, may be in need of better school management, physical resources and better infrastructure, as well as qualified human resources, while others may only need better school management and/or new teaching techniques. Based on this realisation I decided to make a choice of

different contextual sites and thus to generate context related data for the main study.

That the participants of the pilot study had their own understanding of what a 'good' school was, coupled with the difference (at least from their accounts) in the features that such a school exhibits from those found in literature, led to my decision to choose an interpretivist methods of enquiry. This would allow the participants of the main study to make meaning of their experiences and perceptions of their contexts. Therefore, as much as the data generation methods I chose to make use of in the main study were to be context-related, they had to be experience-bound as well, hence the choice of phenomenology[1] as the main methodological framework of the main study.

4.3 Overview of the research design for the main study

During the pilot study I found myself in a complex situation which then influenced my choice of research design for the main study. I explain this design in this section, by providing a summary of the data generation methods that I have decided to employ in the main study. I also attempt to link these methods to the research objectives.

[1] This methodological framework and how it has influenced and shaped my study has been discussed in detail at Sections 4.4.1 and 4.4.2.

The choice of this design was informed by the different contextual meanings which the participants (from the same school) had regarding certain key concepts, which influenced their perceptions of their experiences. The wide variety of these experiences made me broaden my thoughts around the research design in order to cater more appropriately for the participants from the different schools, as well as others from the MASTEC headquarters.

In the sections below, I provide summaries of the data generation methods I employed for the different participant samples as well as the links between these methods and the research objectives.

4.3.1 Summary of the data generation methods

In this study I used a number of data generation methods, in order to maximise the scope and rigour of the data generated. These were focus group discussions, examination of the project documents in order to perform content analysis, and participant observation of the research participants' contexts. Thus, the study lends its data generation methods to a multiple methods research design.

I spent a considerable amount of time at both levels of the MASTEC programme implementation, i.e. the Headquarters and the Schools' levels. This process led to me being able to systematically observe, facilitate focus group discussions and record participants' processes as they occurred naturally.

4.3.2 Links between research objectives and data generation methods

Table 4.1 below is an attempt at illustrating the links between the research project objectives and the methods of data generation employed. Further details of the methods employed for data generation and a full justification for their use are provided in the next section, which starts by providing an account of the methodological framework underpinning the main study.

Research Objectives	**Methods of Data Generation**		
	Focus Group Discussions	Participant Observation	Project Documents
1. Whether or not the MASTEC project programme implementers and the teachers in the schools had similar or different understandings of the aims of the MASTEC project.	x	x	x
2. The extent to which implementation processes of the programme were varied, or adapted to meet the participants' needs and/or contexts.	x	x	x
3. Whether or not the teachers could implement or apply their newly acquired knowledge and/or skills in their day to day classroom activities.	x	x	

Table 4.1: Linking data generation methods to research aims

4.4 Methodological framework

In this section, I present the research design for the present study as it has been informed, in part, by the literature review and the lessons drawn from the pilot study, as reported in the previous section. I begin by providing a brief overview of the methodological framework, the phenomenological framework, which underpins this present study. I attempt to elucidate what this framework means and why I have deemed it appropriate for this study. I also highlight how the theory from which this framework has originated has evolved over time, thus slightly deviating from the original theory. I attempt to illustrate how such evolution has had an influence in the choice of the present design.

4.4.1 Phenomenology

There are, according to Dowling (2007), "a number of schools of phenomenology, and even though they all have some commonalities, they have distinct features" (Dowling, 2007: 131). In line with this information, I explore in the sections below, three of these phenomenological perspectives, which have been the most influential in the development of this study.

Husserlian phenomenology

Edmund Husserl, "the father of phenomenology" (Laverty, 2003: 3), grew to be a philosopher under the auspices of Franz Brentano (Dowling, 2007). It is not surprising therefore, that phenomenology

has its roots in philosophy, with both epistemological and ontological branches. This approach has influenced knowledge development throughout its evolution in the twentieth century (Mackey, 2005: 179).

Husserl adopted Brentano's account of intentionality as the fundamental concept for understanding and classifying conscious acts and experiential mental practices (Moustakas, 1994 cited in Dowling, 2007). Many authors have cited Husserl's focus, as having been strongly epistemological and aimed at revealing knowledge which transcended human experience (Laverty, 2003; Mackey, 2005; Levering, 2006; Dowling, 2007).

Husserl seemed to believe that researchers who attended only to external, physical stimuli that could be isolated and correlated with other isolated responses, not only missed important variables, but ignored context and created a highly artificial situation. As a result of this, Husserl's phenomenology has been widely defined as essentially the study of lived experience or the life world, and its emphasis is on the world as lived by a person, not the world or reality as something separate from the person (van Manen, 1997; Laverty, 2003).

This has been a very brief account of how and when phenomenology originated from a philosophy to a methodological approach to enquiry by Husserl. Next, I provide an account of the

evolution of this approach from Husserl through Heideggerian to Merleau-Ponty's phenomenology.

Heideggerian phenomenology

Martin Heidegger's philosophy, like Husserl's is concerned with human life as it is lived, but differs in his views of how the lived experience is explored, and advocates the use of hermeneutics as a research method founded on the ontological view that lived experience is an interpretive process (Dowling, 2007).

The fact that Heidegger has been referred to as an 'interpretivist,' marks his difference from Husserl. This is further intensified by his disagreements with Husserl's views of the importance of description rather than understanding.

On the basis of the statements cited above, as well as what the literature says about these two Phenomenologists, my understanding of the major difference between Husserl and Heidegger is that, while Husserl emphasised the importance of epistemology, Heidegger saw ontology as being more important (van Manen, 1997; Laverty, 2003; Mackey, 2005; Levering, 2006; Dowling, 2007). This means that Heidegger, according to Levering (2006) "turned the ontological issue upside down," by positing that "if we wish to understand the essence of truth, we will have to look for the truth of essence" (Heidegger, 1954, cited in Levering, 2006).

Phenomenology, according to Heidegger, characterises human ontology: he alludes to the notion that “where man is concerned, essence is preceded by existence, and human existence can only be understood from the existential notion of time” (Levering, 2006: 453).

The researcher carrying out research guided by this philosophy of phenomenology needs to engage in both descriptive and interpretive research. This implies that hermeneutic researchers are expected to focus on the person and the context of their existence. I now proceed to explore Merleau-Ponty’s phenomenology.

Merleau-Ponty’s phenomenology

Maurice Merleau-Ponty, a French philosopher who has been labelled a post-positivist (Dowling, 2007), drew heavily upon the phenomenological techniques in the writings of Edmund Husserl, as well as upon the existential strands in the thoughts of Martin Heidegger, although he added new modifications to these.

Merleau-Ponty’s modifications of Husserl’s and Heidegger’s work led to his goal of phenomenology being seen by some authors (Racher and Robinson, 2003; Levering, 2006) as to rediscover first experience, which they have referred to as the “primacy of perception”. Accordingly, Merleau-Ponty’s definition of phenomenology is that it is

> the study of essences; and according to it, all problems amount to finding definitions of essences, for example, the essence of perception or consciousness. It attempts to give a direct description of our experience as it is, without taking account of its psychological origin and the causal explanations which the scientist, the historian or sociologist may be able to provide (2002: vii).

Having briefly accounted for the origins and evolution of phenomenology from Husserl, the father of phenomenology, through to Merleau-Ponty, I now proceed in the following section, to provide an account of how these have influenced the present study, as illustrated in the choice I have made of methods and techniques. After this I proceed to provide a justification for such influences, highlighting the strengths and weaknesses of the choices made, as well as my efforts to compensate for such weaknesses.

4.4.2 The schools of thought that influenced this study

The present study is largely informed and influenced by Husserl's epistemological phenomenology, which is prominently played out in the data analysis section. Also evident in the study, are the influences of Heidegger's hermeneutic (ontological) phenomenology and Merleau-Ponty's emphasis on the primacy of perception.

My attempt to investigate the essence of a school improvement programme, with regard to the project participants' experiences of its implementation, is key to the assertion that Husserl has

influenced my methods. I attempt here to elucidate this assertion by discussing the methods employed for data generation and analysis.

In choosing the data generation methods, I have heavily relied on research participant conversation with very little participation on my part. This I did as an attempt not to influence the flow of the discussions, as well as not involving myself and my preconceptions and biases in the discussions. I tried to do this (difficult though it proved to be), because I had already reflected on my own preconceptions and was therefore aware of my biases, which could influence the discussions had I chosen to participate more than I allowed myself to. This reflection, according to Husserl and his followers, is referred to as an “epoche/ bracketing/ reduction”.

The influence of Heidegger’s ontological phenomenology is played out in my quest to try to understand how the project participants perceived in their natural settings, their experiences of the programme implementation.

Lastly, Merleau-Ponty’s influence in this work can be demonstrated by the attempt throughout the whole study of gathering together the perceptions of the project participants of how the programme is implemented and how they themselves would implement it differently to bring about a ‘better project’.

Viewed in this light, the design of the present study purports to be eclectically phenomenological. This is not surprising, because while both Heidegger and Merleau-Ponty were Husserl's disciples and highly influenced by his writings, each differed slightly from some of his views and therefore, modified the Husserlian phenomenology, each according to his own convictions (Laverty, 2003; Racher and Robinson, 2003; Mackey, 2005; Levering, 2006; Dowling, 2007).

It is through making use of these lenses that school improvement has been seen as a phenomenon, the essential structure of which I sought to expose from the participants' personal points of view and their experiences of the implementation of the school improvement programme in question, as well as their derived meanings from such experiences.

In order to carry out this investigation and elucidate the participants' perspectives and understanding of their experiences of the school improvement programme of which they were participants, I attempted to clarify and be open to my own assumptions about this phenomenon. I did this as an attempt to minimise the chances that these might have of influencing the study, although I am aware that this is very difficult to do. Therefore, I attempted to bracket these assumptions from interfering with the participants' accounts of perspectives and experiences.

Below, I provide an account of my assumptions about the concepts related to school improvement, based on the literature reviewed and also on my own in-school experiences. Having considered my attempt to identify my underlying assumptions, I believe that:

1 *The MASTEC project, being a donor-funded institution, which was initiated and supported by the provincial Department of Education, should have had founding documents that specified its vision, mission and objectives, as well as an implementation plan to achieve such objectives;*
2 *To develop a school improvement programme and its implementation plan, one needs to be familiar with the concept and what it entails, and in order to engage in this initiative successfully, it makes sense for the school improvement programme developers and implementers to investigate what needs to be improved. In other words, 'what constitutes school effectiveness?'*
3 *School improvement programmes are essentially developed to improve the effectiveness of schools; and*
4 *This last assumption should then lead to the design of a programme or programmes that are best suited for the particular school/s which have been consulted, to best answer to the question 'effective for what?'*

Thinking about and listing these assumptions was influenced by my quest to understand, first, my beliefs about this phenomenon, in order to be able to try and distance them from the participants' responses (bracketing) and secondly to begin to take some measures towards understanding the participants' accounts of their experiences. This process of disclosing my own assumptions with the aim of bracketing them, was influenced by Colaizzi (1973), cited in Creswell (1998: 276), who states that

> [W]ithout thereby first disclosing the foundations of a phenomenon, no progress whatsoever can be made concerning

> it, not even a first faltering step can be taken towards it, by Science or by any other kind of cognition (Colaizzi, 1973: 28).

Therefore, disclosing my assumptions about school improvement was, for me, as good as disclosing the foundations thereof, as far as I understood them. Following this line of reasoning, I felt that it would be most appropriate to investigate the perspectives and experiences of the school improvement programme from the implementers' points of view without (as far as practically possible) clouding them with my own. This could allow for an analysis of the essential structure of the experiences of programme participants from their perspective and a production of their composite summary. Thus, as has been mentioned previously, focus group discussions were carried out with the INSET and PRESET lecturers and the experienced school teachers in this regard.

In the next section, I provide an account of the strengths and limitations of, and compensation for the chosen design.

4.5 The strengths, limitations and compensation for the design

I divide this section into three sections where I discuss the strengths and limitations of the chosen design together with the attempts I put in place in terms of compensating for such limitations. I begin with a discussion of the strengths in Section 4.5.1, limitations in Section 4.5.2 and compensations for limitations in Section 4.5.3.

4.5.1 The strengths of the chosen design

The goal of using phenomenology as a methodology in this study has been to describe lived experiences or to seek to understand the essence of a phenomenon as experienced by people. This goal is best achieved when the descriptions and understandings emanate amongst the people themselves. This choice of design has support from Budd (2004) who states that:

> [L]ife world or lived experience is individual. Each person perceives, intends, interprets. Phenomena such as relevance judgements are understood in various ways, but the phenomenological approach offers understanding in a way that others cannot (57).

This meant that in this particular study, the focus groups' participants were allowed to describe their experiences and their perceptions of their lived worlds in their own language and contexts, amongst themselves. As a result, clarifications through their own questions and probes produced richer data sets.

Although "followers of Husserl's transcendental method would insist that phenomenological research is pure description and that interpretation falls outside the bounds of phenomenological research" (Strachan and Brown, 2004: 162), in this particular study, the two seemed to be compatible with each other. They also seemed compatible with Merleau-Ponty's recognition of the importance of the human body in the process of the acquisition and development of knowledge (Levering, 2007: 452).

This compatibility was expressed by the participants' descriptions of their experiences, opinions and feelings about the implementation of the MASTEC project, as well as my interpretation of their expressions in the manner they emphasised (some, more than others), and their caution in mentioning certain implementation issues, such as communication amongst the MASTEC project stakeholders.

The 'eclectic phenomenological' design chosen for this study has been in support of the "conjoining of ontology and epistemology" (Budd, 2004: 51), where according to Merleau-Ponty:

> [T]he phenomenological world is not pure being, but the sense which is revealed where the paths of my various experiences intersect, and also where my own and other people's intersect and engage each other like gears (1962: xx).

This 'eclectic phenomenological' approach to enquiry has enabled me to engage critically with each of the three proponents of phenomenology, and extract what I could use from each of their writings and beliefs.

Such an exercise has provided me with an opportunity of putting together what I perceived to be compatible within these writings and therefore, produce a mixture that made sense to me and thus enabled me to access, from the research participants, a wealth of data. However, some of this proved to be inaccessible, due to their sliding in and out of their first language, (Sepedi, which is foreign to me). This inaccessibility, and therefore, loss of information, is

further addressed in detail in the next section on limitations of the design.

4.5.2 The limitations of the chosen design

Whilst this design seemed to be the best for my study, I experienced some difficulties carrying out some of the principles of phenomenology, especially relating to my placement of myself as an insider within the schools. This was also the case with the MASTEC headquarters, although in the reverse sense.

I entered the schools as an outsider, somebody the staff associated with the MASTEC project, due to my prior attachment to the institution as a PRESET lecturer. The teachers were initially not so sure about sharing criticism about the programme implementation. Whenever I visited their classrooms, I could feel that window dressing was going on. That I was an outsider was clearly non-verbally expressed during tea and lunch breaks, as I would walk into a lively staff room only to be greeted with a sudden silence. This bothered me, because I wanted to be seen as ‘one of them,’ if I had any hope of conducting and facilitating open focus group discussions with these teachers.

At the MASTEC headquarters, the problem was that I was not seen as a researcher but as ‘one of them’. This was problematic for me, in this instance, because I wanted to ask questions about their experiences and how they perceived these in relation to their

implementation of the project's programme. The problem here was that the people expected me to know the answers to the questions I was asking, as I had shared and lived the same experiences that they had. It was a struggle for me to try and have them separate the role of the colleague they had known for three years from the role of a researcher.

Whilst attempting to see participants' perspectives through their own eyes has been what I strived for, in order to fulfil the principle of 'epoche', which is fundamental to phenomenology, that is easier said than done. My assumptions would invariably influence the study, one way or the other. One of these may be through my prior involvement with the MASTEC project as one of the PRESET lecturers; and another through my failing to accurately identify my own assumptions.

Although, I experienced the difficulties mentioned above in carrying out this design, these were not insurmountable, because I attempted to compensate for them. I provide an account of how this attempt was put in place in the section below.

4.5.3 Compensation for the limitations of the chosen design

The long period of stay in each of the research sites was an attempt at situating myself within such sites. In the case of the schools, as mentioned previously, I made myself useful in helping the teachers out with their struggles of coming to grips with the

new curriculum for the 21st century and outcomes-based education methods. This I envisaged as being helpful in my quest to be accepted as one of the teachers and therefore, bring about levels of comfort and ‘we-ness’ between me and them.

The same applied at the project headquarters, although this was not smooth sailing. I wanted to be seen as a researcher and not as ‘one of the guys’. I conducted a number of focus group discussions, just to get my participants used to the notion of taking me seriously as a researcher ‘who did not know their situation and experiences’. I facilitated focus group discussions on a weekly basis making use of different participants every time.

The focus group discussions I made use of as my data were facilitated and audio-taped only during the third week of my stay at the site. By this time the experienced science, mathematics and technology teachers had gained a little understanding of OBE and Curriculum 2005 through the helping sessions I held with them. This led to my gaining some limited amount of trust with these teachers and being seen as ‘one of them,’ though to a very cautiously limited extent.

In the section below, I discuss the ethical issues encountered and the protocol I followed in taking these into consideration in the present study.

4.6 Research ethics

This section provides an account of the ethical issues, which I encountered in the current study. In the following sections, I present these and account for the manner in which I have dealt with them.

The ethical protocol I followed is consistent with the British Education Research Association (BERA) guidelines 2004, which are adapted from the previous BERA guidelines of 1992. In following this protocol, I ensured that this study is conducted with an ethic of respect for the person and democratic values, as expatiated upon in the following sections.

4.6.1 Respect for participants' rights, needs and values

The importance of ethical considerations, especially in a qualitative study, cannot be over-emphasised. First, I, as a researcher, have an obligation to respect the rights, needs, values and desires of the participants. Due to the fact that qualitative research is by nature, obtrusive, and invades the life of the participants to the extent of revealing sensitive information, I wrote a letter to the participants (**Appendix 1**), seeking their consent to participate in this study. In the same letter I included the following steps so as to safeguard and protect their rights (adapted from Creswell, 1994: 165-6):

- the research objectives were articulated so that they were clearly understood by the participants, this I also did verbally

when I was addressing them on site;

- permission to proceed with the study was sought from the participants;
- the participants were informed of all data collection devices and activities; and
- they were assured that written interpretations and reports would be made available to them, and they were assured of confidentiality and anonymity, although the final decision regarding participant anonymity would rest with them.

4.6.2 Feedback to participants

Ideally, the culmination of a research study is the presentation of a written report. In this instance, I thought it necessary to accord to all the participants in the study the opportunity to indicate if they would like to receive a summary of the main findings with the relevant recommendations.

The participants deserve to be given such an opportunity, because they had taken a great deal of their time to participate in the study and it can be safely concluded that in the name of fairness and transparency, they should know the end-results. However, in the event, none of them indicated an interest in receiving the summary of the findings.

Also, this study was not intended to be a mere academic process. It had the silent intention of assisting all participants within the MASTEC programme and other programmes of similar nature, to

understand firstly what school improvement is, secondly, what school improvement programmes should entail in order to help participating schools to achieve the status of being “moving” schools as opposed to being “stuck” schools (Ainscow and Hopkins,1992), and thirdly, to be aware that different programmes may need to be developed or customized for different contexts, since “one size [does not] fit all” (Hopkins, 2000: 6-8).

This study also hopes to contribute towards a development of a model for school improvement programme, which is suitable to the context of the MASTEC project, and other school improvement initiatives and programmes of similar contexts. This model should, according to the literature, be an embodiment of set literary standards, and incorporate participant views, values and expectations, so as to be target population specific (Moore-Thomas and Erford, 2003: 11). Such a model would be useful as a tool for evaluating whether school improvement programmes in given contexts do what they have set out to do according to the manner in which they have been prescribed, and this in order to meet the needs, values and expectations of the participating target populations.

In short, the study envisages contributing towards efficient and effective school improvement practices and the evaluation of such practices in the rural schools of the South African Limpopo Province, and in others of similar contexts.

4.7 Conclusion

In this chapter I have provided an account of the aims and objectives of the study. I have discussed how I have trialled the methods used to achieve these by a pilot study, which has informed the choice of the research design for the main study. I have further provided a justification for such design, its limitations and how I have made an effort at compensating for these. I have also provided an account of the ethical issues I have encountered in conducting this study, as well as the protocol followed to deal with them.

In the following chapter I discuss the methods of data generation and sampling that I have used for the main study, as has also been informed by the pilot study.

CHAPTER 5

METHODS OF DATA GENERATION AND SAMPLING

Introduction

I have used multiple qualitative methods of data generation and in this chapter I provide an account of each. I thus divide this chapter into six sections, the first, 5.1, being an account of the sampling techniques I employed for this study, followed by a section on justification for the use of multiple qualitative methods of data generation. I allocate each of the next three sections to each specific data generation method as follows:

5.3 Focus group discussions;

5.4 Participant observation; and

5.5 Document examination and analysis

These methods have been employed in the present study according to their definitions in the literature. In the following sections, I provide full details of each, including an account for their use and their strengths and limitations, as well as how I have tried to compensate for such limitations. This structure is adopted for all the following sections that deal with the individual methods used. The concluding section of this chapter is Section 5.6 which also provides a preview of the following chapter.

5.1 Sampling Techniques

As has been discussed previously, the study was conducted at different levels of the MASTEC project, and a combination of one or other sampling techniques were used as appropriate for the different target populations at each level.

The participating schools involved were selected by employing the random-stratified technique. Matriculation examination results of 1996 were used to group schools into three categories. This method of selection represented their entry - level performance into the programme. From this exercise, the three categories established were, as mentioned earlier:

- High - achieving schools;
- Intermediate - achieving schools; and
- Low - achieving schools.

From each category, names of the schools were written on small “post-it” papers of the same size. These papers were folded four times in exactly the same way. They were then put into three different hats according to the category to which they belonged. The hats were then shaken to mix up the folded papers. A blindfolded assistant selected one folded paper from each hat, and the name of the school written on the chosen paper meant that the school would be requested to participate in the study. In each school all the mathematics, science and technology teachers, who

had participated in the MASTEC programme, were requested to form a focus group.

Not all the MASTEC INSET lecturers who were the service providers to secondary schools, could be involved in the study, because some of them (three) had already left the programme at the time of the study, and only one of these could be contacted. The remaining lecturers were organized into a group, so as to form a focus group discussion. This was also another case of non-probability sampling referred to as convenience sampling.

The project PRESET lecturers were also requested to form a focus group, and from each department a representative was chosen because they showed willingness to participate in this study, yet another convenience sampling technique.

5.1.2 The strengths of the sampling techniques

Purposive sampling techniques have been cited as advantageous in that the researcher making use of these does so with a purpose in mind. In making use of this kind of sampling, one has to verify that the individuals in the sample do in fact meet the criteria for being in the sample. Trochim (2006) states that this kind of sampling "can be very useful for situations where you need to reach a targeted sample quickly and where sampling for proportionality is not the primary concern" (2). Trochim (*ibid*.) also mentions that one of the strengths of purposive sampling

techniques is that one is likely to get the opinions of one's target population.

Other researchers cite the strengths of non-probabilistic sampling techniques as being their ability to illustrate characteristics of particular subgroups of interest and therefore facilitating comparisons, as well as their ability to add credibility to a sample when a potential purposive sample is larger than one can handle. These techniques have also been cited for their being able to reduce judgment within a purposive category (Patton, 1990).

In the present study, I have noted that the benefits of having used purposive sampling techniques can be straddled over the two kinds used, namely, convenience and stratified random purposive, which I discuss below.

Convenience sampling

This technique I found to be very useful, especially in the MASTEC headquarters, in that I did not spend much time looking for the participants. They were all available, although I could have made use of more groups than I actually did because of the numbers of who were available at the time. Thus, it also proved to be economic, as all my groups participants were at the same site at the same time. Therefore, I did not spend much money and time travelling from site to site to facilitate the focus group discussions.

Stratified random sampling

This technique was useful for me in reducing the number of sample schools from the 22 MASTEC high schools to three and ensuring that each had a fair and equal chance of being selected. I decided to allocate the schools into the three categories as mentioned previously, and then randomly selected a school from each category. This technique also proved to be economic for me because I spent very little time and money facilitating focus group discussions in all three chosen sites. It took me nine weeks instead of 66 weeks in the 22 schools, which it would have taken me if I had decided to include all the schools in the sample.

5.1.3 Limitations of the sampling techniques

Positivist researchers have generally cited quite a number of what they refer to as 'disadvantages' of using qualitative sampling techniques. For example, Trochim (2006) states that "non-probability samples cannot depend upon the rationale of probability theory" (1). He goes on to say that:

> at least with a probabilistic sample, we know the odds or probability that we have represented the population well. We are able to estimate confidence intervals for the statistic. With nonprobability samples we may or may not represent the population well, and it will often be hard for us to know how well we've done so (1).

Advancing the same kind of sentiments, Hudson (2000) cites the disadvantages of non-probability sampling techniques as being subjective and therefore preventive of making inferences to the entire population, thus rendering validity and credibility of the findings questionable due to selection bias. He goes on to say:

> The limitation of using a non-probability sampling procedure is that the selection of sampling elements is left to the discretion of the researcher, and there is no explicit scientific model that can be used to assess the degree of sampling error (365).

Viewed from this perspective, it would seem as though the positivist researchers assume that qualitative researchers want to make inferences and thereafter generalize their findings to the whole population, whereas that is not the case. Qualitative researchers are aware of the non-representativity of their sampling techniques and would therefore not want to generalize their findings. Actually, many qualitative researchers make use of non-representative samples, partly because they do not want to infer and generalise their findings although these might be transferable to similar contexts elsewhere. They are not interested in explaining the phenomena, but more interested in understanding them. As a result, they have found interpretive approaches more likely than positivist approaches to reveal the depth and diversity of knowledge, as these allow for understanding, rather than explanation of human phenomenon (Mackey, 2005).

Notwithstanding the positivist perspective of the limitations that qualitative sampling techniques have as cited above, the current study had its own share of limitations relating to the sampling techniques employed, that is, the convenience and stratified random sampling techniques.

Limitations of convenience sampling technique:

When it came to drawing a sample from the lecturers at the project headquarters, I could only make use of the available staff members. This was because of the timing of the study, which coincided with the time that the project was approaching its end and was therefore losing staff to other more stable employers. Having had to make use of these available people, could have led to a narrowing of a range of opinions and/or perceptions within the target population. This could be limiting, because I could not have more focus groups from the same population, which could have led to either corroboration or dispute of the opinions and/or perceptions which had been communicated by the members of the focus groups I interacted with at the project headquarters level.

Limitations of stratified random purposive sampling technique:

The experiences I had with the use of stratified random purposive sampling technique were that I ended up with two schools, which were in the same neighbourhood and as a result shared similar cultural contexts – the Limpopo rural areas. They belonged to different strata, in that one was a low-achieving school and the other an intermediate-achieving school. The limitation with this is that, although the schools belonged to different strata, in reality their cultural contexts were very similar and that might have had an influence in what the schoolteachers' opinions and/or perceptions could have been. The teachers from these schools used the same means of transport to and from their respective schools. They could have therefore shared their experiences of my research with

the ones whose school I had not yet been to. Had this been the case, the limitation to a wider range of opinions could have been experienced, a drawback in qualitative research because the wider the range of perceptions in a given population the better the results expected.

5.1.4 Compensation for the limitations

As an effort at compensating for the limitations of having made use of convenience sampling techniques, I tried to include all available and willing staff members of both the INSET and the PRESET elements of the project in the focus group discussions.

Regarding the stratified random sampling technique, I did my best to elongate the focus group discussions from the customary one hour to two hours, especially with the two rural focus groups. This I did so as to try to include in the discussions more issues than would ordinarily have been discussed, thus trying to compensate for the similarities between the two groups (Byrne, 2001).

In the next section, I discuss the use of multiple qualitative methods and, as has been done in Sections 5.1.2 and 5.1.3, outline some of the strengths and limitations of using such methods. This is followed by a discussion of how I attempted to compensate for the identified limitations.

5.2 The use of multiple qualitative methods

The MASTEC project, being a school improvement initiative, could be seen as a service provider of the school improvement programme to the schools that had been chosen to participate in the project. Viewed in this light, the involvement of the project lecturers with the experienced schoolteachers, the provision of workshops and of equipment to the schools, could then be seen as a service that the project was providing. This would mean, therefore, that there was an inherent requirement for interaction between the people during the service delivery, which can create many varying and volatile situations (Gilmore and Carson, 1996). It is through dealing with this aspect of the project characteristics that the use of multiple methods for generating and analysing data presented itself as being so well suited to carrying out a study on the perceptions and experiences of the people who were participants in this project.

Before continuing to discuss the use of multiple methods, it is important to note that there is a lack of universal agreement in literature about what really constitutes a multiple methods study. Some researchers (Rocco, Bliss, Gallagher, and Perez-Prado, 2003; Creswell, Fetter and Ivankova, 2004; Wallen and Berger, 2004; Leahey, 2007; O'Cathain, Murphy and Nichol, 2007; Tashakkori and Creswell, 2007) seem to use the term 'multiple methods' interchangeably with mixed methods and refer to these as an integration of qualitative and quantitative paradigms in a

single study. Bryman (2006) refers to mixed methods as a multi-strategy research approach, by which he means that it is a strategy where a researcher utilises a number of different methods from both qualitative and quantitative approaches to research.

Whatever the name used to refer to this approach, the essence of the matter is that it is generally accepted as meaning an approach to research that combines both qualitative and quantitative strategies and techniques in the same study. Therefore, this approach, according to my understanding of the literature reviewed, presents itself as a methodology rather than a method, because it is a paradigm underpinned by a belief that using both quantitative and qualitative methods of sampling, data generation/collection, and analysis leads to a better quality of research due to the triangulation.

The proponents of the mixed methods studies (Tashakkori and Creswell, 2007; as well as Creswell and Plano Clark, 2007) have provided very broad definitions of mixed methods research to allow for the inconsistencies they themselves have come to take note of amongst the researchers in this field. Tashakkori and Creswell (2007) say that

> in an effort to be as inclusive as possible, we have broadly defined mixed methods here as research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry (4).

Creswell and Plano Clark (*ibid.*) provide an even broader definition of mixed methods research as:

> … [A] research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process. As a method, it focuses on collecting, analysing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach (5).

Given these two very broad definitions, which have a similar meaning, I can differentiate between a mixed methods study and my own study. The latter has made use of a number of different qualitative data generation methods – what I want to term **a multiple qualitative methods study** (Hall and Rist, 1999), rather than just a multiple methods study, which can be easily confused with a mixed methods study. Below, I provide a rationale for having chosen to use multiple qualitative methods for data generation and analysis.

The strengths of multiple qualitative methods

In this section, I present what are generally stated in literature as the strengths of multiple qualitative methods. Thereafter, I present what I found to be the benefits of having made use of these methods for generating and analysing data in my own study.

According to Darbyshire, McDougall and Schiller:

> [U]sing multiple methods in researching … experiences is a variable approach that does not merely duplicate data but also offers complementary insights and understandings that may be difficult to access through reliance on a single method of data collection *(sic)* (2005: 417).

A number of qualitative researchers (Gilmore and Carson, 1996; Hall and Rist, 1999; Black and Rabins, 2006) corroborate the notion of multiple methods as better than mono-methods. They all invariably see this as a form of triangulation – methodological triangulation, "… the use of multiple methods to gain the most complete and detailed data possible on the phenomenon" (Hall and Rist, 1999: 296).

Having taken this paradigm into consideration and viewing the MASTEC project as a service provider with a potential for ambiguity, misunderstanding and differing perceptions between the experienced teachers and the project lecturers, I decided to use multiple qualitative methods of data generation. As was described in the context chapter, this project was implemented at multiple levels, and that, therefore, necessitated an investigation in different settings and contexts. The view I have posited above has its support from Silverman (2005), who states that "… [I]f you treat social reality as constructed in different ways in different contexts, then you cannot appeal to a single 'phenomenon' which all your data apparently represents" (121).

The current study has a very strong phenomenological theoretical underpinning, which therefore necessitates that various 'sensory

perceptions' be engaged in methods most suited to their various natures, as a means of accessing our senses. Hence, the use of focus discussion groups and participant observations, as well as document examination and analysis, so as to be able to access information that would not normally be accessible only through use of one of the methods.

The use of multiple qualitative methods in a triangulated strategy, according to Hall and Rist (1999: 304) "can heighten the certainty with which a research question is answered". Concurring with this notion, Gilmore and Carson state: "… the combination of methods used can provide a rich portrait of the phenomena under study" (Gilmore and Carson, 1996: 25). Quite a number of researchers (Gilmore and Carson, 1996; Hall and Rist, 1999; Darbyshire, McDougall and Schiller, 2005), who have made use of this approach in their studies, cite numerous advantages to integrating qualitative methods in a single study.

Gilmore and Carson (*ibid*), for instance, see multiple qualitative methods, as "having a holistic dimension" and this holistic dimension "offers many advantages." They go on to state:

> [T]he object of taking a holistic outlook in any research is to gain a comprehensive and complete picture of the whole context in which the phenomena of interest occur … (Gilmore and Carson, *ibid*.: 23).

These authors go on to state further that:

> [T]he use of a variety of qualitative techniques with a combination of interpretative techniques will achieve a wider

> and more in-depth understanding of the complex, often vague service processes and outcomes. In addition, they will permit the study of the interactive and performance dimensions of services studied within their natural setting over a longitudinal time period which incorporates recognition of a 'change' environment (Gilmore and Carson, *ibid.*: 25).

According to Hall and Rist (*ibid.*)

> Each of the three major types of data collection (*sic*) (interviews, observation and document analysis (*sic*)) has unique strengths and weaknesses. It is the combination of these strengths and in the compensation for these weaknesses that the intellectual and methodological power of qualitative research becomes apparent (297).

Much as the renowned researchers in this field have cited the advantages of using multiple qualitative methods in their studies, I also shared some of these experiences in mine. For instance, I wanted to establish sound and trusting relationships with my participants before I could engage them in focus group discussions. This meant that I needed to spend some time interacting with them in ways that ensured my acceptance into the fold 'as one of them.' However, my participant observation started from the very first day, with the description of the physical environment, conditions under which the people were working, their interaction with one another, my perception of their attitudes, all making their way into my field notes. This did not stop when the focus group discussions kicked in, as it was important to continue making observations even during such interactions.

Whilst helping them with their preparation for classes, I had an opportunity of examining their workbooks, where I could determine whether or not what they were trying to do (making use of OBE

strategies to teach), was pre-planned, as would appear in their yearly schemes of work and record books. As I was helping and providing advice on the new proposed curriculum, I would take note of who was vulnerable to constructive criticism or not – this would further enhance or weaken my perceptions of their attitudes. The focus group discussions would then corroborate and/or contradict the preliminary findings of these other two methods.

Below, I present a literature-based account of the limitations for the multiple qualitative methods, followed by an account of my own experience of having made use of these in this study.

Limitations of multiple qualitative methods

Hammersley and Atkinson (1983), in relation to the limitations associated with making use of multiple qualitative methods, said that novice researchers usually "adopt a naively 'optimistic' view that the aggregation of data from different sources will unproblematically add up to produce a more complete picture" (199). This is usually not the case, as in most instances, according to Silverman (*ibid*.), "… [T]his 'whole picture' is an illusion which speedily leads to scrappy research on under-analysed data and an imprecise or theoretically indigestible research problem" (122). He further states that "[the use of these methods] seeks to overcome the context-boundedness of our materials at the cost of analysing their sense in context" (Silverman, ibid: 121).

Zikmund (1982: 127) states that "… [a shortcoming of focus groups is that] without a sensitive and effective moderator, a self-appointed participant may dominate the session," thus steering the discussion towards his/her own direction. This may lead to the researcher being in a situation where admonition may be necessary. The results thus yielded may be aversive towards the purpose of the group discussions.

Having exposed what some authors had to say about the limitations of using the multiple qualitative methods, now is the time to report what I personally experienced as being disadvantageous in my having adopted these methods.

What I found very difficult to do was to combine focus group discussions with the recording of the observations I was making during the discussions, especially when I was prompting or calling for a clarification of what was being said.

Compensation for these limitations

Generally, a compensation for the limitations cited in literature was pre-acquired by carrying out a literature review and noting what limitations have been cited and how therefore I could compensate for these. For example, to avoid a situation where there could be a dominant participant in the focus groups, I engaged the group in the development of ground rules. These rules ensured an acceptable code of conduct by all members, and this included issues of confidentiality and anonymity.

As compensation for the difficulty of combining observation notes and participation in the discussions, I ensured that I had a view of everybody in the circle and would try to maintain a certain level of eye-contact as I was speaking. In that way, I could see almost all of them simultaneously and then make notes as soon as they engaged in the discussion. When the groups were busy discussing amongst themselves, I tried as best as I could not to actively participate. During these moments of non-participation, I did not experience any recording problems, as I could see all the participants' non-verbal behaviours. It was not easy, but it did yield some desirable outcomes.

As I have already alluded to above, the multiple qualitative methods of data generation I employed in this study are of three types. Below, I provide an account of the use of each of these. Each of the qualitative methods used is discussed independently. I start with the focus group discussions followed by participant observation, and thereafter examination of documents at both implementation levels of the MASTEC project.

5.3 The use of focus group discussions

As I proceed to provide full details of the methods used within the multiple qualitative methods approach to data generation, I want to clarify that of the three, focus group discussions were the main method and the other two, namely participant observation and document analysis, were supplementary.

Rationale for using focus group discussions

Generally, focus group discussions have been more popular as a means of data generation with marketing researchers, than with social researchers, but this trend is now changing as this method is proving to elicit more insights, opinions, perceptions and their clarifications than other means of data collection *(sic)* (Marczak and Sewell, 1998). This method capitalises on communication between researchers and the participants and more importantly amongst the participants themselves. It allows interactions where participants can challenge one another's views, thus enabling the co-participants to defend these. The group dynamics operating in focus group discussions reveal a lot about the group in terms of shared knowledge, beliefs, attitudes and group norms (Kritzinger, 1995). To exemplify this claim to exposing group dynamics and 'conversation' amongst the participants in a focus group discussion, I attach as **Appendix 2**, an example of transcripts.

I decided to make use of focus group discussions as the main method of data generation because, at the time of the commencement of this study, the MASTEC project was nearing its end, and, as mentioned earlier, the focus of programme implementation had changed from the secondary schools to primary schools. The information I would gather from both the experienced school teachers who were teaching in the previous MASTEC schools and the PRESET lecturers would basically be the opinions and perceptions of their experiences, attitudes for or

against the project, and beliefs of what should or should not have been as far as their particular group norms were concerned.

This data generation method would allow the participants to self-disclose as a group, thus even topics difficult to discuss would render themselves amenable to open discussion, due to the relaxed non-threatening atmosphere of focus groups (Foote, Clark and Recker, 2004).

Therefore, although the present study does not attempt to evaluate the MASTEC project, the responses from the project participants may elicit their perceptions of whether or not the project was implemented with relevance to their particular contextual needs. Should this be one of the outcomes of this study, it would then feed into the post-implementation evaluation of the project. Viewed thus, the focus group discussion method, according to Patton (1990) "…is essential in the evaluation process: as part of a needs assessment, during the program, at the end of a program or months after the completion of a program to gather perceptions, on the outcomes of that program" (cited in Lewis, 1995: 3). In the case of the present study, the focus is not on the program outcomes, though, but more on the participants' perception of their own experiences of the implementation. Perceptions and opinions on the programme outcomes would be a bonus.

Generally, focus group discussions are held in high esteem as being more advantageous or beneficial data generation methods

than their other counterparts, for example, surveys (Patton, 1990; Marczak and Sewell, 1993; Kritzinger, 1995; Lewis, 1995; Gibbs, 1997; Almedom, Blumenthal and Manderson, 1997; New York Teacher Centers, 2004 and Foote *et al*., 2004). These authors agree that this method is flexible, captures rich in-depth data, has immediate results, and encourages sharing especially amongst those who may 'not have anything to say'.

There is also consensus amongst these authors that focus group discussions communicate a desire to obtain meaningful, honest information, as critical responses are challenged or put into an appropriate context, as well as providing an opportunity for the participants to clarify and defend their challenged viewpoints. It is also suggested that in situations where there is organisational conflict and/or alienation, group members may "feel listened to" (New York Teacher Centers).

The benefits of using focus group discussions in the present study have been noted as not being very different from some of those that have been cited in the literature. These focus group discussions were held in the participants' natural settings, by a person who was regarded as "one of them" (although they knew exactly what my purpose was and where I was coming from). Therefore, the atmosphere was relaxed, comfortable and non-threatening, and that is crucial for such discussions.

All groups comprised people at the same level of organisational operation, that is, none of the group members was at a managerial level and this led to the flexibility of the discussions. They could even tease each other, crack jokes and make use of anecdotes in the discussions. They were allowed to formulate their own questions in asking for clarifications from the other participants, as well as from me. This atmosphere therefore even encouraged the quiet ones to join in the conversation and they started sharing. Some of these initially quiet ones started by justifying their joining in later than the others, as illustrated below by quotations from different focus groups of different levels of project implementation, where the number in the square bracket relates to the transcript number from which the extracts have been taken.

> [2] Nto: "*I am quietly sitting listening to all this conversation, reflecting …"*
>
> [5] David: "*I'm sitting here listening to you talking and I'm thinking …"*

Due to my having spent so much time with the participants in their natural settings, these focus group discussions elicited a multiplicity of views which could be encapsulated in narrative information about the [INSET/PRESET] participant perceived norms, fears and insecurities regarding the project's life span and therefore their imminent job losses. They freely shared their frustrations and what they deemed "should" have been done by those in management positions to alleviate such frustrations from the very beginning of the project, leading on to the formulation of their own recommendations for developing 'a better project'.

The limitations of using focus group discussions

Like all data generation methods, the one utilised for this study, when used in different contexts, may prove to embody certain limitations pertaining to those particular contexts. This has proved to be the case in the present study as well.

One limitation of using focus group discussions in the present study has been that in each of the identified target populations, a single focus group was made use of instead of two to three. This has led to limited information, which might have been corroborated, or disputed, by other groups of the same population.

Another limitation of the particular focus groups I interacted with, was that all the participants were familiar with one another, and this might have led to their unwillingness to share those opinions which could have been seen as 'sensitive' and might land elsewhere outside the group. For example, in discussing issues relating to the project aim about social justice and gender equity, some of the participants would caution the others by saying things such as:

> [1] Mesh: "*Haybo wena uzoboshwa*" – a Zulu sentence meaning, "be careful … you will be arrested/in trouble"
>
> [1] Stu: "*Oh! No I won't … she promised us anonymity … remember*?"

Such utterances then led me to assume that there could be more of such issues that no one dared venture into, lest they 'be in trouble'.

The participants were mostly Sepedi speakers and they had a tendency of slipping in and out of their first language which I do not understand. This then meant that there was a lot of information that I was losing, because at times I felt that interrupting the discussions for the sake of asking for translations would temper with its natural flow.

Compensation for the limitations

Compensation for the sampling techniques used for the focus groups has been detailed in the sampling section, (Section 4.8) where I justify the limited numbers of participants involved in the study and detail how these have been compensated for.

To compensate for the single-group limitations experienced in these **focus group discussions**, the information was corroborated by going back to the participants to seek for clarifications and explanations after a day or two on some of the issues which were raised during the discussion. For information management, I made use of a CAQDAS – Atlas ti, which I found to be very useful for transferring all the transcripts into hermeneutic files and organising them from there.

How I compensated for the uneasiness of some members to speak their minds about how they perceived the project implementation, management issues and the future of the project and therefore their jobs (INSET/PRESET groups), is fully discussed in the research ethics Section 5.6.

The language issue was compensated for by utilising the services of an interpreter – one of my colleagues who generously offered to translate from Sepedi to English, with explanations of the context. This exercise was very helpful in assisting me to understand the words and the context in which they were used, as in most South African vernacular languages, the same word can have different meanings if used in different contexts. The next method to be considered is participant observation, also conducted at both levels of the project implementation.

5.4 The use of participant observation

There seem to be a number of different, but related, notions of participant observation in the literature. Some authors refer to it as a rather broad research strategy (Jackson, 1983; Park, 1999; O'Halloran, 2003). On the one hand, some authors (Merriam, 1994 cited in Pålson 2007, Pina, 2006; Yin, 2003) consider participant observation as more of a data collection *(sic)* technique or method. On the other hand, others, such as Bryman, 2002 cited in Pålson (2007), state that a participant observer is engaged in a group for a considerable amount of time, exploring the behaviour of the group by observing conversations within the group and with the researcher. It is the latter definition of participant observation, which influenced this study.

During the period I spent at all four sites where I was generating data for this study, I participated in a lot of activities, thus gaining

the status of a participant observer. For ethical reasons, both the experienced schoolteachers and the project lecturers were aware of my researcher status. Although this knowledge caused them to tip-toe around me during the first few days, by the second week I was just one of them. The Hawthorne effect, observed as a deterrent by many researchers (Mays and Pope, 1995; Brown, 1997; Mulhall, 2003) seemed to have worn off.

I made a record of my observations, as well as the physical environments and conditions under which those took place, in my field notebook. These records were in no particular arrangement; they took a format of a daily diary. This unstructured observation was adopted as an attempt to record the participants' behaviour with as few preconceived ideas as possible, so that I could gradually make sense of what was going on from the experience of being with them in their natural settings. Although I was a participant observer, I interacted with the participants as little as possible during the activities I was observing, because I did not want to blur the observations I was making with what they were telling me (Mays and Pope, 1995).

Rationale for using of participant observation

It is recorded in the literature that participant observation is beneficial to the researcher in more ways than one (Mays and Pope, 1995; Kibler, 2007; Bryman, 2002; Mulhall, 2003; Diaz, 2005; Nesset, 2005; Pina, 2006; Pålson, 2007). Firstly, by allowing

the researcher to participate in the experiences of the researched, in a manner that Kibler describes as

> subjecting yourself, your own body and your personality and your own social situation to the set of contingencies that play upon a set of individuals, so that you can physically and ecologically penetrate their circle of response to their social situation, or their work situation (Kibler, 2007: 95).

I utilised participant observation as one of my supplementary data generation methods, because it allowed me to observe the participants while they were going about their natural activities in their own natural settings. This method is compatible with my theoretical framework of choice, phenomenology, as has been mentioned in Section 4.2 above, in that it allows me to make sense of the situation in which the participants are and how they respond and interact to it.

Participant observation has been cited as being helpful in overcoming the discrepancies between what people say and what they actually do (Mays and Pope, 1995). This would be particularly helpful for the current study as the observation was taking place concurrently with focus group discussions. In addition, during participant observation I could link what the participants were saying and doing with their physical environment, as well as with the conditions under which they were doing and saying what they told me. I could make a link between what they were experiencing and what they perceived themselves to be doing.

By asking questions and interacting with the participants as they go about their tasks, participant observation provides a more in-depth look at how they [the researched] perform these tasks. Mays and Pope (*ibid.*) also concur with the idea that participant observation, due to its being a method that captures data in more natural settings in which people function by recording the context in which they work, helps to overcome the discrepancy between what people say and what they actually do, as well as their unexpected behaviours (Bryman, 2002, cited in Pålson 2007).

Mays and Pope (1995), further emphasising the statement above, state that participation observation

> circumvents the biases inherent in the accounts people give of their actions caused by factors such as the wish to present themselves in a good light, differences in recall, selectivity, and the influences of the roles they occupy (Mays and Pope, 1995: 186).

Having provided a literature-based account of the strengths of participant observation as a method of data generation, I now proceed to do the same in relation to the experience gained in carrying out this function in the field.

As previously stated in the foregoing sections, I spent a period of three weeks in each of the data generation sites. This proved to be advantageous for me, because, as time went on, I developed a trusting relationship with the people. This was further enhanced by my willingness to participate in some of their professional activities. This involvement brought me very close to the people as they were going about their natural functions, conversing with one another in

my presence. I thus learnt some of their informal ‘language’ and could even be taken into their ‘in-jokes’, as well as the origins of these.

As a result of this prolonged immersion in the participants’ situations, an immense amount of specific and detailed description of activities, conversations (both amicable and argumentative) and the various physical environments pertaining to each site, made their way into my field notes. This, according to Nelson (1994), is one of the advantages of participant observation because “a participant observer can study how participants analyze each other’s moves and ongoingly produce the characteristic or ‘objective’ feature of their interaction” (Nelson, 1994: 310).

For me, being situated in context in the different sites was a revelation of how easy it is for people to take their situations for granted. For example, in those schools where there was adequate water and sanitation, it was a non-issue that school improvement programmes should address the improvement of a school’s infra-structure, whereas this was one of the major concerns in those schools where there was no water and electricity. Therefore, participant observation helped me to situate these participants’ actions in context, which could never have been achieved by other means of data generation that can take place away from natural environments.

Like all ‘good’ data generation methods, participant observation has its limitations. Below, I discuss such limitations and, as has been the procedure in this section thus far, I present the literature account first and then report the limitations of this method as experienced in the present study.

Limitations of participant observation

While many researchers have cited the advantages of participant observation as a data generation method, some have noted its limitations from having used it in their own studies.

In Pålson’s (2007) study, the author notes that as a consequence of close cooperation, a risk of a lack of distance between the researcher and the researched group may appear and that it may be easy to adopt an internal perspective without critically examining information taken for granted and accepted as a fact. He also mentions that being an active part of the process investigated, it may be difficult to set the boundaries between participating and observing (Pålson, 2007: 158).

In their study of 1995, Mays and Pope state that the process of being a participant observer is “inevitably selective as it relies heavily on the researcher to act as a research instrument and document the world he or she observes.” However, “it is impossible to record everything” (184), especially if one has a dual

role, that of observing and that of participating in the observed situation.

One of the limitations cited by most researchers is the 'Hawthorne effect' that observation has on people, especially when they know that they are being observed (Mays and Pope, 1995; Mulhall, 2003; Nesset, 2005; Pina, 2006). They assert that it is difficult to separate the researcher from the researched (Mulhall, 2003) and that "the researcher never can be the invisible fly on the wall … is always part of the scene" (Nesset, *ibid*: 9).

In my own experience, the method's limitations were the dual role I found myself in. I found it very difficult trying to participate, observe and record observations all at the same time. Secondly, just as in Pålson's experience of the 2007 research project, I sometimes found it difficult to set the boundaries between my status as a researcher and my status as a participant, either as a teacher advisor or a workshop facilitator. This was more the case at the project headquarters than in the schools.

This difficulty, as I view it, resulted from my need to help the teachers come to grips with the principles, tenets and methods of the new curriculum, which was at that stage being phased in. At the same time, I needed to capture their reception of this help, as it would in my mind relate to their reception of the MASTEC programme. I needed this correlation for my study, but the problem was how to capture and record everything as it was unfolding.

Below, I provide an account of how I tried to compensate for the limitations I experienced during the data generation exercise as a participant observer.

Compensation for such limitations

I carried out a literature review of the participant observation method before I actually started with the data generation exercise. This helped highlight some of the problems which were reported by experienced researchers in this field. Therefore, I had an idea of what could have happened if I had not prepared myself for such problems. This does not mean that I did not experience any, but I was better prepared. For example, the decision I made of spending the first term of schooling as a participant observer emanated from the fact that being observed "may stimulate modifications in behaviour or action – the so-called 'Hawthorne effect', or encourage introspection or self-questioning among those being observed" (Mays and Pope, 1995:184). I already knew that spending that much time on site would sooner or later wear off the novelty of being observed. Concurring with this notion of 'novelty wearing off with time', (Mulhall, 2003) states that

> [T]he Hawthorne effect is an obvious drawback but my own field experience has led me to believe that its effect is overemphasized. Once the initial stages of entering the field are past, most professionals are too busy to maintain behaviour that is radically different from normal (308).

Because I knew that at some point I would be engaged in dual roles, the observations I made during the first few weeks bought me some time in that I could, during those weeks, concentrate on

the physical environment and the activities that were going on around me, as well as conversations that used to accompany these. The casual requests for clarifications and meanings of words that went along with those were so minimal that it was easy to make notes of them at the same time.

Additionally, having facilitated focus group discussions during my last week of stay in each site, helped to clarify and explain some of the issues that emerged during my dual role period. This meant that those pieces of the puzzle I missed at that time could, to some extent, be filled in during such discussions. This experience I found to be rewarding, as even during the discussions, observations were still continuing, the difference this time being that the participants dominated the discussions, thus affording me enough time to carry on with my recording.

In the following section I provide an account of the third method of data generation I employed for this study, that is, document examination or content analysis.

5.5 The use of document examination / analysis

It would appear as though document analysis has not been fully accounted for in literature, especially in qualitative research, although some researchers allude to having made use of this method as a data generation method in their studies, without providing any details of the method (Williamson and McGregor,

2006). To some extent, some researchers seem to blur the distinction between data generation and analysis when referring to document examination or content analysis (Hall and Rist, 1999; Nelson and Mc Sherry, 2002; Hsieh and Shannon, 2005; Kohlbacher, 2006). Kerlinger (1964) defines content analysis in the following manner, which further confuses what exactly this is:

> [C]ontent analysis, while certainly a method of analysis, is more than that. It is … a method of observation. Instead of observing people's behaviour directly, or asking them to respond to scales, or interviewing them, the investigator takes the communications that people have produced and asks questions of the communications (Kerlinger, 1964: 544).

Because of this blurring in distinction between document examination and content analysis as methods of data generation or analysis, I have decided to refer to the data generation method as document examination, and the data analysis method as content analysis, so as to avoid falling into the same trap.

The scant information in the literature that I have reviewed about document examination, does not seem to clearly state anywhere what theories or methodologies are associated with this data generation method. What has come forth strongly is that document examination can be employed in either quantitative or qualitative studies (Mayring, 2002; Bryman, 2004; List, 2005; Kohlbacher, 2006). Actually, there seems to be a consensus amongst these authors that document examination has its origin from a quantitative research orientation, where one common approach is to use a statistical model of word occurrences.

This data generation method has evolved from being a quantitative to a qualitative orientation due to engagement with, and critiques of, the quantitative stance from more qualitatively oriented researchers such as Mayring (2000) and Kohlbacher (2006), amongst others, who argue that there is more to the information contained in documents than the frequencies of words and concepts in them. These authors state that the manifest information, in which quantitative researchers are interested, is always accompanied by meanings, that is, latent content. The said authors argue for an amalgamation of quantitative and qualitative orientations to document analysis. Kohlbacher (2006) states that his research "help[s] to overcome the strict contraposition of qualitative and quantitative research … the combination and mixing of different research methods bears an enormous potential for the advancement of social research" (Kohlbacher, 2006: 2).

Rationale for using document examination

For the current study, I have made a conscious decision to make use of document examination as a data generation method for a number of reasons. Firstly, the project under study was assumed to have been established on some founding documents, and I felt that if I could gain access to these, they would yield valuable information regarding the conceptualisation and implementation plans of the project.

Secondly, I made the assumption that, as in all organisations, there must have been a number of staff meetings, which would

mean that a corresponding number of minutes of those meetings would be available. Therefore if I could obtain documents such as these, I would be able to access information, in an unobtrusive manner, which may not have been voluntarily provided during focus group discussions and observations.

Thirdly, in the schools setting, I would access teachers' record books, their annual scheme of work books, and their assessment records. All these documents I would examine and from the analysis of their content find out whether or not they corroborated findings from the other two data generation methods employed in the same study, as mentioned above in Sections 5.3 and 5.4.

Hsieh and Shannon (2005) define document analysis (which they interchangeably use as document examination) as a research method

> that goes beyond merely counting words to examining language intensely for the purpose of classifying large amounts of texts into an efficient number of categories that represent similar meanings … the goal of which is to provide knowledge and understanding of the phenomenon under study" (1278).

Defined thus, this method is seemingly of great advantage to a phenomenologically oriented researcher, as it enhances the quest to understand the participants' experiences and perception from their own writings, or from the writings that guide their activities.

A number of authors claim that one of the strengths of document analysis is that it is non-intrusive, an unobtrusive method that

allows for examination of a wide range of data over an extensive period (Webb, 1981; Babbie, 2001; Kohlbacher, 2006; McNamara, 2006). This results in making accessible to the researcher information that the participants would not have voluntarily provided (McNamara, 2006).

Other strengths of this method for data generation have been cited in literature as that it looks directly at communication via texts and hence gets at the central aspect of social interaction, and can therefore provide valuable historical or cultural insights over time through such examination (Colorado State University notes, 1993).

Through my personal experience during this study, I found that examination and analysis of documents, unlike other methods, allows for an elongated period of study, because once I had gained access to the relevant documents, I could examine them repeatedly, until I felt that everything I wanted from these was available. I could do the coding repeatedly, until I had established consistency or even divergence between the themes emerging out of these and the themes which had emerged from other data sources. Thus according to Bryman (2004)

> [T]he different stances that are taken up by the [different] authors of documents can be used as a platform for developing insights into the processes and factors that lie behind divergence (Bryman, 2004: 388).

Although document examination has its documented and experienced strengths, this method is not without its own share of

disadvantages, and in the section below, I provide these both from the literature's point of view, as well from the experience of the present study.

The limitations of document examination

A number of disadvantages have been cited in literature for this method of data generation. For example, one has been cited as the difficulty of gaining access to all the relevant documents that a researcher may be interested in as sources of data. This is usually due to the heterogeneity of the types of documents that may be needed, some of which may be in the public domain, whilst some may not be and as a result may not be available for the use of researchers (Bryman, 2004).

Company documents are likely to have been written by different groupings of people, who might be holding different particular points of view that they want to get across. Sometimes it may happen that the accuracy of the documents and the authorship may not be easily validated, especially if the individuals who produced them are no longer available to be interviewed (Foster, 1994: cited in Bryman, 2004).

According to Krippendorf (1980), the document examination technique resorts to designing different coding schemes for different research questions applied to different types of texts, and its limitation lies in the very richness in the variety of coding scheme designs.

From my personal experience of examining the relevant documents for this study, the first snag was that not all relevant documents were made available for my perusal. Some of those that were available had missing pages. Although I had incomplete documents, I found the process to be very time consuming, especially because the documents were all hardcopies. It would take a long time to retype them all in order to have them available in electronic formats. I did not have a sophisticated scanner that I could use to change them to an optical character recognition (OCR) format so as to be able to use computer software for the coding.

Another limitation experienced, was the difficulty of interpreting the written word and trying to make sense of the logic frame made use of by some evaluators of the MASTEC evaluation reports. Most of these reports were incomplete, which made it even more difficult to follow them.

Some of these limitations proved to be insurmountable; all this could be compensated for. Below is an account of how I attempted to compensate for a number of the limitations discussed above.

Compensation for limitations

As has been mentioned in the previous section, some of the required documents for this study were not in the public domain, and therefore I could not gain access to them. These were the proposal and founding documents of the MASTEC project.

Therefore, I used the documents I could gain access to, the project formative evaluation reports, some minutes of the project's steering committee meetings, and the school teachers' schemes of work, and lesson plans.

I tried getting hold of some of the authors of the evaluation reports to interview them about their reports. I could only get hold of the main author of the Ntombela report and had a telephone conversation with him about what I had difficulty interpreting in his report. This conversation helped to validate, authenticate and verify the Ntombela report (Bryman, 2004).

I used the themes that had already emerged from the other data sources to draw out similar themes from the documents examined. This saved me some time in trying to analyse from scratch.

Another attempt at compensating for some of these limitations was by employing the Mayring (2000) strategy of combining the qualitative and quantitative content analysis techniques so as to maximise on their individual strengths. The details of this strategy are provided in the following chapter, under data analysis.

5.6 Conclusion

In this chapter I have described the data generation methods and the sampling techniques I have employed in the main study. I have provided justifications for having employed these and discussed

the limitations experienced through their use. I have also outlined the measures taken as an attempt to compensate for such limitations. In the next chapter I provide an account of how I analysed the data generated from these methods.

CHAPTER 6

METHODS OF DATA ANALYSIS

Introduction

This chapter is divided into five sections. The first one, Section 6.1, describes how I sought to extract or identify the essence of and commonalities in the experiences of the different stakeholders or participants of the MASTEC project, by asking the question “what is the structure of the essence of experience of the [school improvement] phenomenon [as presented by the project], for these people” (Patton, 1990:69). The purpose of this exercise is that the essence can be used to communicate the meaning of the lived experience.

Therefore, in this first section, I provide an account of how I carried out a phenomenological data analysis approach, as laid out by Hycner (1985) and Patton (1990), adopting some guidelines and adapting others for fitness of purpose. I am cognisant of the belief that “unlike other methodologies, phenomenology cannot be reduced to a ‘cookbook’ set of instructions” (Keen, 1975 cited in Hycner, ibid).

In Section 6.2, I present a brief historical account of content analysis, tracing it from its origins through its evolution, to a point where it diverges into a technique that is amenable to use by those

adopting quantitative, qualitative, mixed or 'multiple methods' approaches to educational and social research. This section starts by tracing the origins of content analysis right through its evolution to the analysis technique I have decided to employ in this study.

Section 6.3 provides an account of the data analysis technique, which I chose for the current study in analysing the MASTEC project formative and summative evaluation reports, minutes of meetings, and my own field notes.

In Section 6.4 I provide a detailed illustration of how I have put into effect the data analysis technique whose account is provided in section 6.3. In this section I address my assumptions, present the data phenomenologically thus identifying significant statements. I then choose a single code as an example and a few themes to follow through until the process culminates in the results and discussion of such an analysis.

6.1 Phenomenological approach to data analysis

Hycner (*ibid.*) enumerates 15 steps of a series of procedures which can be utilised in phenomenologically analysing data as a guide for novice phenomenologists, whilst Patton enumerates five, based on the work from Douglass and Moustakas (1984) and six steps based on Moustakas (1990). I have also examined work from Moerer-Urdahl and Creswell (2004), which is based on Moustakas' transcendental phenomenology, listing the 5 steps that

Patton has made mention of. I therefore, examined all this work in order to decide what best fitted the purpose of my analysis.

In an attempt to strike a compromise between the steps of these authors' guidelines, I began by putting together, in one step, all that they separated, but that made sense to me as having the same meaning. I excluded those steps, which proved impossible to go through in my own study and reflected on the limitations that this exclusion might impose on the study. After reflecting on how I could compensate for these resulting limitations, I then tried to formulate the steps that I planned to follow in my own analysis, a hybrid of the three procedures. This process resulted in five steps, which I consider in turn below.

Epochè/ bracketing and reduction

According to Douglass and Moustakas (1984), "the first step in the phenomenological analysis is that of epochè" (cited in Patton, 1990: 407). During this step, I described my own experiences with the phenomenon of school improvement, which I hoped would provide my preconceptions or assumptions about the phenomenon. I engaged in this description to "become aware of personal bias" and tried to gain clarity about such preconceptions, then set them aside and focused on the views reported by the participants (Moustakas, 1994, cited in Creswell et al., 2004). To be able to do this, I needed to gain access to the constituent elements of the phenomenon and recall my own personal and

professional experiences working in schools of differing ethos and levels of achievement.

As a way of going through this bracketing process, I recalled two schools I have taught in, which fitted the description of being different in ethos and levels of pupil achievement. In order to protect the identity of the schools, I decided to name them schools ttt and vvv. In section 5.6 I named the previously advantaged schools that were participants in the MASTEC project as **XXX**, **YYY** and **ZZZ** for the same purpose.

In the one school ttt, I had a teaching experience of 5 months after which I resigned unceremoniously and assumed duties three months later in school vvv, in which I had a five year rewarding teaching experience. As I reflected on the two experiences, I allowed the preconceptions and prejudgements to enter and leave my mind freely. I was reflecting on all the positive and negative encounters in both schools and tried not to think about applying them to this study. I engaged in this process until I felt a sense of closure. After this process, I then proceeded to the next stage of analysis, immersion or listening for whole meanings and thus identifying significant statements from the participants as described below.

Immersion/listening for whole meaning

Moerer-Urdahl and Creswell (*ibid.*) refer to this stage of analysis as "horizonalisation – in which specific statements are identified in the

transcripts that provide information about the experiences of the participants" (9). The data, according to Patton (ibid), "are spread out for examination, with all elements and perspectives having equal weight" (406). At this point in the process, I used CAQDAS and imported the transcripts from Microsoft Word to a new file on Atlas ti, to create a database. It was in the new hermeneutic file that an identification of the significant statements was made, by assigning them to a quotations file. After this process, the next step was to delete those statements which were irrelevant to the topic and others which were repeated or overlapping.

Coding to reveal units of general meaning/themes /illumination

The statements remaining from the process of deleting mentioned in the previous step were the horizons or textural meanings. From these meanings, the significant statements were then clustered into themes or general units of meanings.

Summarising /explication

The themes emerging from this clustering were analysed, so as to develop a description of what was experienced and how it was experienced in textual and structural descriptions (Moerer- Urdahl and Creswell, *ibid*.).

Composite summarising/structural synthesis/creative synthesis

Lastly, I synthesised the textural and structural descriptions of the experiences into a composite description of the phenomenon

through the research process referred to by Moustakas (1994) as “intuitive integration” (100). This description became the essential, invariant structure of the ultimate essence, which captures the meaning ascribed to the experience (Moerer-Urdahl and Creswell, *ibid*.).

Having provided an account of the phenomenological data analysis technique I have employed in this study, I now proceed to provide an account of the data analysis technique I have used in the analysis of the documents, from the schools and the project head-quarters. This technique is referred to as content analysis, the details of which are provided in the following section.

6.2 Content analysis

As previously stated, in this section I present a brief historical account of this data analysis technique.

Due to its evolution, content analysis has been defined to accommodate the three paradigms mentioned above and has as a result three distinct forms of definition forms. Graneheim and Lundman (2004) assert that there have been conflicting opinions and unsolved issues regarding the meanings and uses of concepts, procedures and interpretations in qualitative content analysis, which, in my view might have given rise to the evolution of the technique.

I thereafter proceed to provide an account of the qualitative content data analysis technique I employed according to the theoretical underpinning of this study. Then I provide the literature definitions of such content analysis. An appropriate definition for the current study is then chosen and provided, so as to guide the process of data analysis, which process has been detailed below.

Historical background of content analysis

Content analysis has its origins from the communications field especially media analysis (Berelson, 1952; Holsti, 1969; Krippendorf, 1980; Neuendorf, 2002; List, 2005), and has been accordingly defined as:

i) "[R]esearch technique for the objective, systematic and quantitative description of the manifest content of communication (Berelson, 1952: 18);

ii) "[C]ontent analysis is a summarising, quantitative analysis of messages that relies on the scientific method … "(Neuendorf, 2002: 10);

iii) "[A] method for summarising any form of content by counting various aspects of the content – a quantitative method (List, 2005: 1).

Therefore, content analysis has always been about the counting of words and/or concepts to discover the frequencies in which each occurs per document thus analysed. For this reason, content analysis has been about finding out about the manifest content of documents. This technique has therefore, been very definitely referred to as a positivist technique of data analysis. The idea was that the frequencies would provide an insight into what was viewed as being of importance by the document's writer. In concurrence with this notion, Stemler (2001) states that "the assumption made

is that the words that are mentioned most often are the words that reflect the greatest concerns" (2).

In line with this thinking, content analysis has been defined as a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding (Berelson, 1952; Krippendorf, 1980; Stemler, 2001; Bryman, 2004).

This strong emphasis on determining word counts and therefore, their frequencies has been an object of criticism from qualitative researchers, saying that content analysis essentially reduces text into numbers, thus missing syntactical and semantic information embedded in the text (Zhang, 2006). It is criticisms like these amongst others (Weber, 1990; Miles and Huberman, 1984; Zhang, 2006; Macnamara, 2006; Freeman, Gorter, Mc Williams, and Williams, 2007) of quantitative content analysis techniques as being "reductionist," which led to the evolution of content analysis from a quantitative to a qualitative orientation. This evolution has given rise to some changes in the definitions of content analysis, which then became referred to as **qualitative content analysis**. The following definitions are examples of such changes:

i) [A]n approach to documents that emphasises the role of the investigator in the construction of the meaning of and in texts. There is an emphasis on allowing categories to emerge out of data and on recognising the significance for understanding the meaning of the context in which an item being analysed (and the categories derived from it) appeared (Bryman, 2004: 542);

ii) [A] research method for the subjective interpretation of the

> content of text data through the systematic classification process of coding and identifying themes or patterns (Hsieh and Shannon, 2005: 1279).

Defined thus, Zhang (2006) maintains that “qualitative content analysis goes beyond merely counting words or extracting objective content from texts to examine themes and patterns that appear or are latent in the manifest content” (1).

It would seem as though the ‘paradigm wars’ (Kohlbacher, 2006) also affected the content analysis debate, because as this approach to data analysis was evolving and therefore changing in orientation, it did not stop at the newly defined qualitative content analysis. This evolution proceeded to a point where some researchers (Mayring, 2000; Macnamara, 2006; Kohlbacher, 2006) argue the ‘complementarity’ of the quantitative and qualitative oriented content analysis. Assenting to this notion, Kohlbacher (2006) states that “the combination and mixing of different research methods bears an enormous potential for the advancement of social research” (2).

This debate gave rise to an amalgamation of what was regarded as being useful and, as a result, not mutually exclusive in both paradigms. Going along with this contention, Shoemaker and Reese (1996) categorise content analysis into humanist and behaviourist traditions, which indicates that content analysis can be undertaken using both approaches. They state that “behavioural content analysis is not always or necessarily

conducted using quantitative or numerical techniques, but the two tend to go together" (cited in Macnamara, 2006: 5).

The proponents of this new 'mixed methods' debate then gave rise to new definitions of content analysis as:

> i) [A]n approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytical rules and step by step models, without rash quantification (Mayring, 2000: 5).
>
> ii) [A] text analysis method for qualitative social research (Kohlbacher, 2006: 2).

It can be concluded from these various 'mixed approach' definitions of qualitative content analysis that both quantitative and qualitative approaches to content analysis have advantages and disadvantages. It is making use of a combination of the two that according to McNamara (2006):

> [O]ffers the best of both worlds and, further, that a combination of quantitative and qualitative content analysis methodologies is necessary to fully understand the meanings and possible impacts of media texts *(6).*

Being faced with such an array of content analysis techniques, one had to choose the one which was most relevant and appropriate to the methodological framework and research design of the current study. Having made use of multiple qualitative methods of data generation it seemed sensible to employ a 'multiple methods' technique of data analysis. Therefore, the technique I chose to use is the one adopted by Mayring (2000) and Kohlbacher (2006).

6.3 The content analysis technique chosen for the study

I felt drawn to the work of the following proponents of the mixing of paradigms in carrying out content analysis (Mayring, 2000 and 2003; Kohlbacher, 2006; Zhang, 2006), due to the use of multiple methods of data generation I have employed in this study. It seemed to make sense to me to continue combining methods, even when it came to data analysis. Using the phenomenological approach in conjunction with content analysis would appear to satisfy that quest, but coming across the 'mixed' methods specifically for content analysis became even more appealing than any other technique.

Mayring (2002) developed a procedure for qualitative text analysis which seeks to combine the two paradigms to "overcome the shortcomings of classical quantitative analysis by applying a systematic, theory-guided approach to text analysis using a category system (Kohlbacher, 2006: 8). In his study, Kohlbacher (2006) also used the Mayring (2000, 2002, 2003) procedures of content analysis with an aim of "exploring and discussing the possibilities of applying qualitative content as a text interpretation method" (Kohlbacher, 2006: 1). Zhang (2006) also developed an approach to content analysis which "seems quantitative at early stage, but it intends to explore the usage of the words in an inductive manner" (Zhang, 2006: 2). In other words Zhang (2006)

in his study, also attempted to combine the two paradigms, albeit a little differently from Mayring and Kohlbacher (ibid).

Having gone through the work of the three above-mentioned researchers, the work I found to be very close to my own study turned out to be the Mayring study of 1983, whose main idea is:

> [T]o preserve the advantages of quantitative content analysis as developed within the communication Science and to transfer and further develop them to qualitative-interpretative steps of analysis (Mayring, 2000: 1).

Below, I provide the technique which this researcher employed and which is the one I adopted for my own content analysis.

'Mixed methods' content analysis technique

This approach to data analysis has been cited in literature as having been viewed favourably by quite a number of researchers (Gilmore and Carson, 1996; Khunti, 1999; Tashakori and Teddlie, 1998; Creswell, 2003; Bryman, 2006).

According to Mayring (2000), "[a team of his researchers (Uhlich, Hausser and Mayring et al., 1985)] developed a number of procedures of qualitative content analysis, amongst which two approaches are central: inductive category development and deductive category application" (Mayring, 2000: 3).

Inductive category development

In their psychological longitudinal study of 1985, Mayring's team of researchers uncovered reductive processes formulated within the

psychology of text processing, and making use of these, developed procedures of inductive category development, which are oriented to such reductive processes. Mayring (2000) states that:

> [T]he main idea of the procedure is to formulate a criterion of definition, derived from theoretical background and research question, which determines the aspects of the textual material taken into account. Following this criterion the material is worked through and categories are deduced tentatively and step-by-step. Within a feedback loop the categories are revised, eventually reduced to main categories and checked in respect to their reliability (4).

This step model of inductive category development is schematically represented in Figure 6.1 below, and depicts the procedure outlined above.

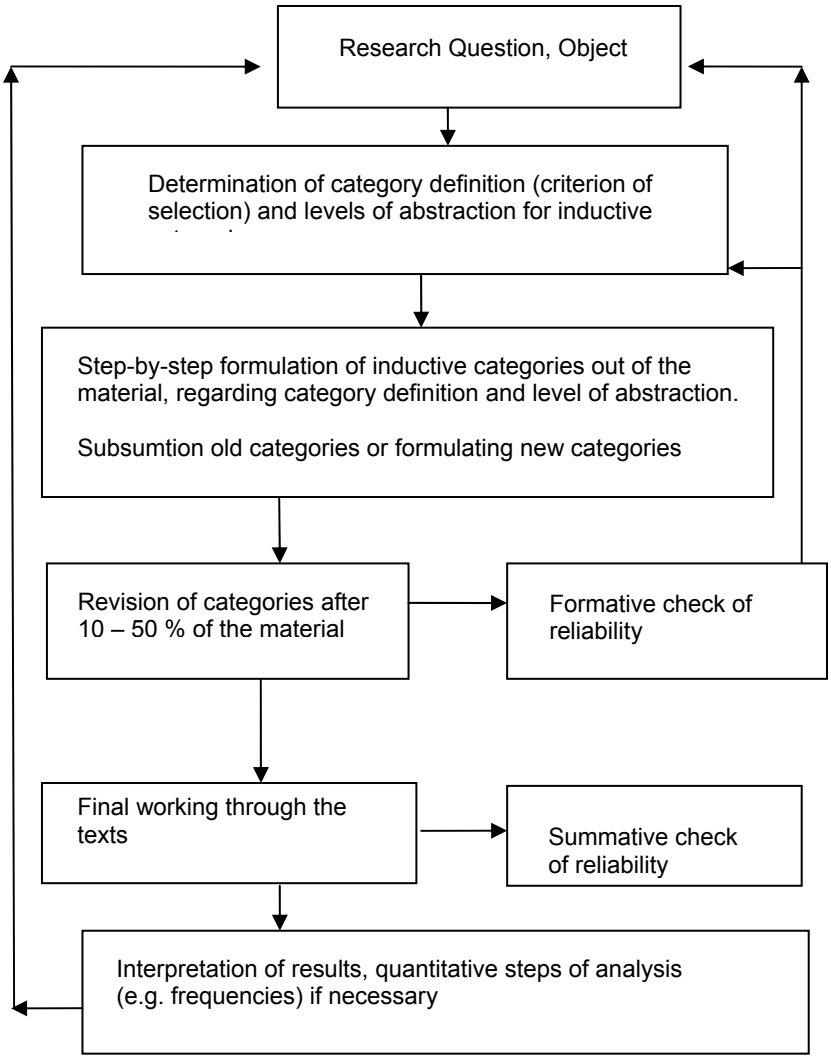

Figure 6.1: A "Step model of inductive category development" of content analysis

Deductive category application

In this section, I provide a step-by-step model of deductive category application as adapted from Mayring *et al.* (2000). An explanation of how this application works is provided in the following citation and is depicted in figure 6.2 below:

> Deductive category application works with previously formulated, theoretically derived aspects of analysis, which are brought into connection with the text. The qualitative step of analysis consists of a methodologically controlled assignment of the category to a passage of text. Even if several procedures of text analysis are processing that step, it is poorly described (5).

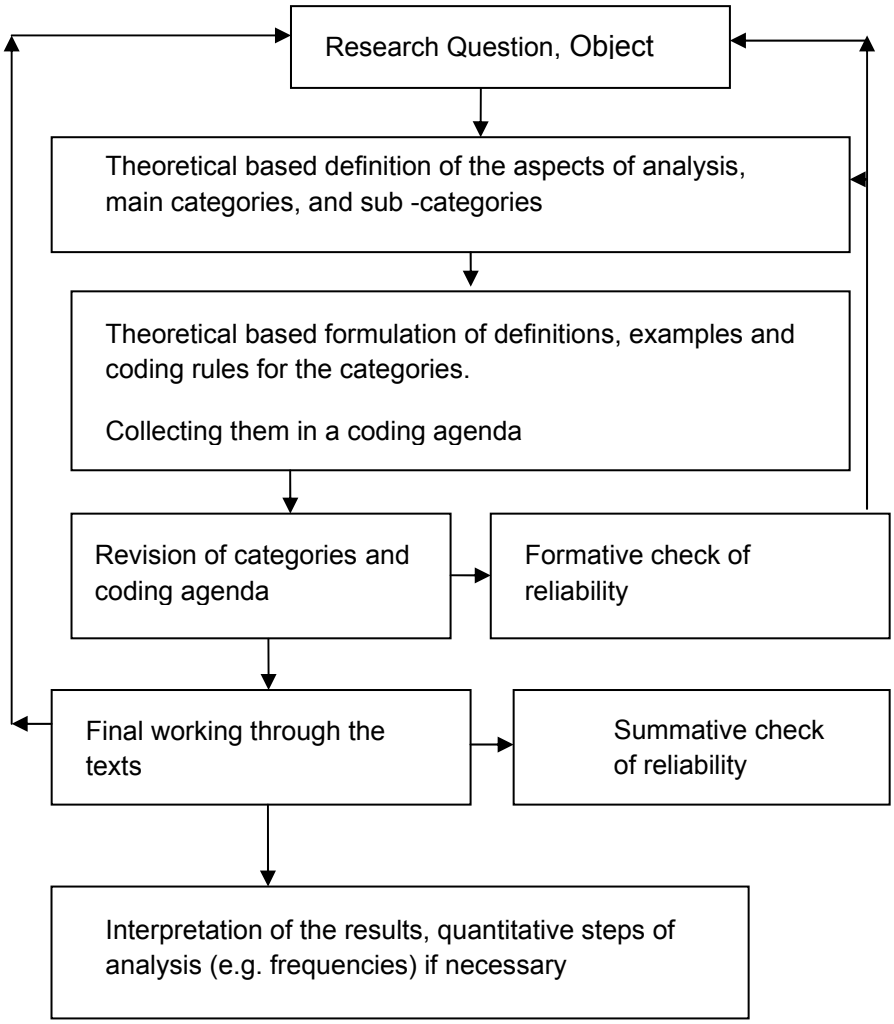

Figure 6.2: A "Step model of deductive category application" of content analysis

Having provided an account of the data analysis technique used for qualitative content analysis, I now proceed to provide in the next section a detailed illustration of how I integrated the methods discussed above for the data generated by all three methods as discussed in the previous chapter.

6.4 Example of detailed data analysis

This section seeks to provide an example of the progression from data generation to data analysis using only a small part of the data generated. I therefore provide a detailed account of the procedure which I employed in trying to make sense of the data generated by means of a focus group discussion of the MASTEC Project INSET lecturers. In order to do this I first describe the phenomenological analysis steps which I carried out, followed by a tabulated list of the significant statements I identified, (**table 6.1**). The next logical step to follow is to present the formulated meanings which the significant statements make. These are tabulated in **table 6.2**, and it is from them that I develop clusters of meanings – the emerging themes.

In presenting these themes I provide a list with their accompanying networks imported from the Atlas ti version 5.0 files, and therefore have diagrammatic representations which illustrate, for each theme, the meanings formulated from the significant statements together with the significant statements with which they are associated. I repeat this process for each of the emerging themes.

Making use of the phenomenological methods alluded to above has been helpful in elucidating from these discussions how the lecturers experienced the school improvement phenomenon as afforded by the MASTEC school improvement programme, and what meanings they attached to such experiences.

In analysing the presented data, I first of all made a presentation of my assumptions pertaining to this study, bracketed them (epoche´) and thereafter examined the formulated meanings (coding), and the emerging themes (immersion) in order to extract a description of the essence of the structure of this group's experience of the MASTEC Project as a school improvement programme. I thereafter developed a summary description for each theme (explication), after which I provided a composite creative synthesis of the lecturers' experiences, by rereading the original transcript and revisiting the significant statements, formulated meanings and themes, and thus bringing together all the summary descriptions of the individual themes (Moerer-Urdahl and Creswell, 2004; Douglass and Moustakas, 1984, and Moustakas, 1990 cited in Patton 1998).

6.4.1 Assumptions/preconceptions

In following through with this method, I brought to the surface my assumptions by considering and recollecting my own in-school experiences of two schools I have taught in, which fit the description of being different in ethos and levels of pupil achievement. In one school xxx, I had a teaching experience of five months after which I resigned unceremoniously and assumed duties three months later in school vvv, in which I had a five year teaching experience. As I reflected on the two experiences, I allowed the preconceptions and prejudgements that schools like school xxx are 'bad schools' and that school like vvv are 'good' schools, to enter and leave my mind freely. I was reflecting on all the positive and negative encounters in both schools and tried not to think about applying them to this study.

I engaged in this process until I felt a sense of closure (Moerer-Urdahl and Creswell, ibid; Miles and Huberman, 1994; Creswell, 1998; Silverman, 2005).

6.4.2 Data presentation

After this process, I then proceeded to the next stage of analysis, immersion or listening for whole meanings and thus identifying significant statements from the participants as elucidated below. To do this I revisited the lecturers' transcript, and labelled the statements so as to easily highlight duplicates and/or redundancies. Once the latter were eliminated, the result was **72** significant statements extracted *ad verbatim* from the transcripts, portions of which are shown in **Table 6.1**. These statements have been designated "significant" as they relate to significant issues pertaining to the study.

For instance, statement **1:1** relates to the methods and /or criteria of both recruitment and selection of these particular members of the MASTEC Project staff, by way of trying to find out if there were any special requirements from potential staff as far as experience and/or qualifications in school improvement.

Statement **1:6** relates to consideration of special populations especially the previously disadvantaged and gender representativeness in the staffing, which answers to the project aim.

Statement **1:13** relates to the INSET/PRESET synergy and staff capacity building initiatives, and was trying to find out whether or not

such synergy existed between the two components of the project, as well as their mode of training.

1:1 Boitumelo: Some of us, that is Salf, Sad and me were sort of "headhunted", we had been working in the previously rationalised Colleges of Education, and fortunately had been recommended to the MEC, whose brainchild the MASTEC project was **(8:8)**

1:6 Meshack: No, never…there wasn't anything like that. I do not think for positions like this there would be any considerations for disabled people, because our duties include driving to the schools for deliveries and sometimes for in-schools visits **(17:17)**

1:13 Moses: What also helped us were the staff development sessions we used to hold as the INSET and PRESET staff members. There we used to discuss our progress and problems. We also revised a lot of the learning theories and shared how to practise these when teaching pupils. So.... during the workshops we would help the teachers revise those theories and develop learning activities around those. **(30:30)**

Table 6.1 Significant Statements

I then proceeded to formulate meanings from these statements by going back to the transcripts to read and reflect upon them to make

sense of what the participants could have meant by their statements. Resulting from this meaning formulation exercise are **34** codes clustered into code families or themes, which emerged from this group discussion.

These 34 codes are presented in **table 6.2** below:

Capacity building -
Capacity building +
Capacity building impact on teacher change -
Capacity building impact on teacher change +
Consideration for preferred groups -
Consideration for preferred groups +
Implementation challenges
Implementation of aim (girl empowerment) +
Implementation of aim (girl empowerment) -
INSET staff expectations of teachers during school experience sessions
INSET: PRESET synergy -
INSET: PRESET synergy+
Involvement in the MASTEC curriculum development
MASTEC Project benefits
MASTEC staff influence on teacher practice
Opinion of role in the MASTEC duality
Opinion on MASTEC curriculum development
Opinion on project focus change
Opinions on school improvement project impact
Opinions on stated project aim
Recommendations for a better project
Recruitment method
Required qualifications
Role in school improvement
Selection method
Staff insecurities
Student teacher application of learning theories

Teacher familiarity with MASTEC curriculum
Understanding of MASTEC project duality -
Understanding of MASTEC Project duality +
Understanding of Project aim -
Understanding of Project aim +
Understanding of school improvement
Implementation of evaluation recommendations -
Implementation of evaluation recommendations+

Table 6.2 Formulated Meanings / Codes

Table 6.2 provides the 34 codes resulting from the statements, but does not indicate what significant statements have been put together to produce the meanings. As a means of compensating for this flaw, I then decided to present the meanings diagrammatically, in such a manner that each code or meaning would be shown with its associated significant statements. As I was about to follow through with this decision, I was confronted with the realisation that such a diagram would be too big and messy. Therefore, I decided to select one code as an example, and this I illustrate in **Figure 6.3** below.

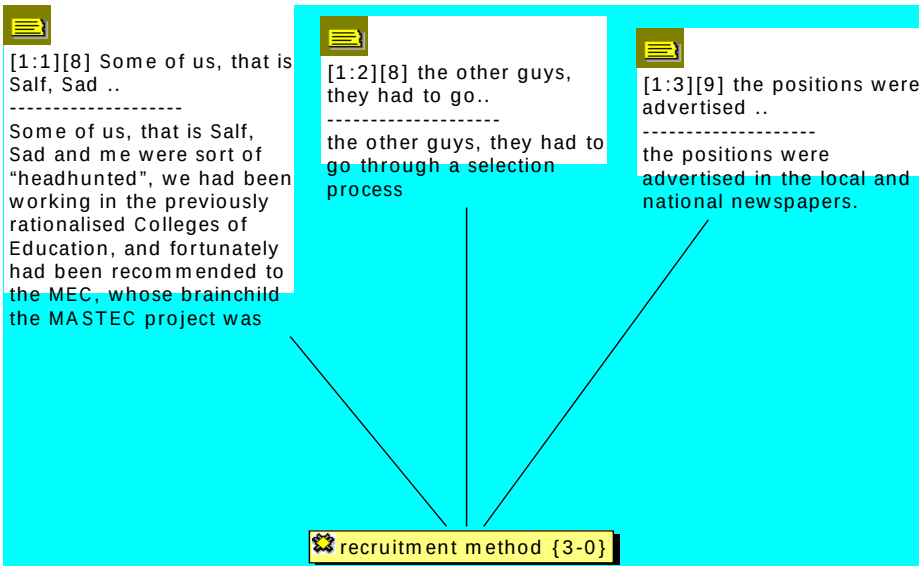

Figure 6.3 Code: Recruitment method; with three associated significant statements

As indicated, this diagram shows the code of meaning "recruitment method;" with three significant statements from which it was formulated. In the diagram, the statements are shown with reference to the transcripts as indicated by the numbers inside the parenthesis. For example all these three statements were extracted *ad verbatim* from document number **1** and the numbers following the colon after **1** is the quotation number, and the second set of parenthesis indicates the line number in the transcript from where such statement have been extracted. For instance the statement on the left hand side of the diagram has been taken from transcript number **1** and is the 1st significant statement in the transcript, which is on line 8 of that transcript number **1**.

The network of significant statements which have given rise to the code is accompanied by a reference system indicating how many significant statements the code is associated with by the first

number inside the parenthesis. The second number inside the parenthesis indicates whether it is linked to other themes, for instance the “recruitment method” code is associated with three significant statements and not linked to any theme hence the notation **{3-0}.**

I then proceeded to cluster the meanings so as to identify the emerging themes, and referred these back to the original statements in the transcript, as a means of validation (Creswell, 1998: 281), to examine whether or not they are proposing something new that was not originally stated by the participants. From this process nine themes emerged, which I labelled as;

1. Appointment criteria;
2. Capacity building;
3. Factors relating to project aim;
4. Difficulties relating to implementation;
5. INSET staff/teachers relationships;
6. Issues pertaining to implementation in different contexts;
7. MASTEC Project duality;
8. Opinions on project value; and
9. Recommendations.

Two examples of these themes are presented diagrammatically below, each shown with its constituent codes indicating a network, followed by a second diagram showing the theme together with its codes and the associated significant statements. The first theme,

which is referred to as CF (code family) in Figure 6.4: “Appointment criteria” is made up of three codes, namely:

- Selection method;
- Required qualifications; and
- Recruitment method.

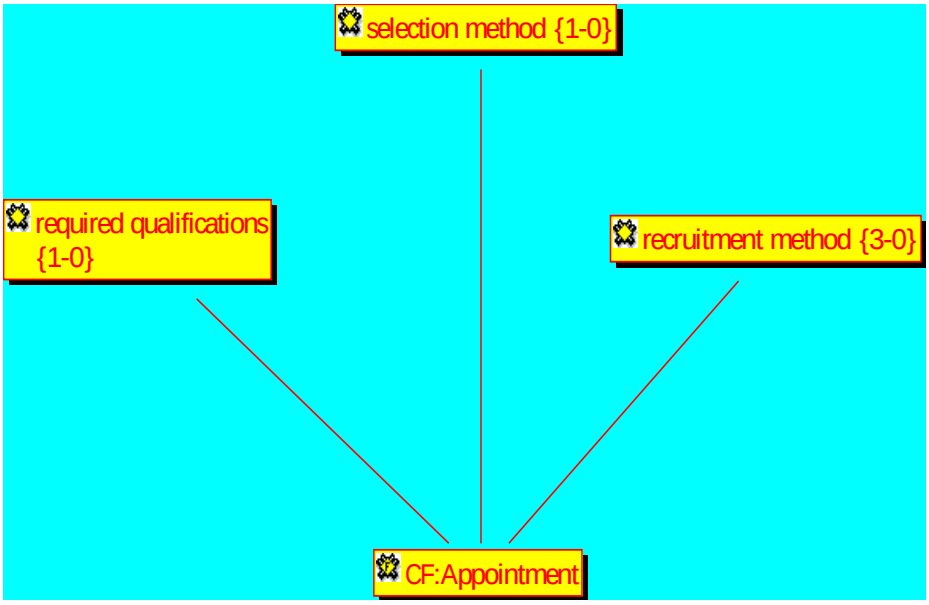

Figure 6.4 Theme: Appointment Criteria

The codes from which the themes have emerged are shown arranged with the referencing system alluded to above, which indicates at a glance how many codes make up the theme, whether or not the code is linked to other themes, and how many themes it is linked to. Also indicated is the number of original significant statements associated with particular codes. This information has been presented diagrammatically below in **Figure 6.5**, an extended version of **Figure 6.4.**

Figure 6.5 is an extension of **Figure 6.3** showing the one code: "recruitment method" with all its three significant statements as well as its two associated codes with their significant statements. All this information has been labelled for ease of reference relating to the transcript, as explained in the following passage.

This figure clearly illustrates the theme (block at the bottom centre, labelled as CF: Appointment – meaning code family) surrounded by three codes of meaning, each being linked to the theme by a dotted line. For example the code: "recruitment method" is associated with the theme: "appointment". The significant statements associated with this code, as shown are the statements **1:1; 1:2** and **1:3** to be found on lines **8** and **9** of the transcript number 1.

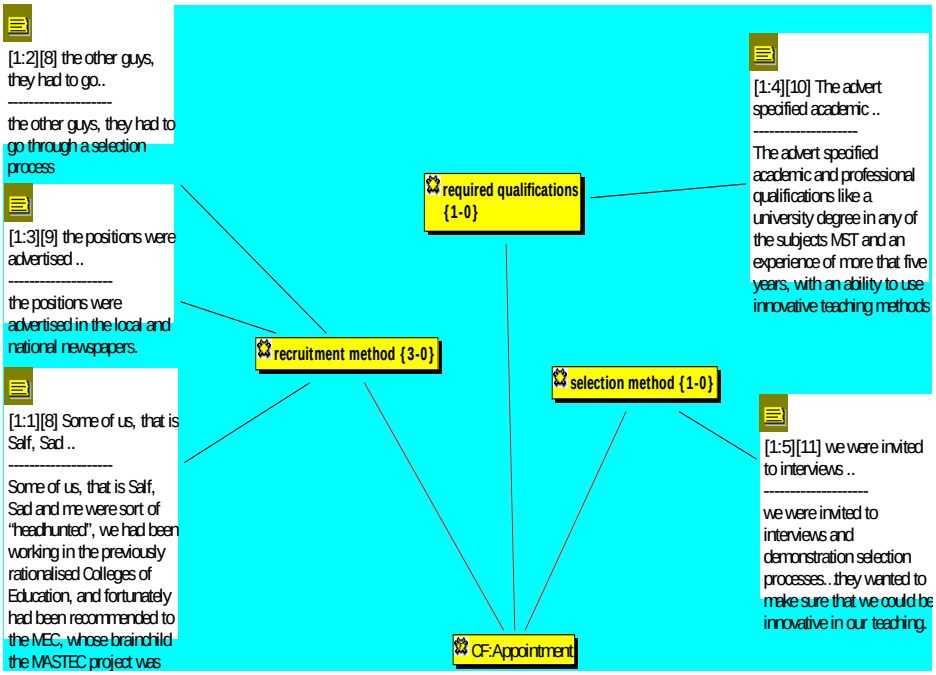

Figure 6.5 Theme: Appointment Criteria, illustrating the significant statements and clusters from which they have emerged.

The following diagram, **Figure 6.6** is an illustration of the second theme: Capacity building. It is also followed by a detailed diagram, **Figure 6.7**, which shows the significant statements from which the clusters that resulted in this theme emanated. The same procedure was followed throughout until all the nine themes had been diagrammatically represented.

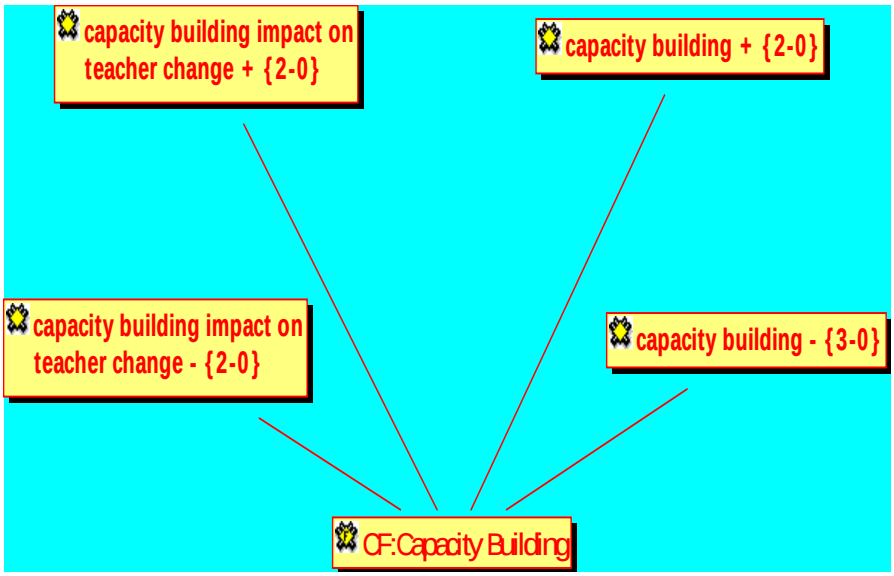

Figure 6.6 Theme: Capacity building

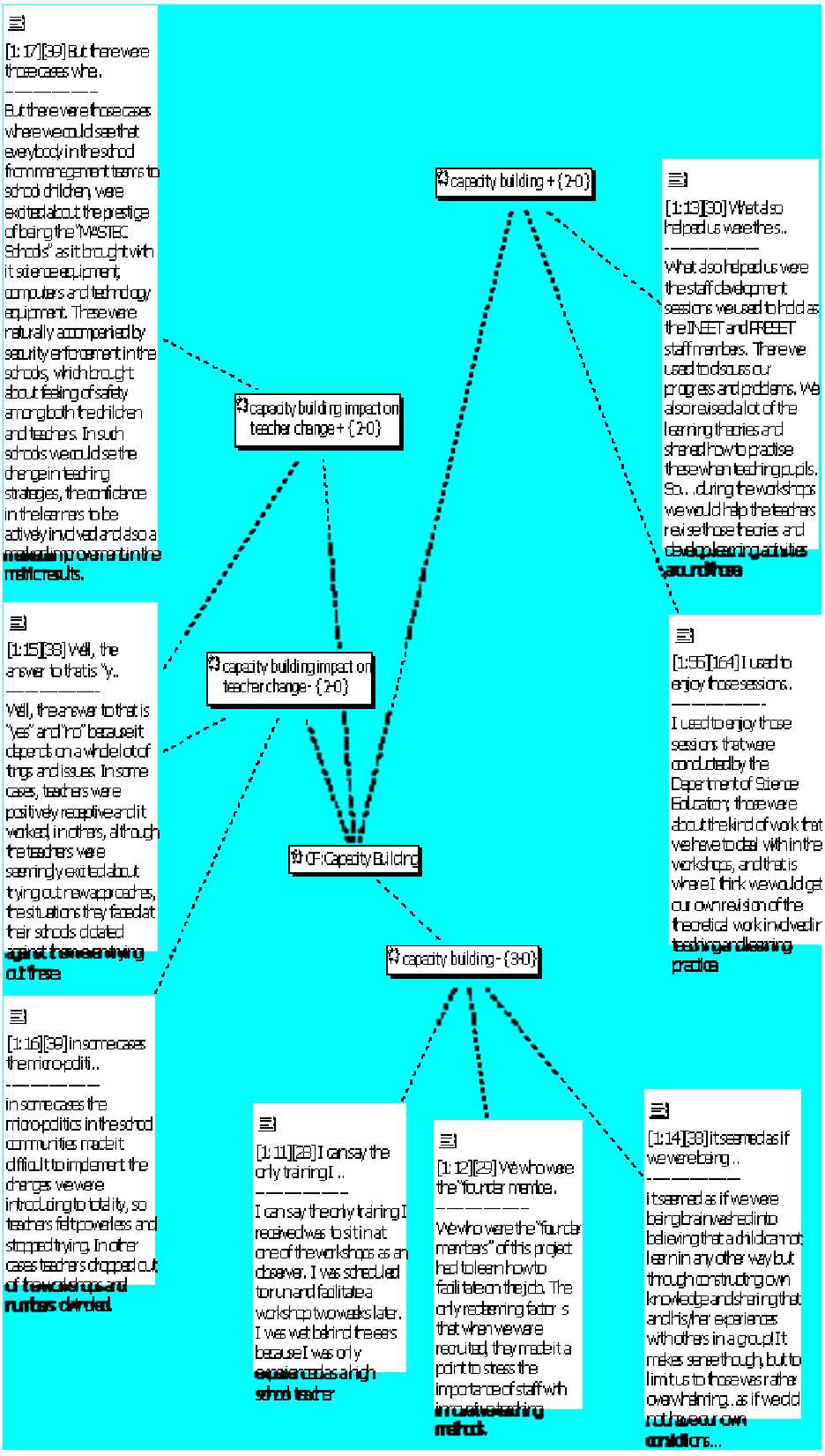

Figure 6.7 Theme: Capacity building illustrating the significant statements and clusters from which they have emerged

6.4.3 Results of data analysis

For the purposes of this thesis chapter I have presented only two of the nine themes which emerged out of the meanings formulated from the participants' significant statements. These two themes are:

- Appointment criteria; and
- Capacity building.

Summary description: appointment criteria

From the information provided by the MASTEC Project INSET staff members, it would appear as though there were no appointment criteria, or if there were, there was no consistency in their application. This is demonstrated by the following quotations cited directly from the transcripts:

Boitumelo: Some of us, that is Salf, Sad and me were sort of "headhunted", we had been working in the previously rationalised Colleges of Education, and fortunately had been recommended to the MEC, whose brainchild the MASTEC project was. But for the other guys, they had to go through a selection process

Sekgape: Yah! Some of us are more equal than others. Well, the positions were advertised in the local and national newspapers. So, those of us who were not known…had to apply like all normal people do.

Winnie: The advert specified academic and professional qualifications like a university degree in any of the

subjects MST and an experience of more than five years, with an ability to use innovative teaching methods

Meshack: Then we were invited to interviews and demonstration selection processes…they wanted to make sure that we could be innovative in our teaching.

Summary description: capacity building

This theme related to the MASTEC Project INSET staff had been afforded capacity building opportunities to equip them with facilitation skills particularly for school improvement initiatives. What emerged was a two-pronged result, with both positive and negative findings as evidenced by the following quotations:

Boitumelo: What training are you talking about? Man, I remember the first day I arrived; there was a hurried induction meeting, where I met all the guys. Immediately thereafter we drove off to the Mankweng area schools to deliver some computers and to confirm a workshop that was scheduled for that Wednesday. I can say the only training I received was to sit in at one of the workshops as an observer. I was scheduled to run and facilitate a workshop two weeks later. I was wet behind the ears because I was only experienced as a high school teacher…teaching teachers was going to be a nerve wrecking experience for me. But when that day came I requested one of the experienced guys to sit in with me

as a co-facilitator. That helped a lot and up to this day I regard it as the training I received.

Mashao: You were lucky because you were one of those who joined the team later. We who were the “founder members” of this project had to learn how to facilitate on the job. The only redeeming factor is that when we were recruited, they made it a point to stress the importance of staff with innovative teaching methods. So, what I did was to share with colleagues my new and innovative teaching strategies that take into account how the learners learn (learning theories).

Moses: What also helped us were the staff development sessions we used to hold as the INSET and PRESET staff members. There we used to discuss our progress and problems. We also revised a lot of the learning theories and shared how to practise these when teaching pupils. So .. .during the workshops we would help the teachers revise those theories and develop learning activities around those.

Salf: Yeah! That was helpful; I remember that some of those I did not even learn at College, they were new to me…theories like constructivism and socio-culturalism…

Winnie: Oh! You mean the famous isms of **xyz**? Remember those days?

Salf: Ja…very well…it seemed as if we were being brainwashed into believing that a child cannot learn in any other way but

through constructing own knowledge and sharing that and his/her experiences with others in a group! It makes sense though, but to limit us to those was rather overwhelming…as if we did not have our own convictions…

Stu: …hence even in the schools the teachers would refer to these theories as the MASTEC Approach…it was so blatantly MASTEC brainwashing

Mashao: Well, the answer to that is “yes” and “no” because it depends on a whole lot of things and issues. In some cases, teachers were positively receptive and it worked, in others, although the teachers were seemingly excited about trying out new approaches, the situations they faced at their schools dictated against them even trying out these.

Boitumelo: Also, in some cases the micro-politics in the school communities made it difficult to implement the changes we were introducing to totality, so teachers felt powerless and stopped trying. In other cases teachers dropped out of the workshops and numbers dwindled. But there were those cases where we could see that everybody in the school from management teams to school children, were excited about the prestige of being the “MASTEC Schools” as it brought with it science equipment, computers and technology equipment. These were naturally accompanied by security enforcement in the schools, which brought about feeling of safety among both the children and teachers. In such schools we could see the change in

teaching strategies, the confidence in the learners to be actively involved and also a marked improvement in the matric results.

6.4.4 Discussion:

In conclusion, taking into account the first of the two themes under consideration in this report, that is appointment criteria and capacity building, it would appear from these discussions that the MASTEC Project INSET staff members were recruited, selected and appointed with no consistent appointment process, which may imply a lack of sustainable and coordinated recruitment policy. This might result in a workforce that is varied in terms of carrying out the project vision and mission.

In as far as the second theme of capacity development is concerned; the staff indicated through this focused group discussion that this initiative yielded both positive and negative results.

The positive result indicates that some capacity building initiatives were run through weekly staff development sessions and that these were about colleagues sharing their experiences and addressing their implementation and preparation problems. These sessions, according to these participants, appear to have positively influenced some changes in the school teachers' lesson preparations and teaching. This assertion is evidenced by the conversation cited in the previous section.

The negative result pertains to the INSET staff's training for school improvement. It would appear from these discussions that the project might not have had a scheduled training programme to equip the appointees with skills relating to workshop facilitation and dealing with school improvement issues. This apparent lack of training on the staff's side seemed to have negatively influenced their school improvement implementation processes. Evidence to this effect is illustrated by the conversation cited in the section above.

6.5 Conclusion

In this chapter I have provided a detailed account of the methods of data analysis I have employed in this study. In the next three chapters, I present the findings of this study. Chapter 7 discusses the MASTEC project participants' perceptions of their experiences of how the school improvement programme was implemented. Chapter 8 presents the MASTEC project benefits and limitations, as perceived by the project participants. Chapter 9 deals with these participants' perceptions of the importance of the extent to which programmes are context-related.

CHAPTER 7

PARTICIPANTS' PERCEPTIONS OF HOW THE MASTEC PROJECT WAS IMPLEMENTED

Introduction

In this chapter, I present the first set of the findings of this study, the participants' perceptions of how the MASTEC project was implemented. These findings consist of six themes which emerged from the analyses of data from the focus group discussions, document examination and participant observation field notes. These themes are:

- the manner in which the project staff were recruited;
- the existence (or otherwise) of capacity-building programmes for the project personnel;
- the ability of the participants to implement the MASTEC programme;
- the existence (or otherwise) of synergy between the INSET and PRESET elements of the MASTEC project;
- communication between the project stakeholders; and
- matters relating to how the project was implemented in relation to its aim.

In Sections 5.1 to 5.6 below, I present each of these themes with supporting evidence from the data sources. I provide in Section 5.1

an example in the form of an illustration (figure 5.1) of how the data were analysed, to show how the themes emerged.

7.1 The MASTEC project staff recruitment strategies

The statements of the MASTEC staff from both elements of the project suggested that the recruitment process from advertisements right through to selection and appointment procedures, did not reflect that a particular breed of personnel would advance the aim of the project – increasing attainment in mathematics and science in the previously disadvantaged pupils in the Northern Province [Limpopo] especially girls. Neither was this emphasized upon their ultimate appointment.

Both INSET and PRESET members of staff intimated that they were each recruited, selected and appointed in different ways, which suggested a lack of appointment policy. This, they suggested, was a pitfall for programme implementation, as there was no standardised manner of recruiting, selecting and appointing staff of a similar calibre.

The staff complement, according to their reports, was contrary to the purported claim of targeting the 'previously disadvantaged … especially girls'. The recruitment process they described shows no signs of having been a focused procedure related to a clear aim, as is illustrated by the extracts below, and the resulting staff complement did not itself portray gender equity.

[1]Boitumelo: “Some of us, that is Salf, Sad and me were sort of “headhunted”, we had been working in the previously rationalised colleges of education, and fortunately had been recommended to the MEC whose brainchild the MASTEC project was. But for the other guys, they had to go through a selection process.”

[2] Nto: “The positions are usually advertised in local and national newspapers and therefore we applied, got invited to interviews and were selected. The selection criteria usually appear in the advert and that is what we use to shape and update our CVs.”

[2] Vio and Mash: “We did not have to apply because we were deployed from the previously rationalised colleges of education on recommendation to the MEC.”

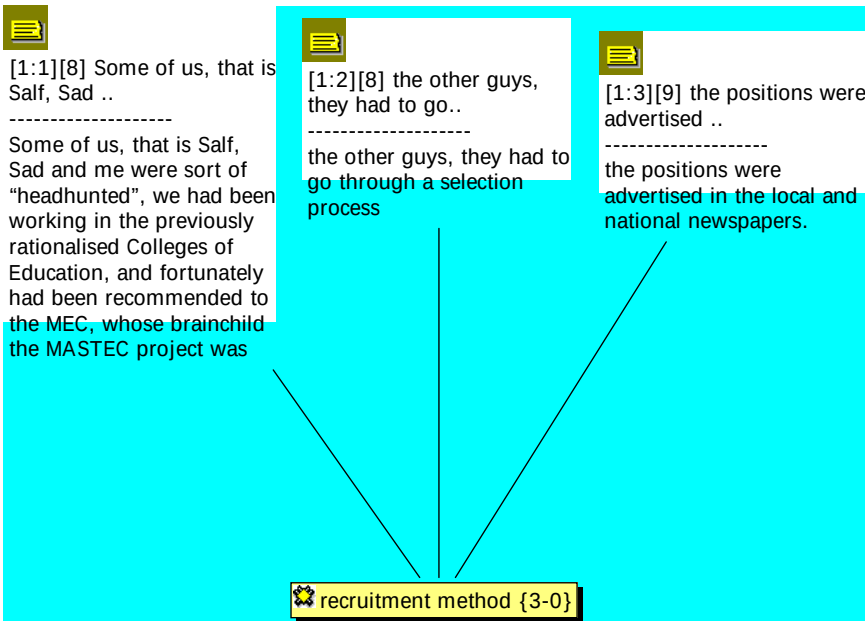

Figure 7.1 Code: Recruitment method; with three associated significant statements

As indicated, this diagram shows the code of meaning “recruitment method”; with three significant statements from which it was formulated. In the diagram, the statements are shown with

reference to the transcripts as indicated by the numbers inside the parenthesis. For example all these three statements are extracted *ad verbatim* from document number **1**; the number following the colon after **1** is the quotation number, and the second set of parentheses indicates the line number in the transcript from which the statement has been extracted. For instance, the statement on the left hand side of the diagram has been taken from transcript number **1** and is the first significant statement in the transcript, which is on line 8 of that transcript number **1**.

The next section addresses the second theme, which relates to the project staff's perceptions of their training and/or capacity-building aimed at enabling them to implement the programme.

7.2 The existence (or otherwise) of personnel capacity-building programmes

Both the INSET and PRESET staff members reported that they had never been specifically trained for the INSET/PRESET dual nature of the project. They were previously from either a PRESET or INSET situation, with a few members being from high school education backgrounds. The combined nature of the project was a new concept for all, and they therefore, had expected capacity building of some sort, to no avail. These groups reported this as a drawback to the programme implementation, as individual staff members did their best to implement the programme according to the way they understood its aims to have been. This lack of

training, they reported, manifested itself in the lack of synergy between these two elements of the project.

The INSET staff members reported that working in the INSET element of the project as workshop facilitators was something new for them, something they had never received any formal training for doing. They therefore expected some kind of capacity building in workshop preparation and facilitation. This, according to their report, never happened as 'they were thrown in at the deep end'. This experience, they reported, definitely affected the manner in which they implemented the MASTEC programme.

According to their expectations, had they been afforded some training, they might have implemented differently. This lack of training as reported by the project personnel is supported by the following extracts from their focus discussion groups:

[1] Boitumelo:	"What training are you talking about? Man, I remember the first day I arrived; there was a hurried induction meeting, where I met all the guys. Immediately thereafter, we drove off to the Mankweng area schools to deliver some computers and to confirm a workshop that was scheduled for that Wednesday. I can say the only training I received was to sit in at one of the workshops as an observer. I was scheduled to run and facilitate a workshop two weeks later. I was wet behind the ears because I was only experienced as a high school teacher … teaching teachers was going to be a nerve wracking experience for me."
[1] Salf:	"If there had been, you would not be hearing us lamenting about it [capacity building and training] now, would you. So

the project management had noble aims for the project but never planned for an implementation strategy to achieve that aim, let alone keeping it in documents, as they would be the implementers".

The issue of staff training and capacity building emerged across the board from the focus groups and the documents, although it was not as strongly articulated as in the field notes. All the people I spoke to expressed a feeling of inadequacy due to lack of training in the field of technology, especially, as well as in planning and implementing the outcomes based lessons and assessment activities. There were not enough workshops, either from the department of education or from the project itself, let alone the other school improvement initiatives in the province. Teachers at all the sites visited displayed and expressed this sense of inadequacy.

At the headquarters level, the project staff also expressed that they 'had been thrown at the deep end' and had not been offered any facilitation skills. This included materials development skills. As a result, they had to find a way of learning on the job. They were proud of their achievements though, but intimated that had they been afforded the training into these new avenues of imparting knowledge and skills, they would have been better at what they were doing.

[2] Mashao: "You were lucky because you were one of those who joined the team later. We who were the "founder members" of this project had to learn how to facilitate on the job. The only redeeming factor is that when we were

> recruited, they made it a point to stress the importance of staff with innovative teaching methods. So, what I did was to share with colleagues my new and innovative teaching strategies that take into account how the learners learn (learning theories)".

7.3 Ability of the participants to implement the MASTEC programme

The third theme relates to the ability of project participants to implement the MASTEC programme. Therefore, I present firstly, the findings on how the experienced teachers perceived their ability to implement the skills they had acquired from participating in the project. Secondly, I discuss the project personnel's perceptions of their ability to implement the programme. I also discuss other implementation issues, which emerged from the data as ways of improving the performance of the participants so as to better implement the programme.

7.3.1 Ability (or otherwise) of schoolteachers to implement the MASTEC programme

In each of the three focus groups relating to the experienced teachers, more than three teachers reported that through their attending the MASTEC workshops they had acquired new skills, which they had been able to apply in their classrooms. Some of the teachers did mention that the new teaching methods and approaches they had learned from the workshops were more suitable to small classes, and since their classes were very large, it was challenging to try to apply these approaches in these classes.

Some of the teachers reported as having benefited by being able to change their mindsets about teaching and learning aids and that they could be creative and improvise rather than being dependent on the Department of Education.

The following excerpts are taken from the transcripts of the teachers' focus group discussions. Although teachers from only two schools reported positively about the acquisition of skills that they could use in their classrooms, teachers from the other school reported how their school benefited from the project by their having learnt how to actively involve learners, as well as how to utilise waste as teaching and learning aids, as is illustrated below. It will be remembered that pseudonyms have been used for the teachers' names as well as schools' names. The number in the square bracket indicates that the quotation is taken from a transcript numbered by that same number:

> [3:] Pule: "There is quite a lot we as teachers gained from MASTEC. We learnt how to actively engage the pupils in their own learning, something we had never done before. We learnt to realise that children know a lot about what we teach them in our various subjects and that our teaching should therefore tap on that knowledge, and allow them to enlighten us about what they know and to what extent that knowledge goes".
>
> [4:] Germa: "The project was like a god sent gift to us. We learnt quite a lot of things from the workshops. We learnt new teaching approaches and how to use waste material for teaching and learning aids."
>
> [5:] Palesa: "There is so much that we learnt from our school's association with the Project from management issues like developing the school's mission and vision and goals to be attained towards the

> implementation of that mission. It was a tough task …but I'm telling you… when ultimately we developed all of that, running this school was amazing."

The INSET personnel also reported that during their in-school support visits, they witnessed how the teachers were applying the new innovative teaching techniques they had learnt from the workshops. This is attested to by the following:

> [1] Boitu: "…in such schools we could see the change in teaching strategies, the confidence in learners to be actively involved …"

Problematic implementation issues I could observe were only in two of the schools I visited, schools A and B. These issues were generally around the ability of the teachers to apply the skills they had acquired from the MASTEC workshops. Teachers in both these schools cited problems that had to do with very big classes, lack of resources, both human and material, and insecurities of tenure affecting those teachers that were still available.

They reported that the workshops and the relationship with the project had been terminated before they were comfortable with the innovative methods of teaching, assessing and planning which they had learnt, and attributed their struggles to the said premature termination. They reported that they had not yet understood the implementation of the MASTEC outcomes-based lessons and, as a result, they were still utilising the traditional rote learning teacher-centred methods. Lack

of resources and facilities also did not make the transition to the use of these teacher-centred methods any easier. Their comments suggested that this situation was worse in large classes, as portrayed by the following extract from my field notes in School A.

> *In a mathematics grade 12 class, topic of the lesson is the Remainder Theorem;*
> *There are 80 learners mostly boys*
> *Teacher has a text book in hand and is reading from it how to solve the problems;*
> *He extracts an example from the book and talks the learners through all the steps*
> *He takes a second one and the same procedure ensues.*
> *A number of problems are selected from the book for the learners to do individually as classwork* (extract from field notes compiled at School A, 2002).

7.3.2 Ability (or otherwise) of the MASTEC project personnel to implement the MASTEC programme

The second and related finding which emerged from my observation and focus group discussions was that the project staff could not implement the programme in a manner they felt was effective, because some of the schools were very far from the headquarters where the workshops were held. Sometimes, even in-school support tended to be problematic due to shortages of transportation. As a result these visits had to be alternated amongst the schools, which further resulted in some schools not getting a fair share. I also noted during my participant observation period that the MASTEC project was apparently not managed according to project management principles because none of the staff members was aware of its intended milestones. If indeed there was a project implementation plan, the staff was not aware of it.

Next I discuss the fourth theme which relates to issues regarding synergy between the INSET and PRESET arms of the project.

7.4 The existence (or otherwise) of synergy between the INSET and PRESET arms of the project

Both the INSET and PRESET personnel reported that, in their view, synergy between the two elements of the project was a very important feature for the implementation of the MASTEC programme. Though this was a consensus from these staff members, including some members of the project management, they all reported that this feature was not fully taken advantage of. They reported that there was synergy to a very limited extent between the two elements of the project, but that it could be better implemented. Below, I present extracts from the focus group transcripts of the INSET and PRESET groups which illustrate this assertion of a not fully realised continuum between these two elements of the MASTEC project:

> [1] Salf: "For one thing, if they [staff development sessions] could be used as a vehicle to bring about synergy between the college/project elements of the institution, I'm sure the MEC's dream would be realised."
>
> [2] Moses: "Yes we do try to synergise our work but that is not without challenges ..."

In the minutes of the project Steering Committee meeting of March 2000, it is reported that the INSET/PRESET adviser requested to be relieved of the PRESET duties, so as to concentrate in the

INSET work. This seems to be an endorsement of the lack of synergy between the two elements of the project.

> "[CWR's] report proposed that in current circumstances he should devote all his time to INSET/CPD work and not to PRESET in the College" (Steering Committee Minutes of March, 2000: 3).

This endorsement seems to have been communicated to the project evaluation teams as well, because it was evident in the evaluation Terms of Reference that emphasis was put on the evaluation of the INSET, rather than the PRESET element of the project. Such an emphasis could have led to an absence or little reference to matters affecting the PRESET arm of the project. This is highlighted in the extract below, taken from the minutes of the project Steering Committee meeting of September 2000:

> "MB and MJM said it was unfortunate that there was little comment in the [DfID] review about the PRESET work in the College" (Steering Committee Minutes of September, 2000: 3).

From my observations at the project headquarters, it was difficult for the INSET and PRESET elements to fully synergise their activities. This could only happen at the weekly staff development sessions, where personnel from both elements used to come together to share their experiences and discuss issues pertinent to either element, as an information sharing process. They helped each other where they could, but their working schedules clashed a lot and there were staff shortages in the INSET element, which made it difficult for those making class visits to synergise their workshops with what was going on in the PRESET classrooms.

These struggles are depicted by the following extract from my field notes from the MASTEC Headquarters:

> *In the MASTEC staff room, where two INSET lecturers and a PRESET lecturer are discussing their preparations for a collaborative workshop for the experienced teachers.*
>
> *The workshop is about integrating learning activities across the curriculum.*
>
> *They are talking about choosing a topic that straddles across English, Technology, Mathematics and Science.*
>
> *They ultimately choose VOLUME as their topic.*
>
> *Preparations seem to be proceeding well except that the PRESET lecturer states that he would not be able to facilitate his part of the plan as he would be having a full schedule with his student teachers on the date of the said workshop.*
>
> *This poses a problem for the INSET lecturers as they believe that technology is a new subject and an expert in the field is needed to facilitate the workshop, and this expertise they do not have within the INSET arm of the project.*
>
> *They try to bend his arm and he agrees to be in and out as and when the time table dictates for him to be in class* (extract from field notes compiled at the MASTEC headquarters, 2001).

In the following section, I present the fifth theme, which relates to communication between the MASTEC project's stakeholders.

7.5 Communication between the project stakeholders

This theme emerged from an analysis of data relating to both levels of project implementation, as represented by two different focus groups, where the participants were deliberating about their awareness of some of the issues they perceived as being very important in carrying out the project's mandate, as they understood it. There was general consensus among the participants that

communication was important for any organisation to achieve its goals. In this section I first point out how some participants perceived communication between the project stakeholders as being positive; then how some perceived it as being limited and in some instances close to being non-existent.

All participants alluded to the importance of communication amongst stakeholders of any project, especially school improvement projects like MASTEC, which had programmes running alongside government programmes. These participants reported on their assumption that the stakeholders were not communicating with one another as evidenced by simple things such as clashes of intervention schedules, amongst others.

7.5.1 Perceived positive communication

Some schoolteachers gave positive reports regarding the communication processes between the project staff members and the schools. These teachers indicated that they knew exactly what was expected of them through the in-school support that the project staff members were providing, as well as by attending the MASTEC workshops. Most participants felt that they could also communicate their concerns and clarify any misunderstandings they might have had. The following extract, although it emanates from just one school of the three which participated in the schools' focus groups, does provide some evidence to support these claims:

> [5] Palesa: “Maybe that is a reason why the project has started with what they call “the in-school support programme”. I really think it is a good idea to reach out to the far-off schools and see the teachers trying out the new approach in the reality of their schools. That way the lecturers can be the schools’ resource people and experience the same difficulties and problems that the teachers and pupils are experiencing.”

It is noteworthy to mention that Palesa was a member of the School C focus group, which was separated from the project headquarters by a boundary fence. Her statements in this discussion could have been an assumption on her part, which indicated her awareness of the in-school support for the “far-off schools”. The close proximity between this school and the project head quarters meant that the project staff and the teachers were often within one another’s space and communication was not a problem for them. These teachers took advantage of this close proximity by undertaking co-planning and co-teaching with the INSET lecturers. A number of participants commented on how there were no rigid boundaries between the two sites, which meant that teachers and lecturers could go in and out of these, as and when they felt there was a need.

The teachers in school C worked co-operatively with the lecturers from co-planning the lessons to co-teaching whenever the situation allowed. These school teachers were a phone call away from the lecturers and would even make arrangements to hold Saturday classes, in order to access the MASTEC laboratories. The MASTEC lecturers used to allow the use of the institution’s science

laboratories by the school teachers during weekends because these were always occupied by the student teachers and their lecturers during the weekdays.

The lecturers would be present during these Saturday classes to open the laboratories and safeguard the MASTEC laboratory equipment as well as co-teach. In other words, the MASTEC facilities and infrastructure seemed to be an extension of the school. As a result, in-school support visits were not necessary for this school and its teachers.

There was a vibrant involved parent community at the school, from the security guards after hours, management of the school tuck-shop and the well run school governing body. The circuit office was very close to the school, though not as close as the MASTEC headquarters. Driving to this office took about five minutes, therefore information to and from the circuit office was easily disseminated.

Some of the implementation issues related to the educator workshops, which were planned and conducted in a manner that was innovative, activity-based and learner-centred. The learners (experienced teachers) were involved in the lessons in ways that seemed as though they could be applied in own classrooms. These workshops encouraged improvisation on the part of the facilitators by suggesting that any recycled materials could be used as well as the expensive equipment, if people knew how to

improvise. Experienced teachers were encouraged to share in these workshops and demonstrate how they had managed to address certain topics, which were perceived to be difficult and/or impractical by others in their midst.

Among the project staff members, the PRESET group especially reported the same sentiments. They reported how and what they communicated with the experienced schoolteachers in preparation for the student teachers' placement in their schools, as illustrated by the following extract:

> [1]Ted: "The forms you submit to us are modified into a single form and then we write an accompanying letter to the schools, first requesting them to yet again accept our request of giving our students a teaching experience in their schools. This is the letter I was talking about, which has a reply slip to indicate acceptance. This reply slip is usually signed by the principal and the teacher responsible for teaching practice administration, as appointed by each school…as some form of commitment".

The project staff held regular meetings and weekly staff development sessions where all members of staff shared their experiences and concerns. The management also was involved in meetings with representatives of other stakeholders, in the form of a Project Steering Committee. This committee held quarterly meetings which were consistently minuted. This engagement in various meetings, including workshops for the schools' management and experienced teachers, bore witness to the existence of a positive communication strategy within the project.

On examination and analysis of the field notes I had recorded at each of the participant observation sites, I found out that there emerged findings which corroborated those from the other data analyses. For example, the following extracts from the field notes made at the schools and the project headquarters depict such positive attempts at communication amongst the stakeholders. I select the following from different field notes which were made at the different sites, and I do not repeat the same observations from the different sites.

> *I notice that there is a computer space with a number of computers for learners and admin staff*
>
> *Next to the admin computer there is a log book where staff members record their concerns and queries for the attention of the MASTEC INSET staff (their phone numbers are also listed)*
>
> *I notice a MASTEC workshop schedule on the staff room walls with facilitators' contact details*
>
> *Each school has a MASTEC co-ordinator, who liaises between the school personnel and both the INSET and PRESET lecturers*
>
> *The MASTEC primary co-ordinator is a go-between the schools and the project headquarters* (extract from field notes, 2002)
>
> *The MASTEC management form a Steering Committee with some schools officials and the Department of Education officials as well as representatives of the project donors* (extract from the Steering Committee minutes, 2000).

In the section above, I have tried to depict how the MASTEC project had a positive communication strategy in place across all its levels of implementation. I now proceed to provide, in the section below, how the project participants negatively perceived communication within the project and between its stakeholders.

7.5.2 Perceived negative communication

Whilst we have seen that the communication issues raised differed from site to site, the data suggest that most participants believed that positive communication between stakeholders was good for developing and sustaining relationships, and that in some areas, communication was to a certain extent problematic.

Communication problems between the project participants were of a varied nature within the different sites. In the MASTEC headquarters, these related to the two management structures in the project, that is, the PRESET and the INSET elements; and to those between the project management and the Department of Education, as well as to the INSET staff and the school teachers. For the whole period I was at the MASTEC headquarters, I observed quite a number of what in my interpretation seemed to be some problems regarding communication between the project management and the project staff.

Communication at this site was through staff development sessions, held every Wednesday. In between these, there were monthly staff meetings where the INSET/PRESET issues were discussed. The following extracts from my field notes compiled at the project headquarters illustrate this claim.

> *At a staff meeting which was unusually[2] called by the lecturers at the MASTEC headquarters, the issue of*

[2] It was unusual for the staff to call any staff meeting – these were normally called by the management, but this time the lecturers had a feeling of urgency and were uncomfortable with the management not having done or even said anything about the hanging future of the

> *contention was the incorporation of the PRESET arm of the project into the University of the North [Limpopo]. It came out at this meeting that the staff had received letters from the LPDE informing them about the incorporation and at the same time giving them an opportunity of either consenting to the incorporation or deciding to be deployed elsewhere within the department of education in the province. This was absurd, according to the lecturers, because it would have been expected for other communication to have taken place prior these letters. The assumption amongst the staff was that such communication had been probably held with the project management, which by this time had already been depleted. The Deputy Heads Academic and Administration had by this time left the employment of the project. The Deputy Head: Academic had by then been appointed at the University of South Africa – she had recruited one of the PRESET lecturers as her new research assistant. The Deputy Head: Administration had already been deployed into the District offices of the LPDE. These movements out of the project suggested to the staff that the management "must have been aware of the incorporation, and decided to jump ship before it went aground" (Boitu).*
>
> *The rector was called to account and from what he said it became clear that there was no future for the PRESET arm of the project, within the present status quo, he was also being appointed by the National department of education, as a project manager: 100 Science Schools. In this way the staff was divided, some chose to be incorporated into the university whilst others chose to be deployed into the LPDE offices. This is when I got employment from the national department of education as a deputy chief education specialist: life sciences. (E*xtract from field notes compiled at the MASTEC headquarters, 2001).

I also noted that there was quite a lot that the project staff was not aware of, which was known to the project management. For example, the vision and mission of the project, which one would have expected should be gleaned from the founding documents of the project, were not known to both the INSET and PRESET staff. Another example was that of the expectations of the project donors of the project, that is, the achievement of the project aims by the end of the project life-span. Because the implementation staff claimed that they were not aware of these aims, their

---

project/or college.

implementation efforts may have not been geared towards their achievement.

The MASTEC project had a school management team development programme, which was supposed to help the school management teams with governance. With communication being a major part of governance, the fact that this project's own internal communication was poor, was a basis for weak communication with the project schools, and this could have been inadvertently transmitted to these schools. For example, in schools A and B, communication problems varied from communication between the principal and his staff up to communication with the schools' communities including MASTEC and the officials of the provincial Department of Education.

Below, I provide a further account of how the project implementation issues were addressed in the field notes recorded. Although the records made in this regard may not be seen as explicitly addressing communication between the project stakeholders, the mere fact that in schools the project had supplied equipment, which led to better community and parental involvement in school matters, implies that a certain level of communication between these stakeholders was in existence.

In school A, I recorded that the project INSET staff had delivered the science, mathematics and technology equipment to the school. Due to the provision of computers by the project, the school had

installed electricity and security measures like burglar guards for the safe keeping of this equipment. In fact, this was a condition for delivery which was imposed on the schools by the MASTEC personnel.

In this school, communication problems resulted from the school governance issues. The school had a non-functional governing body that needed to have been offered training and capacity building by the Department of Education, as had been the case in other schools. None of the teachers in this school knew why this body had not been trained. Communication was also very poor between the principal and his staff to an extent that the teachers never attended a single morning assembly during my entire visit of three weeks. The principal alone would conduct prayers alone in the assembly and address the learners all by himself. Parental and community involvement in school matters was nil and therefore no communication existed between the school and those responsible for the learners.

As in school A, school B had also received equipment from the project, which had contributed to the school community stepping up the school security, as well as installing electricity. In this school, I noticed that whenever there was an issue, be it a communiqué from the Department of Education or MASTEC, the principal would call a staff meeting and involve the staff, even in the decision making of responding to that particular message or communiqué. From my point of view, the principal demonstrated a

democratic style of leadership. The school governing body (SGB) was fully functional in this school and this was proven by their communication methods with the staff.

On enquiry, I found out that the communication between the SGB and all school communities was efficient and regular. There was a guidance teacher, who formed mentoring groups with the teachers. These groups would help the learners with their academic and/or personal problems to an extent of referring the more difficult cases to social workers, and/or other relevant professionals.

In contrast with school A, communication within the school and the school community existed, though the teachers maintained that it could be better. The only problem cited in school B was poor communication between the officials of the Department of Education and the school. Parental involvement in school matters was also reported to be very poor although efforts had been made at minimising this problem, though these had not as yet yielded any positive results.

In the following section I present the sixth theme, which relates to whether or not the project participants perceived consistency in the implementation of the project in relation to its aim as stated in the project documents.

7.6 Participants' perceptions of how the MASTEC project was implemented in relation to its aim

All project participants reported that they had no idea what the official project aim was, (except Meshack, who reported that he had seen it for the first time "only this year") and therefore, were afraid that they might not have carried out the project's programme implementation as would befit such an aim. This, they said would impact negatively on the results of their implementation of the programme, because they had a different understanding of what they were supposed to do. For example, they intimated that they were not aware that the target population of the programme was the 'previously disadvantaged … especially girls'. As a result, during the programme implementation there was no special focus or emphasis on ensuring more and better participation from this population.

These members of staff went on to report that the project aim, as stated in the project documents, must have been inserted in there as a "politically correct statement" for whatever reason. Such assertions are illustrated below:

> [1] Buyi: "Really now, I would agree with you because look at us, about 70% male and hoping to change the social order of believing that Science is for males. In the workshops that we conduct … how do we emphasise or even try to change the belief? The text books we use, the examples we make use of, they all stress the importance of men in the field of Science".

[1] Meshack: "You know this is the third year of our service in the INSET, but that project aim you are talking about, I only saw this year when we were working with the project advisor, compiling an impact study of the project in primary schools. Unfortunately, then it was the primary tutors group that was working in that study, so I doubt that any of these guys here have seen that".

[2] Nto: "These days in South Africa, gender equity is the order of the day. Remember that this was established by a politician, the statement of the aim must have had to be politically correct, because there is nothing that we do really to encourage girls to register for the Science subjects in schools…we are so far removed from schools that even if we wanted to influence the girls' choice of subjects, we would not be able to do that".

It was during this discussion with the project personnel that I noted that there were some issues which they did not dare venture into as this might land them in some kind of trouble, as has been previously pointed out in Section 4.6.2. I had reassured them of confidentiality, and therefore wanted to believe that this fear or discomfort could be coming out of their distrust of one another. I interpreted this assertion from the following extracts from the INSET transcript.

[1] Buyi: He's right, you know...that "previously disadvantaged pupils and girl stuff"… yah to some extent…the previously disadvantaged…but we had schools amongst those like **XXX**; **YYY** and **ZZZ**, which one could never classify as being "previously disadvantaged"

[1] Stu: You know what I honestly think? That must have been some gimmicks… just to make the proposal attractive for the donor funding

[1] Meshack: Hay Bo wena, uzoboshwa!! (Zulu for 'be careful, you will be in trouble')

[1] Stu: Oh! No I won't…she promised us anonymity…remember?

I noted that in all three schools the target population of the project, as far as the pupils' gender was concerned, was reaffirming the statements made by the project personnel above. I noted that, for example in school A, the year 2000 Matric science class of 19 pupils, consisted of seven girls and 12 boys, a 37% female representation, and that this had been the trend for as long as the teachers could remember. In school B for instance, the ratio of girls to boys in the science Matric class in the year 2000, was 5:18, and in school C, this ratio was 12:33. The disparity in gender equity was also noted at the MASTEC headquarters, where the INSET personnel were 30% female. At the PRESET element, there was a fair distribution of gender equity.

7.7 Conclusion

In this chapter I have presented a group of themes whose findings relate to the manner in which the MASTEC project was implemented. Some of these findings indicate that the programme was implemented in a satisfactory manner and yielded positive results due to such implementation. It is noteworthy though to state that not all participants and project documents were as positive about the implementation of this programme, notably the personnel of the rural school and some PRESET lecturers. In

general, the findings indicate that the implementation of the MASTEC programme was not as beneficial as the participants of this study might have liked, hence their allusion to the programme's limitations.

In the next chapter, I present findings relating to the project participants' perceptions of the MASTEC project's benefits and limitations.

CHAPTER 8

PARTICIPANTS' PERCEPTIONS OF THE MASTEC PROJECT'S BENEFITS AND LIMITATIONS

Introduction

In this chapter, I present the second set of findings, which relate to the project participants' perceptions of the benefits as well as limitations of the MASTEC project. In presenting these, I start with the perceived benefits in Section 8.1 and then follow up with the perceived limitations in Section 8.2.

These groups of findings consist of a number of themes which, as has been explained and portrayed in the previous chapter, emerged from the analyses of all the data sources accessed. When presenting these findings I provide supporting evidence from extracts taken from the transcripts of the focus group discussions, field notes, and the documents content analysis.

In the section below I present these perceived benefits in detail.

8.1 Participant's perceptions of project benefits

I divide this section into two subsections, namely, school related and individual benefits, as perceived by the project participants.

8.1.1 Participant's perceptions of benefits to schools

Most participants of this study, both from the project headquarters and the schools, reported what they perceived as benefits for those schools which participated in the MASTEC project, ranging from improved school infrastructure and security to increased parental involvement in school matters and better school management. This theme is illustrated below by the following extracts from the project lecturers' and School C transcripts:

[1] Boitu: "…there were those cases where we could see that everybody in the school from management teams to school children, were excited about the prestige of being 'MASTEC schools'…in such schools we could see the change in teaching strategies, the confidence in learners to be actively involved …"

[1] Boitu: "I remember the principals of FGR and TRE excitedly saying how having developed theirs [vision, mission and objectives] and including their members of staff in such has helped them in running the schools better than before!!"

[2] Vio: "I think that some of the schools are showing signs of improvement in many aspects. For example the situation at ASDE region of parental involvement in setting up security systems to protect computers…is a positive effect…but did we set out to involve parents in that way?"

[2] Ted: "Well, since parental involvement in school matters is usually taken as a sign of interest in their children's success …in a roundabout

way… we hope that it can lead to an increase in attainment…"

[5] Palesa: "There is so much that we learnt from our school's association with the Project from management issues like developing the school's mission and vision and goals to be attained towards the implementation of that mission. It was a tough task …but I'm telling you… when ultimately we developed all of that, running this school was amazing".

8.1.2 Participant's perceptions of benefits to individuals

Project participants from both levels of the project implementation, at least from the INSET and two of the schools' focus groups, reported having benefited personally from their involvement with the project. The following four extracts from the relevant transcripts are evidence of such reports from two schools, where experienced teachers said that they had benefited by being able to change their mindsets about teaching and learning aids, and that they could now be creative and improvise rather than being dependent on the Department of Education.

[3] Pule: "There is quite a lot we as teachers gained from MASTEC. We learnt how to actively engage the pupils in their own learning, something we had never done before. We learnt to realise that children know a lot about what we teach them in our various subjects and that our teaching should therefore tap on that knowledge, and allow them to enlighten us about what they know and to what extent that knowledge goes."

[4] Germa: "The project was like a god sent gift to us. We learnt quite a lot of things from the workshops. We learnt new teaching approaches and how to use waste material for teaching and learning aids."

[4] Lesego: "… I used to attend the MASTEC workshops just for my personal and professional growth so that if it should happen that I get employed

somewhere else where conditions are conducive to hard work, I would measure up."

[4] Lebo: "Since my having been involved with the project, I have tried my best to make most of my lessons to be learner-centred by building into them activities for the learners to carry out. I have learnt how to facilitate their learning without me always being the sole source of information."

From the project headquarters, almost all the INSET staff reported positively regarding the benefits that they themselves gained from the implementation of the project's programme, especially for their own personal development. Below I present just one extract from the INSET focus group transcript which provides supporting evidence for this assertion:

[1] Sal: "…that's what I mean about having gained at least a skill of communicating in the local languages, so that when that time comes, one can be deployed anywhere in the country…"

According to my field notes, it emerged across all the sites that the participants regarded the benefits of participating in the project as a motivating factor in their teaching. The teachers stated that they valued and appreciated the knowledge and skills they had gained, including the basic computer literacy. Other benefits included their having acquired science, technology and mathematics equipment, which was going to improve the manner in which they taught.

The MASTEC INSET staff, on the other hand, mentioned benefits including acquiring facilitation skills, curriculum development and materials development as a perk, something, which they had not been trained in at the colleges of teacher education. They had

developed teacher resource packs with illustrations and they were very proud of this achievement.

In the following section, I provide an account of the project limitations as perceived by the participants.

8.2 Participant's perceptions of limitations of the MASTEC project

As much as there were perceived benefits of the project, there were perceived limitations, as well. These limitations ranged from matters relating to how the project participants perceived the implementation of its programme, such as the preparation of student teachers and experienced teachers for unrealistic contexts and the lack of cohesive direction from the management due to the project's having two centres of power, to the manner in which the MASTEC project was evaluated and the manner in which the evaluation reports were handled.

8.2.1 Preparation of student teachers and the experienced teachers for unrealistic situations

This finding, although it indicates one of the project limitations, is also relevant to the participants' perceptions of how the MASTEC project was implemented (discussed in the previous chapter) as it raises problems of implementation. The experienced school teachers reported that the new teaching approaches and methods that they were exposed to in the MASTEC workshops were mostly activity-based and therefore learner-centred. They could therefore

not adapt these for use in their large classes due in part to a lack of resources in their schools, and this is depicted by the following conversation from teachers of two different schools.

> [4] Tshepo: "The MASTEC approach was very good; the only problem about it was that it was best suited to small classes. I, for example, had difficulties implementing the small group discussions, and the activity-based lessons because there just is no space in our very big classes."
>
> [3] Pule: "We had many problems … we still have. For starters … MASTEC emphasised activity-based and assessment-driven teaching and learning."
>
> [3] Pule: "So, whatever we learnt at the MASTEC workshops, we could not implement in our classrooms due to lack of resources and facilities."

These sentiments were also expressed by the INSET focus group. They said that both experienced teachers and student teachers were being provided with teaching-learning situations that were not realistic for application in their schools. These were the same schools where student teachers would be placed for their school experience periods. For instance, the methods they were encouraged to make use of were suited for use in small classes, whereas their normal classes were very large.

> [1] Mash: "In some cases, the teachers were positively receptive and it worked, in others, although the teachers were seemingly excited about trying out new approaches, the situations they faced at their schools dictated against them even trying these."
>
> [1] Boitu: "Also in some cases the micro politics in the school communities made it difficult to implement to totality the changes we were introducing, so teachers felt powerless and stopped trying out."

[1] Moses: "Umh!…that means that our student teachers are prepared for an ideal teaching-learning situation, which they may not find or experience when they go out to the schools … that must be frustrating.."

My observation of the student teachers' in-school experience also supports the experienced teachers' and project lecturers' assertions regarding the difficulties that the students faced during this period. All the students I observed during my participant observation period were struggling with adapting the teaching and learning methods they had been taught at the college. They could not handle the large classes and as a result, they either ignored the innovative teaching strategies or continued with them regardless of their situation. This is portrayed by the following extract from my field notes, which were compiled at school B.

Boyzie, a student teacher, is having a class of 69;

He has divided the class into 13 groups of 5 and one group of 4;

He has assigned the groups some discussion topics and questions;

He is visiting each of the groups, listens to the discussions, asks some questions and proceeds to the next;

The class is noisy and there is not enough space to move around from group to group;

He seems to be struggling with classroom management;

Before the exercise is over and/or wrapped up the bell goes and he leaves the room.

8.2.2 MASTEC project formative evaluations

The project personnel from both the INSET and PRESET elements of the project reported as a limitation the failure to disseminate the evaluation. The major issue of concern in this regard was that they

believed that no improvement would result from such reports, as they were not discussed either with individuals or the entire personnel. Some of these evaluations, they maintained, could not have been objective, because the evaluators included the MASTEC management for example, the Ntombela report (2000). They also felt that because they had misgivings about the project aims; the evaluation process and its results would be difficult to put into effect without first explaining and clarifying the aims. The following extracts provide support to the above assertion.

[2] Winnie: "They [evaluators] were so secretive we never knew they [evaluations] were happening and we did not even know the results of them. Now, how do you improve when you do not know your performance?"

[1] Buyi: "Yeah … do you remember that lady from Natal, xyz's home girl…she came here as an evaluator went to classes and to the workshops and was taking notes. She did not tell us what she was doing or what she was looking at. Then she gave reports to the project manager, who in turn made it such a secretive feedback to individual personnel."

[1] Sal: I know what you mean Ousie, it does not matter how many times the project was evaluated, it would be very difficult for the college/project to put into effect any improvement strategies recommended by such evaluations without first revisiting the aim…and that has not happened yet."

8.2.3 The lack of clear directions.

The project participants from the INSET and PRESET reported in their respective focus group discussions that the manner in which the project was managed was such that it had two centres of management, who seemingly had no implementation plan and were also not talking to each other. On scrutiny of the discussions,

it became apparent that the lecturers from INSET and PRESET were also not talking to each other, as portrayed by the first of these citations, from a PRESET lecturer.

[1] Buyi: "What I mean is that we have two separate and parallel processes…the INSET and PRESET, in the sense that there is no way in my opinion, that we can say the student teachers, when in schools are doing what they are taught, and/or that the experienced teachers understand what the students are doing, I think that question can best be answered by the PRESET staff."

[2:] Nto: "I still am not sure of the nature of College/Project…because we operate as two different entities at some points and seem to merge our functions at others. Nobody is clarifying what is to be expected."

[1] Ted: "The worst enemy of this institution is lack of communication, and I believe that in any institution of any magnitude, all stakeholders need to communicate effectively with one another…what do you expect from an institution run without an implementation plan … an institution that seems to be governed by the philosophy that "one size fits all? That could be the problem …we have two management structures…and from where I am, they are not talking to each other."

[2] Mat: "Well no, I am sure that it is a good initiative. It's just that we do not seem to be having a clearly thought out plan of how to bring them INSET and PRESET closer to each other. I am not sure whether it is because of the manner in which the two components are managed."

Comparing field notes from my participant observation in the headquarters of the project, with the sentiments expressed by the project staff, I found that they corroborated each other, as depicted by the following extract:

I walk into the MASTEC staff computer laboratory only to find that about five computers are without Internet connection, and

> *the three which are still connected have a new password, which only the INSET staff had been given. I request one of the INSET colleagues for the password and the response is that they had been sworn to secrecy; otherwise they would also lose the privilege of being able to access the Internet. I find this strange and unacceptable and decide to approach the project manager. She tells me that the PRESET staff needs to request such resources from the PRESET management, whose funds come directly from the provincial department of education. They can no longer use the project monies to fund the college activities* (extract from field notes, 2001).

There was a clear demarcation of resource allocation between the INSET and PRESET staff. Donor funding was strictly for use by the INSET arm of the project and the PRESET arm was funded by the Department of Education. This led to a lack of resources for the PRESET staff to an extent that, for example, in time they were disconnected from the Internet. This disconnection was never announced to them and they could therefore not argue their case. This led to them experiencing feelings of resentment towards the INSET staff, as they were hampered from being able to carry out any form of research in preparation for their lessons.

8.3 Conclusion

In this chapter I have presented findings which, when grouped together, constitute the two themes: Project Benefits and Limitations, as perceived by the MASTEC project participants. I have also supported these findings with extracts from the various data sources.

Much as this chapter has brought forth the project participants' perceptions of the project benefits, it has also revealed divergence of opinions in the different schools participating in this study. The same applied to their perception of project limitations. Looking at the project lecturers' responses, one found that from both arms of the project, their voices relating to benefits were less audible than those relating to limitations, albeit with differing emphasis between the INSET and the PRESET. It seems from these assertions, that the project had benefits for some participants and limitations for others at both levels of its implementation. It will be interesting to find out whether or not these differences had anything to do with the different contexts in which the project participants were located. In the following chapter, I present the set of findings relating to the participants' perceptions of the importance of the extent to which programmes are context-related.

CHAPTER 9

PARTICIPANTS' PERCEPTIONS OF THE IMPORTANCE OF THE EXTENT TO WHICH PROGRAMMES ARE CONTEXT-RELATED

Introduction

In this chapter, I present the third set of findings which relate to the MASTEC project participants' perceptions of how important it is to them to have programmes which are to a certain extent, context-related. This theme emphasizes how the research participants held their contexts as being very important as a point of reference in developing and implementing programmes that would be suited to them. These findings have also emerged in the pilot study, where one of the school teachers intimated that the MASTEC programme was good for school improvement, but not for their school (see **Section 4.2**).

In Sections 9.1 and 9.2, below, I present the themes from which these findings emerged, and these are:

- the participants' perceptions of how custom-made programmes would be better suited for their contexts; and
- the participants' perceptions of their contexts.

9.1 Custom-made programmes

The focus group participants from all levels of project implementation unequivocally reported that, as good as the MASTEC programme was, it would have been implemented better had it been customized for the contexts of the participating schools. The following are citations from the schools and project levels asserting this belief.

> [5] Buti: "I am concerned a bit about the MASTEC project and its workshops … I am wondering if it is equally easy to implement their teaching in all schools."
>
> [1] Vio: "…so, in bringing about an improvement to a programme like this I would try to learn more about the culture of the people I want to work with … and comply as best as I can … to get their buy in."
>
> [2] Nto: "… but equally important would be for me to caucus with the chief's wife … thus making sure that the concept will be accepted. Therefore, an outsider will not know all these strategies, and that is why I agree with Tumi about learning more about the local cultures of my target population before introducing any programme."

This, most of the participants agreed, could have been achieved through a needs analysis of each of the schools, to categorise them and therefore develop intervention programmes for their emergent needs. This assertion is depicted in the following extracts from group discussions at both schools and project headquarters' levels.

> [3]Joyce: "Yes, that's what I mean … a research to find out from the schools how they measure up to the ideal school…and also to ask them what they need to measure up?"

> [1]Boitumelo: "First of all, do a thorough needs analysis of all the schools one intends developing a school improvement for, identify the makeup of the School Community and all the influential factors, both internally and externally, and consider those elements and how they will fit in with the programme."

The contents of the documents I examined also provided support to the participants' assertion, in one way or the other. Although this has not been explicitly reported in these documents, one could infer from the value attached to parental and/or community involvement in school matters being a positive attribute towards school improvement, that recognition of context is held in high esteem by the participants of this study. This is also portrayed well in all the MASTEC evaluation reports as discussed in detail in Chapter three.

At the project steering committee meeting of March 2000, a concern was raised by one of the attendees about whether the incorporation of the project into a "university in crisis" would be a good idea, as it was questionable whether it [the university] would "cope with" the work that was being done in MASTEC. Below I attach this concern *ad verbatim*.

> "AM expressed considerable concern over the incorporation into a Faculty with such a poor record within a University which was itself in crisis both financially and administratively. He questioned whether the University was in a realistic position to cope with the training of Maths, Science and Technology students" (Steering Committee Minutes of March, 2000: 2).

Once again, could this concern have had something to do with the different contexts in which the project would be incorporated?

This finding emerged in three sites across the board from my observations and from the informal conversations I held with the participants. The three schools were all operating under different contexts, ranging from being well-resourced with full parental and community involvement in school matters, to very poorly resourced and with no apparent school rules. Below, I present the school contexts that could have contributed to the positive or negative impact of the MASTEC programme.

9.2 The MASTEC schools' contexts

As explained in the methodology chapter, the schools' real names have not been used to protect their identity due to anonymity promised to the research participants. Therefore the schools which participated in this research have been labelled as schools A, B, and C.

School A was, according to Moeketsi, a fruit vendor whose shop was situated just outside the school gates "a school in name only". This was a small school and as described in detail in Chapter two, was very poorly resourced. To make things worse for this school is that there were no apparent policies and procedures relating to any of the expected school rules that would create a positive school ethos. Educators and learners alike did not observe punctuality to either school or classroom. The same applied to

leaving school before the school bell rang to indicate that ‘school is out’. My observation attests to this assertion as portrayed in the following extract of my field notes made at school A.

> *It is 7h30 in the morning and I am outside the school premises. The gate is locked and all is quiet there does not seem to be anybody in the vicinity. I wait in my car hoping that there might be a security guard who would notice my presence and open the gates for me to enter. Nothing of the sort happens. I wait for an hour and at 8h30 a man approaches from outside the premises with a bunch of keys. He says “I noticed your car; it was so early ... nobody comes to school here at that time of the morning. Are you a government official”? To this I replied “no, but the principal is expecting me... I will be spending the next few weeks at the school ...I am conducting a research”*
>
> *I ask whether he is the security guard, he says “no, I just sell fruit ... this is my shop. They let me keep the keys because I stay so close to the school ...they also use my toilets and water supply... this is just a school in name only” On enquiring why he feels that this “is a school in name only” he responds that “there are no rules ... everybody does as they please, like now ... the school should have started at 7h45 but who will start? The principal is not here, the teachers are not here! Do you think the learners will be here on time for them to have a decent learning time? No, they will even leave before the day is over. No wonder they always get poor matric results... no one learns anything here”.*
>
> *The first cars start to arrive as the hands of the clock are approaching 9h00, so do the first few learners. I notice that there is no assembly, learners just proceed to their respective classes, so do the teachers* (extract from field notes compiled at school A, 2002).

In school B, the governing body was functional, and since this body is representative of many school stakeholders, governance issues were democratically handled. This representative body was therefore, seen to be helping develop and implement school governing policies, thus contributing towards the creation of a positive school ethos.

The school was bigger than school A in that it had an administration block, where there was a principal's office, a staff room and even of heads of departments' offices, a number of classrooms to accommodate learners from grades 8 to 12, a school hall and a multi-purpose classroom which was being used as a laboratory and library. The school had water and sanitation, although the learners' toilets were pit system. Punctuality was observed at least by the majority of the staff and learners. Absenteeism was not a big problem although from time to time a number of learners would miss classes for some reason or the other.

> *It is 7h30 in the morning and I am driving towards the school gates. I drive past a number of learners who are all running in the direction of the school. There are a number of cars parked under the trees and some in shady spots near the school buildings. I assume that these cars belong to the educators. At exactly 7h45 the school gates are closed and all late comers stand outside, waiting. All learners assemble in front of the administration block and the principal conducts morning devotions. He is alone at the podium, all the educators, including the school management team are in their offices and/or staff room. After 15 minutes, learners disperse and go into their respective classrooms. It is only after all have settled in that the latecomers are allowed into the school premises. Punishment is handed out to each by the educator in charge. School starts punctually and there seems to be order although there are a few learners who seem to be loitering in the yard* (extract from field notes compiled at school B, 2002).

School C appeared to be distinctly different from schools A and B. The school was very well-resourced, in terms of human resources and infrastructure. It was a neighbour of the MASTEC headquarters, separated by just a boundary fence. Punctuality and absenteeism were non-issues at this school and when asked

about it, the teachers reported that the school had a very strict policy on such issues.

> *I am driving towards school C and it is 7h00. I am a bit earlier than I was in the other two schools as I was told by the principal that the school starts at 7h15 and goes on until 16h15. I notice that all is quiet and I am beginning to think "so much for starting 45 minutes earlier than other schools … it does not seem to be working … at least for this morning". When I reach the school gates, I am surprised to notice that already, there is some activity going on in some classrooms. I later find out that grade 12 learners arrive at the school by 6h30 for studying and/or additional tuition. The bell rings at 7h15 and quietly all pupils go out of the classrooms in rows of two towards the school hall. I notice that behind the school there is a parking lot where those teachers who drive to school park their cars, hence my inability to see them when I arrived.*
>
> *At assembly, all teachers are present and I am invited to be one of them, on stage. The principal conducts the morning devotions after which she makes announcements. It is at this time that I am introduced to everybody as a researcher from the National Department of Education. She then gives me some time to address the congregation about my visit to the school and its purpose. This is where I get to explain my study and emphasise that as I am now no longer working for the MASTEC project, I am carrying out a study, which it is hoped, will help towards improvement of the MASTEC project services to the project schools. I am amazed by how differently this school is run, the ethos and how well-resourced it is both materially and structurally.*
>
> *After assembly all learners go into their classrooms and teachers follow suit almost immediately. For my entire stay at this school, I have not seen any classroom that is not occupied by a teacher, at any given period of teaching-learning. When some teachers are absent attending workshops or any activity outside the school, there is an arrangement to keep their learners occupied under the supervision of surrogate teachers* (extract from field notes compiled at school C, 2002).

I observed how the three different schools were dealing differently with the implementation of the same programme of which they were recipients. For example, School C adapted their time-table to fit in with the programme. They extended their teaching time, so

that they could divide the classes into a suitable number for the activity-based learning methods they had learnt from the project. They also made a lot more use of the MASTEC facilities because of their close proximity to the project headquarters. These arrangements seemed to work well for this school; it was therefore not surprising that this school was the high achieving one of the three.

The other two schools were situated in the deep rural areas of the province, about 20km away from the project headquarters. Therefore, it would be very costly to transport their learners to the headquarters to enjoy the same privileges that School C was enjoying. The same applied to making use of the MASTEC tutors in co-planning and co-teaching.

On being asked about what they could do to render the project more context-related had they been given such an opportunity, the project staff enumerated several steps they would follow in this regard. Firstly, some intimated that they would conduct a thorough needs analysis in the project schools. Secondly, most went on to say that they would also develop a number of programmes categorised to suit the identified school needs and contexts. Thirdly, they would allocate the schools to appropriate categories so as to implement the appropriately developed programmes where they would be needed most. Fourthly, a project implementation plan would be developed so that it would be easy to track the project's progress or regress at agreed upon intervals.

This monitoring and formative evaluation system, according to some of these participants, would give rise to a continual improvement of the programmes during their life-cycle. Thus in this manner, a cyclic model of school improvement programmes for the province would be developed, implemented as well as monitored and evaluated for continual improvement.

9.3 Conclusion

In this chapter I have brought forth the findings which depict the MASTEC participants' perception of how important it was for them to have a contextualised and/or customised school improvement programme, which would have been suitable for their needs. I have also provided pencil portraits of the schools which were participant in the current study as an effort towards depicting their different contexts. I have supported these findings with extracts from the focus group discussions; field notes generated from all three sites and minutes of the steering committee meeting of March 2000.

All three levels of the MASTEC programme implementation seemed to be in agreement with the importance of the consideration of contexts in programme development and implementation. However, personnel from the different levels seemed to have a different focus of meaning relating to what constitutes context. For example the schoolteachers and project lecturers had the people and their culture in mind, whilst the

management level (as espoused by the project steering committee) were agonising about the programme's imminent placement within the then embattled University of the North.

This divergence in meaning might be an indication of a difference in thinking and / or implementation between the MASTEC project management and the rest of the programme implementers. Thus, one wonders whether or not this divergence could have had an impact on some of the programme's limitations, as viewed by its participants.

Having presented across Chapters 7 to 9, three groups of findings which emerged from my data analyses, I now proceed in Chapter 10 to a discussion of these findings. This chapter will:

- summarise the key findings;
- provide implications for policy making, further research, and practice; and
- consider how these findings have extended those of previous literature.

CHAPTER 10

DISCUSSION

Introduction

As was stated in Chapter 1, the current study was carried out in order to address three research questions. In this chapter I attempt to illustrate how each of these questions has been addressed. I try to achieve this by comparing the research findings of the present study with those of the empirical studies reviewed in Chapter 3. In performing this exercise, I consider how these findings are similar or corroborate one another, as well as how they differ. I also attempt to explain any divergence of findings. I begin this exercise by exploring each research question in turn.

For the purpose discussed in the paragraph above, I divide this final chapter into eight sections. In Sections 10.1 to 10.3, I summarily discuss the findings relating to each of the research questions. In Section 10.4 I provide a summary of the contributions of this study to literature and in the final sections, that is, 10.5 to 10.8 respectively, I summarise the limitations of this study and provide an account of its implications for policy and practice, as well as for further research.

10.1 Could it be that the implementers of the MASTEC project needed to have implemented the same school improvement programme in different ways to accommodate differences in the contextual needs of the different participating secondary schools?

In Chapter 4, I discussed in detail the aim of the current study as being to investigate whether or not the MASTEC project, which was implemented in very different school contexts, was implemented in a manner that was beneficial and appropriately suited to all the contexts of its participating schools. As mentioned previously in Chapter four, this broad aim was broken down into three research questions, the first of which is the subject of this section. For the sake of simplicity I paraphrase this question and explore it further in Section 10.1.1 below.

10.1.1 The importance of the extent to which programmes are context-related

Generally, literature echoes the importance of context in programme development, implementation, monitoring and evaluation in both developed and developing countries. However, it is important to note that that reports of degrees of variance in schools in developed countries suggest that these are less marked than those in developing countries, which to a limited extent, might downplay the importance of context, as seen through the eyes of researchers from the developing countries. Be that as it may, in those studies from the developed countries, where context has been considered, there is evidence that “relevant input

characteristics on output" (Scheerens, 2001:1) are needed in order to show which process or throughput factors work, next to the impact of contextual conditions in school effectiveness research.

Similar findings have been reported by a number of researchers (Levačić *et al.,* 2005; Luo *et al.,* 2005; and Sun *et al.,* 2007), whose studies showed that implementing a programme in different contexts yielded differing impacts. This finding is strongly corroborated by the findings of the present study, where the MASTEC programme is implemented in different contexts, with some of its participants perceiving it to have been "ill-implemented" due to its "one size fits all" philosophy (Section 7.2.2).

The same view was expressed in some of the project evaluation reports (Constable and Rice, 2000; Ntombela *et al.*, 2000), and the steering committee minutes (meeting of March 2000). The participants in the present study expressed their views about this as a limitation of the programme and went on to suggest ways of turning the situation around, if they could be provided with such an opportunity.

All focus groups echoed one another in expressing the view that programmes which are customised for the contexts of participants have a better chance of being well implemented.

Amongst their suggestions for an improvement of the programme, the participants of this study intimated that they would identify the

potential beneficiaries of the programme and conduct an appropriate needs analysis. From the results of this analysis, they would then develop a customised programme for each of their identified recipients and in collaboration with them. They said this collaboration would increase the likelihood of the success in the implementation and monitoring of the programme.

In my view, provision of the same programme to different contexts without considering the differences and addressing them, was a disadvantage to some schools whose improvement needs were very different from what the programme was addressing, and an advantage to others whose needs this programme addressed. This situation might have led to some schools' attrition from the project.

The crux of the matter is that the project had one programme to provide to all the schools and yet not all the schools benefited in the same manner from the programme. An interesting question is whether or not this could be due to the schools' different contexts.

10.2 Could the manner in which the MASTEC programme was implemented be one of the reasons for attrition by some secondary schools?

Although the question posed in the section above appears to be calling for speculation as there were no participants from schools whose involvement in MASTEC ended prematurely, light on the most probable answer may be shed by findings from previous

empirical studies on this subject. As has been stated previously in Chapter two, the MASTEC programme was centre-based. School teachers would leave their schools during a school day and during school hours, to attend workshops at the project head quarters. It may therefore be a good starting place to consider studies that took into consideration school-based versus centre-based programmes, in an attempt to explore this question, and this is done in Section 10.2.1 below.

10.2.1 Project participants' perceptions of matters relating to the implementation of the MASTEC programme

Based on previous research, in both developed and developing countries, there is little evidence for the assertion that whether or not a programme is school- or centre-based has a bearing on its successes and /or failures. Research conducted on both school-based and centre-based programmes bears testimony to the lack of conclusive evidence on this question. For instance, in the case of studies in the Netherlands, the United Kingdom and France, both successes and failures were reported in both kinds of programmes (Levačić and Jenkins, 2005; Luo and Dappen, 2005; and Sun and de Jong, 2007). In the case of studies conducted in developing countries, where centre-based programmes are popular, again both successes and failures have been reported.

The current study found that the MASTEC Project, a centre-based programme, has been reported by its participants as having been a success in some schools and not in others. This finding seems to

corroborate those of the studies stated above, which considered different development initiatives introduced in quite different contexts.

An emerging consensus in the literature relates to the importance of programmes satisfying certain conditions in order to succeed in the contexts in which they were implemented. Some of these conditions were *inter alia*, stated as the programmes' ability to meet teachers' needs and expectations (Hustler *et al*., 2003; Dyer *et al.*, 2004; Moswela, 2006). Some authors relate this consensus to issues that pertain to the teachers' acceptance and recognition of insider versus outsider programme implementer. According to these writers (including Nir and Bogler, 2006) outsider implementation did not particularly address teachers' needs and expectations.

This common finding from the others' research was similar to a certain extent to one of those of the current study. This similarity relates to the concern of some participants that no needs analysis was carried out to determine the type of programme that the MASTEC project needed to implement in order to bring about improvement in the schools involved. However, there was also a divergence between these two sets of findings. That is, although the MASTEC programme was implemented by 'outsiders', the MASTEC lecturers, the teachers did not object to their professional development being placed in the hands of these 'outsiders'. Rather, they seemed to acknowledge the lecturers' expertise in the

areas in which they themselves were lacking, specifically those relating to new innovations in teaching and learning. This divergence may be explained by the fact that these South African teachers might have been less qualified than those from the developed countries, especially when one considers the impact of the legacy of the apartheid era on the qualifications of black teachers.

From the Tanzanian study of the school mapping project, a set of implementation-related findings emerged which portray the importance of stakeholder involvement and communication across the board. This study pointed out that the involvement of local communities as important stakeholders in all the stages of implementation resulted in a reported success (Galabawa *et al.*, 2002).

I detected some similarities between the findings of the present study and those of Galabawa *et al.* reported above. The participants of the current research project, especially those from the rural parts of the province, have unequivocally stated that communication was key to the success or failure of any organisation. From my field notes it emerged that what was perceived as negative communication practice related to the neglect shown towards the communities around the schools (see Section 7.5.2). Participants' views on the involvement of local school communities were also discussed in Section 9.1 where it was reported that community members' participation in the

MASTEC project may have helped to garner the support that could have increased its prospects of success.

10.3 Could there have been a problem with the schools that were not benefiting from the MASTEC programme?

To explore the question posed above, I present in the following section participants' perceptions of the project benefits and limitations. I attempt to draw a comparison between these perceptions across the different participants of the current study, so as to determine whether or not such perceptions can be attributed to their differences and/or the differences in their circumstances.

10.3.1 Project participants' perceptions of the of the benefits and limitations of the MASTEC project

It has been reported in some previous empirical studies that school improvement programmes have been found to be beneficial to their participants. Such benefits included the success of such programmes due to stakeholder involvement (Galabawa *et al.*, 2002), or to provision of equipment to the participating schools and the acquisition of new skills with respect to methods of teaching (Harvey and Peacock, 2001). In the studies of the Netherlands school curriculum reform, the benefit of the programme was that it received legal status and was recommended for implementation by all schools (Sun and de Jong, 2007).

The current study, (Sections 8.1.1 and 8.1.2) includes similar findings in that some school teachers reported that they had gained more than merely new teaching approaches from being involved with the project. They indicated that they also became better able to customise such approaches to their own specific needs and situations, as well as to provide input to the management of their schools. They also reported that their schools' infrastructure had been improved in terms of security and electrification of the buildings to better house the equipment they had received from MASTEC. This they perceived as having improved the relations between teachers and the learners' parents, as the latter were directly involved in such improvements.

The project INSET staff reported having gained skills in facilitation and the development of teaching materials due to their participation in the project. Some even mentioned having acquired more fluency in the local languages, which they would not have learned had they not been involved in the project.

Project limitations cited in the findings of previous studies included four issues as listed below.

1. Lack of sufficient political support for the government in its legalisation of school reform programmes (Sun and de Jong, 2007). This was said to be the position in the Netherlands curriculum reform due to the nature of the targets that such a

programme was set to achieve (highly specific achievement targets);

2. One school improvement programme that was implemented in a variety of different Botswana contexts, and as such was seen as a “one size fits all” (Moswela, 2006);

3. Outsider implemented programmes that led to teacher dependence on the implementers to an extent of attrition at the end of the progamme implementation period (Sun and de Jong, 2007); and

4. Lack of communication between implementers and stakeholders as well as lack of programme implementer flexibility to adjust with the changing political landscape, where the managers of this project found themselves ‘competing’ with government funded projects. This then led to the demise of the programme as was the case in the South African PMP project (Harvey and Peacock, 2001).

I found that in the findings of the present study there are both similarities and differences as compared to those of the previous studies. Similarities related firstly the implementation of one school improvement programme in different contexts (Section 9.2), for different contexts (Section 8.2.1) and secondly the lack of communication amongst the stakeholders (Sections 7.5.2 and 8.2.3).

Divergence from the findings of other studies related to the lack of political support: in the case of the MASTEC project, the programme originated from the provincial department of education and had full support both from the politicians and most citizens. The MASTEC project, unlike the curriculum reform of the Netherlands, was to address the South African national education transformational needs, and most South African citizens were in agreement on the qualification of the target population, as stated in some documents of the project, to be its intended subject.

Another divergence related to the attrition of schools due to outsider implementation. In the case of the MASTEC programme, outsider implementation of the project was welcomed by most teachers. The only issue they raised was the relevance of the programme to all schools, as their needs had never been considered when the programme was developed. Thus, in this case, attrition may well have occurred not because the teachers had developed a dependency syndrome as was reportedly the case with the schools in the literature, but because they might not have perceived the programme as being relevant to their school improvement needs.

In the following section I provide an account of the findings that distinguish this study from existing literature on the subject.

10.4 Distinctive Findings

Although the finding relating to the importance of contexts is not unique to this current study, what seemed to be distinctive about it in this case was the extent to which some of these contexts involve cultural protocol and the involvement of community leaders, especially the traditional leadership, in rural areas as compared to peri-urban areas. Traditional leadership, in the South African context, refers to cultural monarchs, chiefs and ethnic group leaders. This theme appeared to hold a special place in participants' perceptions, and therefore in their reports of how regard or disregard of cultural dynamics can influence the programme implementation and its impact. This strong view was evident from the INSET focus group discussion cited in the previous chapter (Section 9.1). Why this finding is important and its implication for practice is discussed below in Section 10.7.3.

Secondly, out of the three schools participating in this project, mostly the focus group whose participants belonged to the school situated within very close proximity to the MASTEC head quarters reported benefits from participating in the project (Section 9.1.2). Although the other two focus groups did report on benefits of being participant in the programme, they put more emphasis on project limitations in their discussions (Section 9.2.1). Both project lecturers' focus groups cited benefits to schools from their participation in the project, as if this was universal for all the schools. I find it quite interesting that this is the case as these

three schools were situated in different contexts in terms of infrastructure and resources (human, material and financial), as well as in terms of their proximity to the MASTEC resources. In addition, from the testimony of the participants based in those schools, they were not benefitting equally from the programme. It is my interpretation that this divergence in terms of programme benefits may result from the different improvement needs of the different schools.

A similar divergence applied to participants' views at the MASTEC headquarters in relation to project benefits and limitations. In their respective focus groups, I found that the INSET group had a tendency to point fingers at the PRESET lecturers as far as project limitations were concerned (Section 9.2.3) while the PRESET group in turn blamed the project management. This is quite interesting for me because, as stated earlier, it seemed as though the INSET staff were the 'blue eyed boys' of the project management, since they were getting all the benefits that the donor funders' money could buy.

My interpretation of this finding was that the two centres of power had divided the project to such an extent that the staff found it easy to point fingers when implementation seemed not to be yielding positive results. Now, one question that arises from these divergent perceptions of benefits and limitations is whether it could be that those schools which left the programme before its end (with no apparent reason) did so due to this divergence, and

whether there is therefore a specific related cause for their failure to benefit from the project. I interpret this attrition as a probable confirmation of the power of context. That is, the personnel belonging to those schools that had left MASTEC may have felt that the programme was not what they needed for the improvement of their school and therefore decided to leave prematurely. Incidentally, these dropped out schools were the same schools that the INSET focus group was referring to in Section 7.6 as the "**XXX**; **YYY** and **ZZZ**, which one could never classify as being 'previously disadvantaged'."

10.5 The limitations of this study

As previously stated, in conducting this research, I approached my investigation from an eclectic phenomenological perspective, by employing a multiple qualitative methods approach to sampling, data generation and analysis. The rationale behind the combination of methods that I employed was, firstly, to optimise the opportunities of "gaining the most complete and detailed data possible on the phenomenon" (Hall *et al.*, 1999: 296) given resource (time and cost) constraints. Secondly, because the MASTEC programme was located and implemented in different contexts, I followed Silverman's reasoning that "…if you treat social reality as constructed in different contexts, then you cannot appeal to a single 'phenomenon' which all your data apparently represents" (Silverman, 2005: 121).

However, while I considered the research design appropriate to addressing my research aims, the study (like all studies) inevitably has weaknesses and limitations. Below, I provide a synthesis of the limitations associated with the research approach and methods used in the current study.

Regarding the phenomenological approach to research, in this study I experienced two problems relating to my status at the institutions of data generation, that is, the sample schools and the MASTEC headquarters. Interestingly, this problem was two-fold, in that within the schools it was about making the school teachers regard me as 'one of us', whereas at the project headquarters, where I worked, it was about being regarded as researcher rather than as 'one of us'.

In addition, in conducting participant observation, I had trouble with the dual roles I found myself performing. This led to my inability at times to separate myself as the researcher from myself as a teacher educator. I also found it difficult at times to set boundaries between my status as the researcher, and as a teacher at the project under investigation, what Mulhall (2003), refers to as the "researcher and the researched" (307). Although I tried my utmost to be conscious of the situation, the result of this difficulty could have negatively influenced the trustworthiness of the data generated by inadvertently reporting the observed from a biased point of view where my interpretation or prior experience of similar situations may cloud the perspective of the participants'

experiences. This could have had the ripple effect of impacting the credibility of my findings.

As far as sampling techniques were concerned, convenience sampling, which I used to select participant lecturers, meant that I had to manage with the staff members available at the project headquarters. The reason for this was due to the timing of the study and that of the MASTEC project. The latter was nearing the end of its life span and as a result had lost a number of staff to other employers. Such usage of available staff may have led to a narrowing of a range of perceptions within the target population, which has implications for the representativeness, generalisability or transferability of my findings. I hasten to add though that this was the least of my concerns as I am aware that qualitative studies are more about understanding the phenomena under investigation, as experienced by those centrally involved, than about seeking to generalise the findings to a broader group.

The problem experienced with the convenience and stratified random sampling approaches, which I used to select a sample of participant schools, was that I ended up with two schools in the same neighbourhood. These schools shared what appeared to be similar broad contexts, although the educational achievement of their pupils placed them in different sample strata. The fact that these schools were situated in such close proximity to each other meant that teachers from the two schools had more opportunities to socialise than in a situation where their schools were far apart,

because they more often than not used the same means of transport. This situation could have had an influence on their reported perceptions of their accounts of their experiences of the MASTEC project, as they could have probably shared experiences of my visit during the participant observation period.

With regards to the data generation methods, limitations of this study were experienced first with the use of focus group discussions. For each target population to be sampled there was only one focus group instead of two or three. This was limiting to the quality and quantity of data thus generated, because an opportunity was missed to widen the scope of the participants' experiences and opinions so as to either corroborate or dispute those which emerged from just one group.

A second limitation was that all members of the focus groups were from the same institution and therefore knew each other well. The status of and power relationships between the group members appeared to lead to their unwillingness to discuss at length any topics they regarded as being sensitive, and this might have threatened the trustworthiness of the data. The INSET lecturers in particular expressed fear of finding themselves in 'trouble' for sharing some of their thoughts and feelings about what they deemed as the limitations of the project. This is portrayed in Section 7.6.

Thirdly, all focus group discussion participants belonged to the same ethnic group and spoke the same language, sePedi, which was foreign to me. Although they discussed in English, they would from time to time slip in and out of their own language, thus making it difficult for me to follow the flow of the conversation. To some extent I could minimise the effects of this limitation at a later point in time, because the group discussions were recorded, and thus were revisited with the help of an interpreter. However, because I was not able to follow some lines of conversation during the focus group discussion, some valuable opportunities for probing participants' accounts may have been lost.

A fourth limitation was the omission of learners, both from the PRESET and the secondary schools. Learners in this instance refer to the high school pupils and student teachers, as opposed to the schoolteachers. An inclusion of these groups could have provided accounts of their experiences of the programme from a perspective of a population seldom listened to. Had the learners been made part of this study's participants, their inclusion would have brought to the study a voice of the real intended beneficiaries of the programme. It would have been interesting to find out from this population whether or not they thought that the MASTEC programme was beneficial to them.

A fifth limitation relates to the omission of those MASTEC project schools which had prematurely left the project. Data generated from the people associated with one or more of these schools

could have shed some light on the reason for their attrition, rather than the speculation which emanated from this missed opportunity.

Although this study appears to have had quite a number of limitations, they were not insurmountable, and I have managed to compensate for some of these. For example, as has been already stated in Section5.4, doing a literature review before actually conducting the field work helped in me making the decision of spending the first term of schooling as a participant observer, and thus reducing the so-called 'Hawthorne effect', (Mays and Pope, 1995:184). This compensation for the limitations has been discussed at length in Chapters 4; 5; and 6.

On the other hand, the study also had a number of strengths, some of which are highlighted in the following section, in which I discuss how this study has contributed to existing literature.

10.6 Contributions of this study to existing literature

As mentioned in the previous sections, the findings of the current study corroborate, to a certain extent, those of previous empirical research into practice in the fields of school effectiveness research, although the methodology employed differs from many of the previous studies. I employed a 'multiple qualitative methods' approach to investigating participants' perceptions of their MASTEC project experiences, an approach which I have not

detected in many of the studies I have considered for this project. I have highlighted the difference between this approach and the 'mixed methods' approach in the methodology chapter.

There has been a consistency of use of multiple qualitative methods throughout this study, in line with the methodological framework (eclectic phenomenology) adopted for the research. I represent this consistency by means of the schematic presentation, below in Figure 10.1:

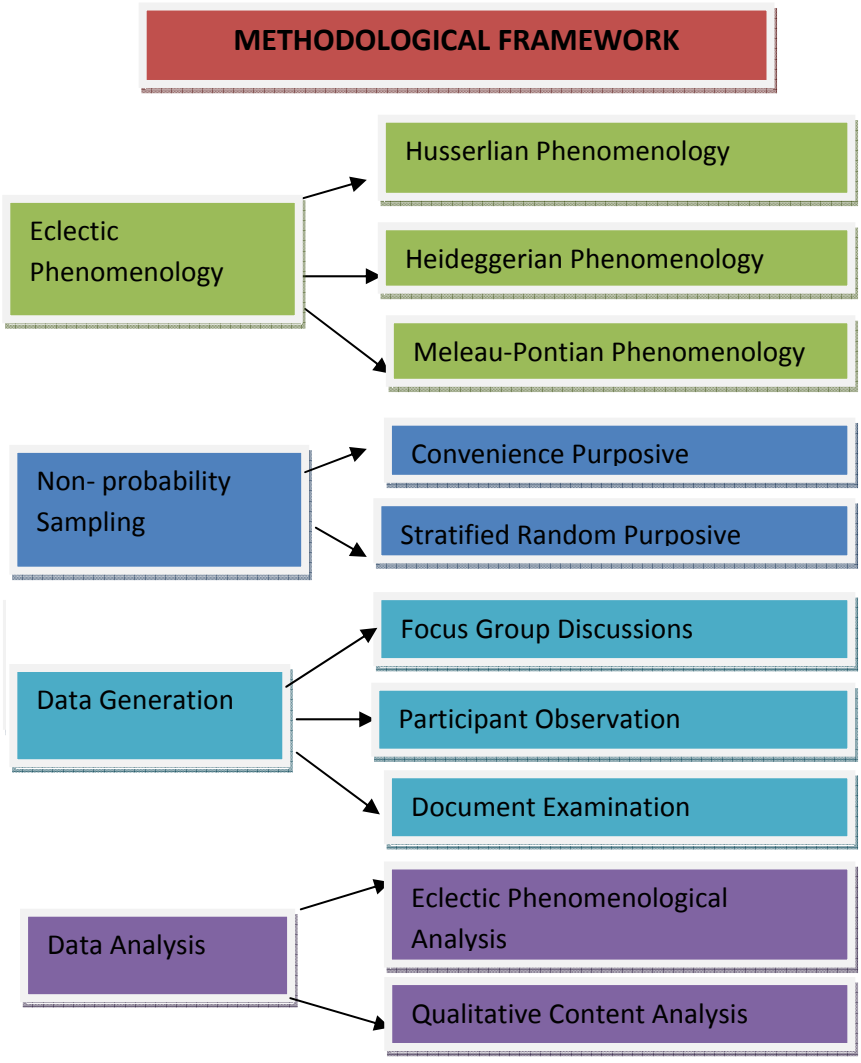

Figure 10.1 Consistency in use of multiple qualitative methods throughout all the phases of the study

Through the data analysis methods utilised, this study has introduced into the existing literature a synthesis of phenomenological analysis methods of Hycner (1985), Douglass and Moustakas (1984) and Moustakas (1990), that has resulted in a unique five step technique of data analysis, which I have referred to as the phenomenological data analysis technique.

I have in this study made an effort at clearing the blur in distinction that occurs in literature (from as early as 1964, with Kerlinger, right through to 2006, with Kohlbacher), between document examination and/or content analysis as data generation methods, by choosing to refer to document examination as a data generation method and content analysis as a data analysis method. This is discussed in detail in Section 5.5.

The qualitative content analysis method I have employed, which has been adapted from Mayring (2000), Kohlbacher (2006) and Zhang (2006), may not be completely unique, but its choice, which offered the assurance of keeping the methods of data analysis compatible with those of data generation and thus allowing for greater adherence to the methodology of this study (multiple qualitative methods), offers an approach which does not seem to be the norm in the fields of school effectiveness, school improvement and effective school improvement.

As has been illustrated above in Sections 10.1 to 10.3, the themes which emerged from the different methods of data analysis employed in this study corroborated one another and those of the

previous research to a great extent, although in places there were some minor differences, for which I have attempted to provide an explanation. Below, in the next section, I provide an account of the implications of this study.

10.7 Implications of the findings of this study

In this final section, I provide an account of what implications the findings of this study might have for policy makers at the South African Department of Education and elsewhere, and for future research as well as for school improvement practitioners.

10.7.1 Implications for policy making

Since the rationalisation of teacher education colleges and their incorporation into institutions of higher education, the South African in-service teacher education has largely depended on partnerships between provincial departments of education and non-governmental organisations (NGOs), non-profit organisations (NPOs) and other private service providers, such as the Primary Science Project (PSP), amongst others. The MASTEC project was one of these in-service teacher education providers, although its operation differed from others because it was an INSET/PRESET project aimed at improving learner achievement through educator empowerment.

The monitoring and evaluation of projects and programmes which are in partnerships with the provincial departments of education are usually conducted in a number of different ways being

underpinned by different theoretical frameworks. Each service provider either conducts, or commissions a service provider or agency of their or the donors' choice to carry out such processes. This results in a failure to adhere to uniform standards which makes these evaluations difficult to compare with each other. I am not suggesting that all evaluation studies should employ similar methods for the purposes of comparability, but that those projects that have been developed through the use of logical framework approach (LFA) they may need to be evaluated in the same manner because LFA is in essence a project development, implementation and monitoring and evaluation tool.

What this implies for government is that firstly, after the conceptualisation of school improvement and/or school effectiveness initiatives, an identification and examination of relevant perspectives of all stakeholders may have to be conducted, prior to the actual development and implementation of such initiatives.

Secondly, a needs analysis may have to be carried out to identify exactly what the stakeholders see as a need, from their own perspective. It is at this stage that the finalisation of the programme conceptualisation can be conducted. Once conceptualised, in collaboration with all stakeholder representation, a customised programme can then be developed.

10.7.2 Implications for further research

I divide this section into two parts, which relate to sampling and design issues. In addressing these I begin by stating, with the benefit of hindsight what I would do instead of, or in addition to, what I have already done if I had to carry out the same study over again. I then follow up in the second part with a reflection on my use of multiple qualitative methods and highlight related issues that may be followed up by further research.

Firstly, sampling was limited to one focus group per category of participants, whereas as stated in Section 10.5, an additional number of these per category might have led to a wider spectrum of responses which could have either corroborated or contradicted the perceptions of group members. If I were to do it again I would seek to recruit a larger number of participants and seek to conduct a larger number of focus groups per category.

In addition, the present study used only experienced teachers and MASTEC PRESET and INSET lecturers as participants. It omitted an important component of the PRESET and the schools, the student teachers and school learners respectively, as explained previously in Section 10.5. The student teachers could have shared how they perceived their experience of the initial teacher preparation programme. They could also have compared that experience with their in-school experience, whilst the learners could have shed some light on their needs and whether or not they

had benefitted from the programme. Should these populations, especially the school learners, not have been omitted in the current study, an opportunity of having tested the relationship between 'transformative theory', (which was discussed in detail in Section 2.4.1) and the aim of the project would have been gained. Also, as stated previously in Section 10.5, the schools that had left the programme could have provided some insights into their attrition reasons, had they been made part of the study.

Another missed opportunity was the omission of the MASTEC management team as part of the target population of this study. It would have been helpful and interesting to juxtapose their perceptions and experiences of MASTEC programme implementation against those of the other participants, especially the lecturers.

Secondly, as previously stated, this study was limited to multiple qualitative methods whereas the incorporation of a *mixed* methods approach to data generation and analysis could have introduced a quantitative element to this study which may thus have enabled consideration of the extent to which the findings were typical of the experiences of those in other schools and regions or contexts. This facet of the study might have revealed the statistical importance, significance and relevance of the findings of this study, thus consolidating them. Were I to repeat or duplicate this study, I would incorporate quantitative methods of data collection and analysis.

In Section 5.3 of this thesis, I allude to the threatened trustworthiness of the data generated in the manner chosen for this study. I could have lessened such threats by engaging an inter-interpreter checking system, where a second researcher might have come to similar findings, having been analysing the same data.

10.7.3 Implications for practice

The term ‘practice’ is broad in meaning as it relates to what people do. For this reason, “many implications for practice logically flow from those [of policy-making and further research]” (King and McGrath, 2002:205). In this section, therefore, those implications for practice that relate to policy and research will not be dealt with for prevention of repetition.

For school improvement practitioners, the findings of this study, notably those relating to problems of communication, imply that in programme implementation, all stakeholders may have to be kept advised of all operational plans. These findings also imply that lines of communication need to be open.

Another implication is that a single programme can be developed for implementation in different contexts, so long as it is adapted and adjusted in an attempt to ensure suitability for those particular contexts. As contexts differ, caution may need to be exercised in how the single programme is implemented from one context to another. In some situations, school-based programmes can work

well, whereas in others, only centre-based programmes can. In some South African situations, schools are allocated into clusters and cluster-based programmes have been found to function well in such circumstances, in terms of being easily accessible for teachers. A further implication here is for monitoring and evaluation to be carried out during programme implementation, rather than after, as is usually the case in most of these programmes. Concurrent implementation and monitoring and evaluation would be essential especially if a single programme has been adjusted for the different contexts in which it is implemented.

Another context-related implication for practice emerged from what I have referred to as the distinctive findings of this study, as presented in Section 10.4. According to this finding, development and implementation of school improvement programmes for some rural Limpopo schools may have to be discussed with the traditional leadership for them to be accepted by the school communities. Thus, after the conceptualisation of such programmes, there may have to be an identification of **all** stakeholders, including local governing structures and parents. This may have to be followed by inclusive consultative processes that will lead to an implementation strategy which involves monitoring and evaluation of these programmes.

It is recommended, as a result of the research enterprise reported in this thesis, that management and educators concerned with the in-service training of teachers strive for the development and

maintenance of synergies between local, district and provincial initiatives. These synergies may need to extend to pre-service teacher education institutions to ensure that what the experienced teachers receive from the programmes is aligned to the education of student teachers and the latest theories of learning and teaching. This implies that where both INSET and PRESET teacher education occur in the same institution, utmost care needs to be taken in avoiding the situation in which of two centres of power exist as was found to be the case in the MASTEC project.

Finally, this study has highlighted a number of issues that did not emerge directly from its findings, but are reported in other chapters. For example, as stated in Chapter 1 of this thesis, the educational transformation needs of South Africa are to address equity and redress as a means to provide quality education. Therefore, in my opinion, any South African school improvement initiative would be prudent to have as its aims and/or objectives, which are geared to lead to achieving the transformation of national education through addressing equity.

It is stated in the MASTEC project documents that the programme aims at improving attainment in Mathematics, the Sciences and Technology in the previously disadvantaged learners of the [Limpopo] province, especially girls. This is a noble aim and is very relevant to the transformation needs of South African education system. King and McGrath (2002) echo the need to address issues of equity, especially in the African continent, as they say that this

could positively contribute towards increasing the economic benefits of growth as “inequality hinders growth” (40). The current study has uncovered that much as the stated project aim complies with the national transformation needs, there is no evidence to the effect that the implementation of the MASTEC project was even slightly geared towards an achievement of this aim.

In my opinion, for the MASTEC project to have worked for all concerned, a thorough identification of all the stakeholders followed by their total involvement throughout its developmental stages might have had to precede it. Were that to have been the case, potential problems would have been better identified. The Tanzanian evaluation (Galabawa *et al.*, 2002) gives a good example of how stakeholder identification and involvement have worked well to yield positive impacts for a programme’s participants. In common with other research from developing countries, this present study has underlined yet again the importance of culture and context in any attempt to transform our education.

REFERENCES

African Evaluation Guidelines (2002) A Checklist to assist planning evaluations, negotiating clear contracts reviewing progress and ensuring adequate completion of an evaluation, Evaluation and Program Planning, Vol. 25, Issue 4, November 2002, 481 – 492

Ainscow, M. and Hopkins, D. (1992) Aboard the moving school, in Educational Leadership, 50 (3), 79 – 81.

Almedom, A. M. Blumenthal, U. and Manderson, L. (1997) Hygiene evaluation procedures: approaches and methods for assessing water-and-sanitation-related hygiene practices, Boston, MA, USA: International nutrition foundation for Developing Countries

AusGUIDE (2005) The Logical Framework Approach, AusAID, Australian Government, Commonwealth of Australia

Ausubel, D. (1960) The use of advance organisers in the learning and retention of meaningful verbal material, Journal of Educational Psychology, 5, 267-272.

Ausubel, D. (1968) Educational Psychology: A Cognitive View, Holt, Rinehart and Winston, (New York), 1968.

Babbie, E. R. (2001) The Practice of Social Research (7th ed.) London: Wadsworth Publishing Company

Beeth, M. E. and Hewson, P. W. (1997) Learning to learn Science: Instruction that supports conceptual change, (a research paper)

Berelson, B. (1952) Content Analysis in Communication Research. The Free Press, Glencoe, Illinois.

Black, B. S. and Rabins, P. V. (2006) Guest Editorial: Qualitative Research in Psychogeriatrics, International Psychogeriatrics Association 2006, 1-7.

BOND Networking for International Development (2003) Logical Framework Analysis

Bransford, J. Brown, A. and Cocking, R. (1999) How people learn: Brain, mind, experience, and school. Washington, DC: National Academy Press.

British Educational Research Association (BERA) (1992) Revised Ethical Guidelines for Educational Research

British Educational Research Association (BERA) (2004) Revised Ethical Guidelines for Educational Research

Brocklesby, J. (1993) Methodological complementarism or separate paradigm development-examining the options for enhanced operational research, Australian Journal of Management, 18, 2, December 1993, University of New South Wales

Brouwer, C. N. (2007) Alternative teacher education in the Netherlands 2000-2005. A standards-based synthesis,

European Journal of Teacher Education, 30 (1) 2007, p26-40.

Brown, K. E. and Medway, F. J. (2007) School climate and teacher beliefs in a school effectively serving poor South Carolina (USA) African-American students: A case study. Teacher Education Vol. 23 Issue 4, May 2007, pages 529-540.

Brown, L. (1997) "The Private Practice of Subversion: Psychology as Tikkun Olam" American Psychologist, 52 (4),

Bryman, A (2004) Social Research Methods (2nd ed) Oxford; Oxford University Press

Bryman, A. (2006) Integrating quantitative and qualitative research: how is it done? Qualitative Research 2006; 6; 97 Sage Publications.

Budd, J. M. (2004) A qualitative study of the experiences of patients following transfer from intensive care, Journal of Documentation, Vol. 61, no. 1; 2005 pp 44 -59.

Burns, R. (1995) The adult learner at work, Business and Professional Publishing, Sydney

Byrne, M. (2001) Sampling for qualitative research AORN Journal http://findarticles.com/p/articles/mi_mOFSL/is_2_73/ai_70871448/print [accessed 2007/07/12]

Chand, V. S. and Misra, S. (1999) Peninsula Technikon, Cape Town: In Transformation.

http://www.iinad.ernet.in/~vijaya/Pentechnikon.pdf [accessed 2008/12/18]

Colorado State University (1993) Overview: Content Analysis http://www.writing.colostate.edu/guides/research/content/index.cfm [accessed 10/10/ 2007).

Constable, P. and Rice, M. (2000) MASTEC Project – DfID Review (unpublished).

Creswell, J. W. (1994) Research Design: Qualitative And Quantitative Approaches. Thousand Oaks, CA: Sage.

Creswell, J. W. (1998) Qualitative inquiry and research design: Choosing among the five traditions. California: Sage.

Creswell, J. W. (2003) Research Design Qualitative, Quantitative and Mixed methods Approaches, Thousand Oaks, Sage.

Creswell, J. W. Fetter, M. D. Ivankova, N. V. (2004) Designing A Mixed Methods Study in primary Care, Annals of Family Medicine, Vol. 2 No. 1 Jan/Feb 2004.

Creswell, J. W. and Plano Clark, (2007) Designing and Conducting Mixed Methods Research, Thousand Oaks, CA: Sage Publications.

Davenport, J. (1993) "'Is there any way out of the andragogy mess' in M. Thorpe, R. Edwards, and A. Hanson (eds) Culture and processes of Adult Learning, London; Routledge.

Darbyshire, P. MacDougall, C. and Schiller, W. (2005) Multiple Methods in qualitative research with children: more

insights or just more? Qualitative Research 2005; 5; 417-436.

Department of Education (1998): Green Paper on Further Education and Training – Preparing For The Twenty First Century Through Education, Training and Work.

Diaz, F. (2005) Participant Observation as a Tool for Understanding the Field of Safety and Security, or How I learnt the Ethnographic Approach in an Attempt to Encompass the Complexity of Social situations, Champ pénal Vol. II

Douglass, B. G. and Moustakas, C. (1985) Heuristic inquiry: the internal search to know. Journal of Humanistic Psychology, 25 (3): 39-55.

Dowling, M. (2007) From Husserl to van Manen: A review of different phenomenological approaches, International Journal of nursing Studies, 44 (2007) 131-142.

Dyer, C. Choksi, A. Awasty, V. Iyer, U. Moyade, R. Nigam, N. Neetu, P. Shah, S. and Sheth, S (2004) Knowledge for teacher development in India: the importance of 'local knowledge' for in-service education, International journal of Educational Development, 24, 39 – 52.

Earl, L. Torrance, N. Sutherland, S. Fullan, M. and Sidiq Ali, A. (2003) Manitoba School Improvement Program final Evaluation Report, The Ontario Institute for Studies in Education of the University of Toronto.

Ernest, P. (1994) Constructing mathematical knowledge: epistemology and Mathematics education, London; Falmer.

Foote, R. A. Clark, L. and Recker, N. (2004) Using Focus Group Interviews to Identify Needs for Stepfamily Education, Journal of Extension, August 2004 Vol. 42 No. 4.

Frechtling, J. A. (2007) Logic Modelling Methods in Program Evaluation, Wiley Inc., Jossey-Bass, San Francisco.

Freeman, R. Gorter, R. Mc Williams, C. and Williams, , R. Gorter, R. Mc Williams, C. and Williams, S. (2007) A qualitative exploration of the role of gender, ethnicity and clinical experience upon dental students' interpersonal skills when interacting with dental nurses, European Journal of Dental Education, Blackwell Publishing.

Freire, P. (1973) Pedagogy of the oppressed. New York: Seabury press.

Galabawa, J. C. J. Agu A. O. and Miyazawa, I. (2002) The Impact of school mapping in the development of education in Tanzania: an assessment of the experiences of six districts, Evaluation and Program Planning, Vol. 25 No. 1 pp 23 – 33.

Gibbs, A. (1997) Focus Groups, Social Research Update, Issue 19 Department of Sociology, University of Surrey, Guilford GU27XH, Gilbert, N. (eds)

Gilmore, A. and Carson, D. (1996) “Integrative” qualitative methods in a services context, Marketing Intelligence and Planning Vol. 14, No. 6; 1996 pp 21-26

Graneheim, U. H. and Lundman, B. (2004) Qualitative Content Analysis in nursing research: concepts, procedures and measures to achieve trustworthiness, Nursing Education Today Vol. 24 Issue 2, February 2004 pp105-112.

Hall, A. L. Rist, R. C. (1999) Integrating Multiple Qualitative Research Methods (or Avoiding the Precariousness of a One-Legged Stool) Psychology and Marketing, Vol. 16 (4):291-304, July 1999, John Wiley and Sons Inc.

Hammersley, M. and Atkinson, P. (1983) Ethnography: Principles in Practice, Tavistock Publications

Harvey, S. and Peacock, A. (2001) The life-cycle of a South African non-governmental Organisation: Primary Science Programme 1983 – 1999, Comparative Education, 37:2, 213 – 229.

Havu-Nuutinen, S. (2005) “Examining young children’s conceptual change process in floating and sinking from a social constructivist perspective” International Journal of Science Education, Vol. 27, no. 3, p259-279.

Hewson, P. W. Beeth, M. E. and Thorley, N. R. (1998) Teaching for Conceptual Change, in K.G. Tobin and B. J. Frase (eds) International Handbook of Science Education. p199-218. Dordrecht, Netherlands: Kluwer.

Holsti, O. R. (1969) Content Analysis for the social Sciences and humanities. Reading, MA: Addison-Wesley Publishing Company.

Hopkins, D.; West, M. and Ainscow, M. (1994) School Improvement in an Era of Change. London: Cassell.

Hopkins, D and Levin, B (2000) Educational Reform and School Improvement, (an essay) NIRA Review

Hopkins, D. (2000) 'One Size Does Not Fit All' Arguments for a Differential Approach to School Improvement – a paper given as part of the University of Keele – TES lecture series on Tuesday 6th June 2000.

Hudson, S. (2000) The Segmentation of Potential Tourists: Constraint Differences between Men and Women, Journal of Travel Research, vol. 38 No. 4 pp 363-368.

Hycner, R. (1985) Some Guidelines for the Phenomenological Analysis of Interview Data, Human Studies, 8, pp.279-303.

Hsieh, H. and Shannon, S. E. (2005) Three Approaches to Qualitative Content Analysis, Qualitative Health Research 2005; 15; 277 Sage publications

Hustler, D. McNamara, O. Jarvis, J. Londra, M. Campbell, A. (2003) Research Report 249 DfES, Nottingham, pxii – 265.

Jackson, P. (1983) The principles and problems of participant observation, Geografiska Annaler: Series B, Human Geography, vol. 65 no. 1 pp39-46.

Kahn, M. (1993) Building the base: Report on a sector study of Science education and Mathematics education. A product of great consultation carried out for the Commission of the European Communities, Pretoria and the Kagiso Trust, Johannesburg, South Africa.

Kerlinger, F. (1964) Foundations of behavioural research. New York: Holt, Reinhart and Winston

Khamis, A. and Sammons, P. (2007) Investigating educational change: The Aga Khan University Institute for educational development teacher education for school improvement model, International Journal for Educational Development, 27, 572 – 580.

Khunti, K. (1999) Use of multiple methods to determine factors affecting quality of care patients with diabetes, Family Practice, Vol. 16, No. 5; Oxford Press.

Kibler, E. (2007) Participant Observation: studying the link between homelessness, HIV/AIDS and drug abuse, http://soziologisch.info-lounge.at/?p93-100 [accessed 13/09/2007].

Killen, R. (2002) Outcomes-based education: Principles and possibilities, Interpretations, 35 (1), 1-18.

King, K. and McGrath, S. (2002) Globalisation, Enterprise and Knowledge Education, Training and Development in Africa, Symposium Books, United Kingdom

Knowles, M. (1984) Andragogy in Action: Applying modern principles of adult education. San Francisco. Jossey-Bass.

Kohlbacher, F. (2006) The Use of Qualitative Content Analysis in Case Study, Research Forum Qualitative Social Research, Vol. 7, No. 1 Article number 21 January 2006.

Kritzinger, J. (1995) Qualitative Research: Introducing focus Groups BMJ 1995; 311: 299-302 (29 July).

Krippendorff, K. (1980) Content Analysis. An Introduction to its Methodology. Sage Publications Ltd., London.

Laverty, S. M. (2003) Hermeneutic Phenomenology and Phenomenology: A Comparison of Historical and Methodological Considerations, International journal of Qualitative Methods 2 (3) September 2003 Article number 3.

Leahey, E. (2007) convergence and confidentiality? Limits to the implementation of mixed methodology, Social Science Research, 36 (2007)149-158.

Levačić, R. and Jenkins, A. (2005) Evaluating the effectiveness of specialist schools in England, School Effectiveness and School Improvement, 17:3, 229 – 254.

Levering, B. (2006) Epistemological Issues in phenomenological Research: How Authoritative Are People's Accounts of their own perceptions? Journal of Philosophy of Education Vol. 40, No.4; 2006

Lewis, M. (1995) Focus Group Interview in qualitative research: a review of the literature, Action Research Electronic Reader, Health Science Education

List, D. (2005) Know Your Audience: A Practical Guide to Media Research, Wellington, New Zealand: Original Books.

Luo, M. and Dappen, L. (2005) Mixed-methods design for an objective-based evaluation of a magnet school assistance project, evaluation and Program Planning, vol. 28, Issue 1, February 2005, pp109 – 118.

Maandag, D. W.; Deium, J. F.; Adriaan W. H. and Buitink, J (2007) 'Teacher Education in schools: an international comparison' European journal of Teacher Education, 30: 2, 151-173.

Mackey, S. (2005) Phenomenological nursing research: methodological insights derived from Heidegger's interpretive phenomenology, International Journal of Nursing Studies 42(2005) 179-186.

Marczak, M. and Sewell, M. (1998) Using Focus Groups for Evaluation CYFERNET-Evaluation http://ag.arizona.edu/fcs/cyfernet/focus.htm [accessed 2007/07/09]

MASTEC PRESET Staff (2000) Draft Document – An Implementation Policy for the Delivery of CPD for Educators in the Northern Province.

Mayet, G. H. (1997) 'Admissions to Schools: a study of Local Education Authorities' in R. Glatter, P. A. Woods and C. Bagey (eds) Choice and Diversity in Schooling: Perspectives and Prospects. London: Routledge.

Mayring, P. (2000) Qualitative Content Analysis, Forum: Qualitative Social Research, vol. 1 (2) June 2000.

Mayring, P. (2002) Introduction to Qualitative Social Research, Beltz Verlag, Weinheim/Basel

Mayring, P. (2003) Qualitative Content Analysis, Qualitative Social Research On-line Journal, 1 (2) retrieved December 18, 2003 from http://qualitative-research.net/fqs/fqs-e/2-00inhalt-e.htm

Mayring, P. (2006) Qualitative Content Analysis, FQSR, Vol. 1 No. 2 (June)

Mays, N. and Pope, C. (1995) Qualitative Research: observational methods in health care settings, British Medical Journal, 1995; 311:182-184 (15 July)

McNamara, J. (2006) Media Content Analysis, Uses, Benefits and Best Practice Methodology, (A research paper) CARMA A Media monitors Company

Merleau-Ponty, M. (1962) The Phenomenology of Perception, translated by C. Smith London: Routledge and Kegan Paul.

Merleau-Ponty, M. (2002) The Phenomenology of Perception, London: Routledge

Mertens, D. (1999) Inclusive Evaluation: Implications of Transformative Theory for Evaluation, American Journal of Evaluation, Winter 99, vol. 20 (1), 1 – 14.

Middleton, A. (2005) Logical Framework Analysis: A Planning Tool for Government Agencies, International Development Organisations and Undergraduate Students, Undercurrent, 2005, Vol. 2 p41-47

Miles, M. B. and Huberman, A. M. (1984) Qualitative Data Analysis: A Sourcebook of New Methods. Beverly Hills, CA: Sage Publishers.

Moerer-Urhdahl, T. and Creswell, J. W. (2004) Using Transcedental Phenomenology to Explore the “Ripple Effect” in a Leadership Mentoring Programme, International Journal of Qualitative Methods, 3 (2) June, 2004.

Moon, B. (2007) School-based teacher development in Sub-Saharan Africa: building a new research agenda, The Curriculum Journal, Vol. 18, No. 3, September, 2007, pp. 355 – 371.

Moore-Thomas, C. and Erford, B. T. (2003) Needs Assessment: An Ongoing Process for School Improvement, in Measuring Up: Assessment Issues for Teachers, Counsellors and Administrators.

Mortimore, P. (1991) School Effectiveness Research: Which Way at the Crossroads? Swets and Zeitlinger

Mortimore, P. (1991) The nature and findings of school effectiveness research in the primary sector, S. Riddel and S. Brown (eds.) School Effectiveness Research: It's Messages for School Improvement, London: HMSO.

Moswela, B. (2006) Teacher professional development for the new school improvement: Botswana, International Journal of Lifelong Education, vol. 25, no. 6, 623 – 632.

Moustakas, C. (1990) Heuristic research: Design, methodology and applications, Newbury Park, CA: Sage.

Mulhall, A. (2003) In the field: notes on observation in qualitative research, Methodological Issues in nursing Research, Journal of Advanced Nursing, 41 (3), 306-313 Blackwell Publishing

Nelson, C. K. (1994) Ethnomethodological positions on the use of ethnographic data in conversation analytic research; in Journals of contemporary Ethnography; Vol. 23 No. 3 pp307-331 Sage publications, Inc.

Nelson, L. and Mc Sherry, R. (2002) Exploring the lecturer/practitioner role: individuals' perceptions of the lived experience, Nurse Education in Practice, (2002) 2, 109-118

Nesset, V. (2005) An Exploratory Study into the Information-Seeking Behaviour of Grade Three Students

Neuendorf, K. A. (2002) The Content Analysis Guidebook, Thousand Oaks, CA: Sage.

New York State Teacher Centers (2004) Program Evaluation, Focus Groups http://programevaluation.org/focusgroups.htm [accessed 2007/07/11]

Nir, A. E. and Bogler, R. (2007) The antecedents of teacher satisfaction with professional development programs, Teaching and Teacher Education, 24 (2008) 377 – 386.

Novak, J. D. (2002) Meaningful learning: the essential factor for conceptual change in limited or appropriate propositional hierarchies (liphs) leading to empowerment of learners. Science Education, 86(4), 548-571

Ntombela, M. Mhlongo, M and Wood-Robinson, D (2000) Report: Evaluation of the INSET Component of the MASTEC project (unpublished)

O'Cathain, A. Murphy, E. and Nichol, J. (2007) Why, and how mixed methods research is undertaken in health services

research in England: a mixed methods study, BMC Health Services Research 2007, 7:85 licensee Biomed Central Ltd.

Odame, H. H. (2001) Engendering the Logical Framework, International Service for National Agricultural Research (ISNAR) the Netherlands.

O'Halloran, S. (2003) Participant Observation of Alcoholics Anonymous: Contrasting Roles of the Ethnographer and Ethnomethodologist,

Örtengren, K. (2004) A summary of the theory behind the LFA method The Logical Framework Approach, Sida (Swedish International Development Cooperation Agency).

Palardy, G. J (2008) Differential School Effects among Low, Middle, and High Social Class Composition Schools: A Multiple Group, Multilevel Latent Growth Curve Analysis, School Effectiveness and School Improvement, Mar 2008, vol. 19, no.1. p21 – 49.

Pålson, H. (2007) Participant Observation in Logistics Research – experiences from an RFID implementation study, International Journal of Physical Distribution and Logistics Management, Vol. 37 No. 2, 2007 pp148-163.

Park, P. (1999) People, knowledge and change in participatory research. Management Learning, vol. 30 no. 2 pp141-57

Patton, M. Q. (1990) Qualitative Evaluation and Research Methods (2nd ed.) Newbury Park, CA; Sage publications.

Payne, B. (1998) MASTEC project Tri-Partite Review Agreed Report, (unpublished).

Piaget, J. (1962) Comments on Vygotsky's critical remarks concerning The Language and Thought of the Child, Routledge and Judgment and Reasoning in the Child, by Piaget, The original Intelligence in children. New York; International Universities Press.

Piercy, M. and Berlyne, D. E. (2002) The psychology of intelligence, translated from Piaget, 2001, original work published 1947)

Pina, J. (2006) Using Participant Observation for Organisational Discovery and Systems Analysis: Global AIDS Program Uganda, AMIA 2006 Symposium Proceedings page 1064

Racher, F. and Robinson, F. (2003) Are phenomenology and post positivism strange bedfellows? Western Journal of Nursing Research 2003; 25 (5) 464-481.

Reischmann, J. (2004) Andragogy. History, Meaning, Context, Function. http://web.uni-bamberger.de/ppp/andragogik/index.htm

Rocco, T. S. Bliss, L. A. Gallagher, S. and Perez-Prado, A. (2003) Taking the Next Step; Mixed methods Research in Organisational Systems, Information Technology

Learning, and Performance Journal, Vol. 21 No. 1 Spring 2003.

Scheerens, J. (2001) Monitoring School Effectiveness in Developing Countries, School Effectiveness and School Improvement, 12:4, 359 – 384.

Sidani, S. and Sechrest, L. (1999) Putting Program Theory into Operation, American Journal of Evaluation, Spring/Summer 99 20 (2), 227 – 239.

Silverman, D. (2005) Doing Qualitative Research (2nd ed.) London, Sage.

South African Schools Act 84 of 1996, Pretoria: South African Government Printers.

Stemler, S. (2001) An Overview of Content Analysis, practical Assessment, Research and Evaluation 7 (17) http://pareonline.net [accessed 28 February 2007]

Strachan, E. H. E. and Brown, R. J. (2004) A qualitative study of the experiences of patients following transfer from intensive care, Intensive Critical Care Nursing, (2005) 21, 160-171.

Sun, H. and de Jong, R. (2007) Effective School Improvement in The Netherlands, International journal of Educational Management, Vol. 21, No. 6, pp504 – 516.

Tashakori, A. and Teddlie, C. (1998) Mixed Methodology: Combining Qualitative and Quantitative Approaches. Thousand Oaks, CA: Sage.

Tashakori, A. and Creswell, J. W. (2007) Editorial: The New Era of Mixed Methods, Journal of mixed Methods Research 2007; Vol. 1 No. 1 pp3-7.

Tatto, M. T. (2002) The value and feasibility of evaluation research on teacher development: contrasting experiences in Sri Lanka and Mexico, International Journal of Educational Development, 22 (2002) 637 – 657.

Tennant, M. and Pogson, P. (1995) Learning and change in the adult years: A developmental perspective. San Francisco: Joey-Bass.

The Joint Committee on Standards for Educational Evaluation (Sanders, J. chair) (1994) The Program Evaluation Standards: How to assess educational programmes, (2nd ed) Thousand Oaks: CA, Sage

The World Bank Operations Evaluation Dept. (2005) http://www.worldbank.org/oed/ [accessed 28 October 2006].

Trochim, W. (2006) Research Methods Knowledge Base (early on-line edition)

van Manen, M. (1997) Researching the Lived Experience: Human Science for an Action Sensitive Pedagogy. (2nd ed.) Ontario: Althouse Press

van der Werf, G. Creemers, B. de Jong, R. and Klawer, E. (2000) Evaluation of School Improvement through an Educational Effectiveness model: The Case of Indonesia's PEQIP Project, Comparative Education Review, vol. 44, No. 3, pp 329 – 340.

Visser, R. (2003) Trends in Program Evaluation Literature; The Emergence of Pragmatism, TCALL Occasional Research Paper No. 5; Texas Center for Adult Literacy and Learning.

Vygotsky, L. S. (1978) Mind and Society: The development of higher mental processes. Cambridge, MA: Harvard University Press.

Wallen, G. R. and Berger, A. (2004) Mixed Methods: In Search of Truth in Palliative Care Medicine, Journal of Palliative Medicine, Vol. 7, No. 3 (2007) Mary Ann Liebert Inc.

Webb, E.J. (1981) Nonreactive Measures in the Social Sciences, 2nd ed. Boston: Houghton Mifflin.

Weber, R.P. (1990) Basic Content Analysis (second ed.), Series: Sage University Papers. Quantitative Applications in the Social Sciences vol. 49, Sage Publications Ltd., London.

Williamson, K. and McGregor, J. (2006) Information use and secondary school students: a model for understanding plagiarism, Information Search Vol. 12, no. 1, October 2006

Wong, J. L. N. and Tsui, A. B. M. (2007) How do teachers view the effects of school-based in-service learning? A case study in China Journal of Education and Teaching vol. 53, No. 4, Nov 2007, pp457-470.

Wood-Robinson, C. Baloyi, T. Lukhele, B. and Maoto, S. (2000) The Impact Study of the MASTEC project CPD Programme on the schools (unpublished).

Wrigley, T. (2006) Schools and poverty: questioning the effectiveness and improvement paradigms, Improving Schools, November 2006, vol. 9, no. 3, p273 – 290.

Yin, R. (2003) Case Study Research; 3rd ed. Thousand Oaks, CA: Sage

Ylimaki, R.; Jacobson, S. and Drysdale, L. (2007) Making a Difference in Challenging, High Poverty Schools: Successful Principals in the US, England and Australia. School Effectiveness and School Improvement 18 (4): 361-381.

Young, D. (1998) Rural and Urban Differences in Student Achievement in Science and Mathematics: A Multilevel Analysis, School Effectiveness and School Improvement, 9:4, 386 – 418.

Zhang, Y. (2006) Content Analysis (qualitative, thematic) a conference paper.

Zikmund W. G. (1982) Exploring marketing research (4th ed.) Orlando, FL: Dryden Press.

APPENDIX 1

PERMISSION-SEEKING LETTER

The Principal

High School C

Ga-Mothiba Township

POLOKWANE

0700

13 August 2000

Dear Sir,

Re: <u>RESEARCH ON THE MASTEC SCHOOL IMPROVEMENT PROJECT</u>

I am a lecturer in the pre-service arm of the MASTEC College of Education and am currently pursuing a doctoral degree in school improvement. I have recently entered the research stage of my studies, and would like for your school to participate in such research.

The aim of the study is to explore the MASTEC project participants' perceptions of their experiences within the project. I therefore request your permission to visit your school to facilitate focus group discussions with the mathematics, science and technology teachers, make observations of classroom interactions and carry out document examinations of some of the school documents that relate to the MASTEC project.

When the research has been completed, a summary of the findings will be made available to you if you would so wish. I assure you and your staff that your rights to anonymity and the anonymity of the school will be upheld by using pseudonyms when referring to either the school or teachers participating in this study.

I do hope that my request will receive your most favourable consideration.

Yours sincerely,

Nombulelo Phewa (Mrs.)

APPENDIX 2

FOCUS GROUP TRANSCRIPT

This appendix provides an example of a transcript from the School A focus group, which is one of the deep rural Limpopo schools.

SCHOOL A FOCUS GROUP DISCUSSION

Introduction

This appendix is an *ad verbatim* transcript of the focus group discussion which I facilitated at School A. The group consisted of 6 teachers who taught mathematics, life science and physical science at the school, who had been participants in the MASTEC programme. The teachers were requested to share their opinions and views about the implementation of the said programme, as well as whether or not they had had a good experience. They were also encouraged to suggest any recommendations they might have towards the improvement of the MASTEC programme, were they to find that such recommendations were necessary.

Tladi: There is no doubt about it, the MASTEC concept was and is still a good one for school improvement. The only problem with it was that at the time of MASTEC existence, the project only concentrated on improving two aspects of school, i.e. management and in-class activities.

R. I would imagine that that's the core of schooling, good management and good teaching and learning activities

Tladi: Yes and no…depending on what you mean by school improvement or even what you mean by school, whether or not a school is good is determined by a lot of things other than good

school management and good or bad teaching and learning practices.

Ndala: I agree with you my brother, when you talk of school improvement, in my mind, you need to say exactly what an ideal school is. Define and describe it, mentioning all that is expected and not expected of such an institution. Thereafter you look at the schools around you and find out how they measure to your ideal school

Dineo: …then the next logical step would be to identify the gaps these schools have measured against the ideal school

Joyce: …oh! In other words…there needs to be some sort of an …ba re ke ing? …some questions asked of everybody in the schools…pretty much like what you are doing right now…

Dineo: …research…ba re ke research!

Ndala: Yes, that's what I mean…a research to find out from the schools how they measure up to the ideal school…and also to ask them what they need to measure up?

R. I gather that what you are talking about did not happen prior to your involvement with MASTEC

Ndala: Oh no! It didn't. We just heard from the principal that there's this project which was going to help us teach better and achieve good matric results and therefore be a good school.

Dineo: I remember that day, we got excited because getting good matric results makes teachers proud and the pupils and their parents happy. We wanted to be at a point where our school would be flooded with applications from the parents of high calibre…just like they do at Mankge. They get all the parents who work at the University, the professors, doctors, lecturers …you know…the right kind of parents who value education of their children…who would support them morally, financially and with good resources…like access to the University libraries and laboratories…

Joyce: Hey! Stop dreaming….we dreamt then, and you are still dreaming now!

R. Why are you still dreaming? Was your dream not realised by working with the project?

Joyce: that is a very difficult question to answer in a simple yes or no.

Pule: She's right. There is quite a lot we as teachers gained from MASTEC.

We learnt how to actively engage the pupils in their own learning, something we had never done before. We leant to realise that children know a lot about what we teach them in our various subjects and that our teaching should therefore tap on that knowledge, and allow them to enlighten us about what they know and to what extent that knowledge goes.

Tladi: From the workshops we were reminded of the learning theories we learnt at College, which we never really knew how to use in our classrooms.

Nkiseng: In other words, MASTEC was very helpful in showing us how to implement what we learnt all those years ago in our classrooms. That was very good…but did not translate into us yielding good matric results…instead it made things worse for some of us…who were really dedicated to changing our old and traditional teaching methods.

R. But how so? What was the problem?

Pule: We had many problems…we still have. For starters…MASTEC emphasised activity-based and assessment-driven teaching and learning. I remember Colin saying **"you can teach and teach and teach until you move mountains…if no learning takes place during your teaching…you are as good as having done nothing at all"**

Nkiseng: …and that makes sense, because you need to have evidence of your teaching…the pupils must show that they have learnt…and that was the MASTEC approach.

Tladi: Look around at our school There is so much we lack in order to even begin changing our science teaching to be activity-based. Have you been to our laboratory and library/

R. no …not yet

Tladi: Exactly! And you never will…because we have no such facilities. Now, can you imagine what needs to be done to be activity-based in your teaching without those resources? When we were at the workshops…the lecturers there had everything we wished we could have at the school…the mass meters, test tubes…chemicals… you name it…everything was there to make it possible for the pupils to actively engage in their learning of science.

Pule: So, whatever we learnt at the MASTEC workshops, we could not implement in our classrooms due to lack of resources and facilities.

Dineo: There is something we could implement though… and that is group work and discussion, because although our classes are not as small as the workshop classes, we can still divide them into groups of five to eight and end up with a total of 8 to 5 groups because our biggest classes have 40 pupils.

Tladi: The biggest challenge is that when you have divided them into groups…what then? For them to be able to engage in academic discussions you need to give them something to research about. Now how feasible is that when the school library does not exist? Do you then hope that they will access information from home? I do not think so, not with the kind of parental involvement in their children's learning being at the level it is and was then.

Ndala: Therefore, what this approach meant was that for teachers coming from a situation like ours, was that they would have to go all out to gather resources relevant to their lessons, and also involve the pupils to do the collecting of such. For this kind of commitment from all stakeholders, one needs to re-look the culture of the school and the school community.

Nkiseng: …and teachers in this school are not based in Mankweng…by the time they arrive home it is already late for them to even consider being on the look-out for any learning aids they might come across. It is such a tall order.

Learners themselves are not used to collecting stuff for lessons, and to coerce them into doing that is sometimes seen by the community as **"these teachers are lazy…they want our children to do their job for them…and who gets paid by month-end? What's in it for us and our children?... nothing!"**

Nkiseng: Sometimes you hop into a taxi and hear things like

"do you know what these teachers want our kids to do after school? roam around in the village looking for teaching aids? Who is the teacher now? I will never allow my daughter to do that because after school it is home time. They need to do their home daily chores. Maybe it is better for boys…there is nothing they do at home anymore…now that we no longer have livestock for them to look after"

R. So in other words you are saying good as the MASTEC project has been in terms of enlightening you as teacher about good teaching methods, there was quite a lot of issues impacting on good practice that needed to be taken into account for the MASTEC teachings to take root and yield the desired outcomes

Tladi: That is right. For example, the conversations from the school community members that were cited by Mashao and

Sek say that the kind of people we serve do not understand what good teaching and learning practice is. That we as a school do not seem to have a working relationship or co-operative relationship with our pupils' parents. And these are the stakeholders in this enterprise. That has a very important impact on what goes on in the classroom.

Ndala: …and therefore to improve classroom practice…consideration must be duly given to the relations between the school and its community so that in whatever good endeavours the school is initiating, support is garnered from the community.

Pule It does not end there…the school management was empowered by the project in running the school effectively…but that also lacked the interface with the community. What we are saying her is that the MASTEC project was a noble idea, but the way it was introduced and implemented in our school dragged it down… as a result it seems as though it did not work…well it did not… but not due to its own being…I don't know how to say this…

Ndala: I think what you mean is that…like we said at the beginning of this discussion…the project did not have a benchmark against which to help our school in particular, to implement its school improvement strategies to suit our needs and situation.

R. I hear what you are saying. Now, based on everything you have said, what would you do to make the project work for your circumstances?

Nkiseng: You know, that is not an easy thing because in our village we have a chief, and for anything to succeed it has to have his blessings. The people around here take themselves as the chief's subjects. They will do everything that is coming from the Great Kraal (Chief's homestead). Therefore, I would approach the chief's headmen (advisors) and introduce the

concept to them as a manner of garnering support from them when I approach the chief.

Pule: …the chief is a very enlightened person, who likes anything that has to do with education. He would surely support any initiative towards improving a school in his village. He would surely call a lekgotla to introduce the project to the men of the village, who would debate it and add what they think needs to be done to the school and for the school to render it ideal. They would then take it home to their families.

Nkiseng: That is the only way such a project can get the school community's support… then when teachers request the pupils to do extra work after school, the parents would understand why and give them the necessary support.

Dineo: This kind of relationship would extend to parents' meetings…to be infused in the lekgotla's agenda points…that's the only way we can have full attendance at these meetings…thus including all members of the community…not just parents…but also updating the chief…who may be taken as the major "sponsor" of the school.

Joyce: With the chief's support, it can be a bit easy for the parents to gain "ownership" of the school, spend a bit extra on the building of extra rooms, security and maintenance of the school, because relying solely on the government for such things takes forever, and we do not have time to wait forever.

Tladi: I agree with every suggestion so far, and in addition to that, I would take the minutes from the lekgotla infuse them with what I perceive to be a good school from the government's point of view. This will consider both the government and the school community values…from these I would then identify what our school needs in order to…can be closer to this "ideal school". The project would then be structured in such a way that workshops are specifically geared towards

addressing these gaps that our school has against the characteristics of that school.

Pule: I think this will work better because we will know that the project has been cut out for us. Attendance in the workshops will improve and communication with the parents will also improve.

Nkiseng: I think just by improving communication with parents and the larger community, will already improve our school. Issues of absenteeism and …not doing homework will be issues of the past because we will be having a better parental involvement and support.

Tladi: I also agree with this plan…but my concern is that we seem to have forgotten the issue of science equipment and library books. How can we make sure that we have better access to these?

Joyce: I personally do not think that the issue you are raising is major, because with the chief's support, we can access finances that as a school we cannot. We can also access the community's physical support in terms of building new structures for the equipment and books. We can also access security and maintenance, as I have already intimated. There is nothing that these people will not do, as long as the chief is behind it. So, of importance to me is to get the chief's buy-in.

R. I get a sense that although your school is within close proximity to the University of the North, you do not draw many children whose parents are the University personnel, and that is disadvantageous in the sense that your pupils come from areas where their parents seem as if they do not value education as much as they value what is said by the chief. This being the case parental involvement in school matters is very limited; as a result it has a negative impact on the teaching-learning

activities – which renders the MASTEC Project efforts at improving the school ineffective.

Tladi: That is so well stated. Are you sure that you were no part of the school during the MASTEC era? Another problem that exists here is that thee does not seem to be any relationship between the Department of Education and the school improvement projects that are in operation in the Province. Even during the MASTEC era, the DoE would run its own school improvement workshops that would sometimes clash with the MASTEC ones. So we had to decide to attend our bosses' workshops rather than the MASTEC ones. If these institutions co-operated, there would be a common schedule with very specific and different workshop agendas to enable the teachers to make a decision about which they would attend for their purposes. So that is one more thing I would do to improve on the MASTEC project – ensure a healthy working relationship with the DoE so as not to re-invent the wheel, and to complement each other.

Ndala: the way we are so positive about this discussion, I really hope it will yield positive results, in the sense of contributing towards the re-establishment of a school improvement project that will consider the schools' particular needs in striving to improve them

Tladi: …I hope so too, and I'm sure that we are speaking for all the schools when we say it is a pity that the MASTEC project had to abruptly come to an end like that without us being involved in trying to make it work for us….and I understand that it discontinued even for those schools where it seemed to work. All secondary schools were just abandoned by the project…and nobody is saying what the real problem was that made them to decide on concentrating on primary schools.

Pule: well…it could be that they think that starting to improve at the bottom will build a sound foundation for the secondary

schools…that by the time they get to us at the secondary schools…the pupils will be so pliable and resilient that they will be able to face any arduous situations.

R. **it won't help us to speculate about that now will it? I sincerely hope that your contribution to this study will influence a development of a context-based school improvement programme or at least some ideas about establishing such a programme for the Limpopo schools in general. Thanks very much for your time and commitment to this cause.**