

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

In this chapter, I present a definition and overview of the mixed methods research approach used in the study, as well as the procedures for mixed methods designs, the sampling method used, data collection tools, justification for the choice of the research methods and tools, and ethical considerations.

The study sought to find answers to the following three questions:

1. How do teachers understand and interpret medium-of-instruction (MOI) policies within their practice?

Question 1 required teachers to articulate their classroom language practices. This question was asked in order to establish teacher awareness and understanding of the provisions of the 1997 multilingual policy and their school language policies, whether they implemented their school LIE as expected, and why they used one or more languages when teaching. They had to recall information relating to what took place in their classrooms during teaching and learning. It was envisaged that a significant number of teachers would participate in the first phase of study and that a questionnaire would be the most practical tool to use since the aim was to gather baseline data on the status quo in the selected schools in the Mthatha District. A structured or closed questionnaire containing a few open-ended questions was designed to gather the baseline information in the selected schools. Structured questionnaires enable the researcher to observe patterns, make comparisons, and process data using computer analysis (Cohen, Manion & Morrison, 2007:321). Numerical data are best gathered using a questionnaire.

2. How do teachers implement language in education (LIE) in their classrooms?

Question 2 required the researcher to establish LIE policy implementation patterns in different contexts, to examine patterns of classroom interaction, and determine whether there were any similarities and differences between the contexts and within each context. It also required the researcher to observe the kind and quality of classroom interaction taking place in the different school contexts during teaching and learning, and to find out whether teaching was aligned with assessment practices with regard to language use. This

question sought to establish actual classroom practice, and qualitative data were therefore sought. Purposively selected teachers who took part in the survey were observed and video-recorded in action. “Observational data afford the researcher an opportunity to gather ‘live’ data’ from ‘live’ situations” (Cohen, Manion, Morrison, 2000:305). I wanted to experience first-hand how teachers used language(s) to help learners achieve educational goals. Unstructured observations were employed in the second phase of the research because they yield potentially valid and authentic information (Cohen et al., 2007:396). Classroom observations provided a “reality check” on the data obtained in the survey. Direct methods of data collection enable a researcher “to conduct a fine-grained analysis of the moment-by-moment process of classroom instruction and interaction” (Evans, 2009:293). Their limitation is that they may not be representative of the teacher’s routine classroom language behaviour, and the analysis of such data may not be invariably straightforward (Pennington in Evans, 2009). A major limitation of direct methods is that the presence of the researcher and use of recording instruments may influence a teacher under investigation to behave differently from his day-to-day style of teaching (Evans, 2002).

3. Why do teachers interpret the policies in the ways they do?

Question 3 sought to establish factors influencing LIE policy implementation in different school contexts. It required the teachers to reflect on their classroom language behaviour and the effects it had on learning and teaching. This question involved finding out factors influencing the classroom language choices of key informants during the focused interviews. The key informants were teachers who had taken part in the preceding two phases of the research. A qualitative approach was found to be suitable for Phase 2 and Phase 3 of the research process, as I wanted to do an in-depth analysis of the selected teachers’ classroom practices.

3.2 Description of Research Approach

Mouton (2001:55) states that a research design is “a plan or blueprint” for how the researcher intends to conduct the study. It shows what can be achieved and how it can be achieved. The notion of “fitness for purpose” becomes paramount when the researcher has to decide on a choice of research design (Cohen, Manion & Morrison, 2000:73). A number of other questions govern the choice of research design and methodology. These have to do with the specific research questions; what needs to be the focus of the research in order to answer the research questions; the main methodology of the research, how validity and reliability will be addressed; what kinds of data will be required; the kind of sampling chosen; where else the data will be available; how the data will be gathered and analysed; and who will undertake the research (Cohen, Manion & Morrison, 2000: 75).

3.2.1 Epistemology

The study takes the position espoused by Social Constructivists, that learning or knowledge construction is a social and collaborative event, and that language mediates learning and promotes understanding/cognition. Prior to colonization, indigenous ways of knowing, which were transmitted from generation to generation through local languages, served Africans well. The possibility that one could be found wanting in terms of the proficiency, adaptability and creative qualifications did not arise since learning occurred in languages which were spoken in the wider community. The L1 was not only a survival tool but also a means for initiating one into his/her own culture. The exclusive and uncritical use of an L2 as the main LOLT during the colonial and neo-colonial era created gaps in learner understanding and led to under-achievement.

3.2.2 Mixed Methods Approach

(Creswell, 2005, in Maree, 2007: 261) defines a mixed methods research as a procedure for collecting, analysing and mixing both qualitative and quantitative data at some stage of the research process within a single study in order to understand a research problem more completely. The mixed methods approach, which is based on pragmatism, is flexible in that it uses multiple methods, contextual interpretations and the best strategies to address research questions about real-life problems (Patton, 2002, in Maree, 2007:260). Pragmatists argue that quantitative and qualitative methods are compatible and can be combined in a single study because of their

similarities in fundamental values (Howe, 1988, and Reinhardt & Rallis, 1994, in Maree, 2007:263).

The following have been given by Creswell et al. (Creswell et al., 2003, in Maree 2007:261) as the main reasons for employing a blended approach which utilizes both quantitative and qualitative techniques within one study:

- 1) Explain or elaborate on quantitative results with subsequent qualitative data.
- 2) Use qualitative data to develop a new measurement instrument or theory that is subsequently tested.
- 3) Compare qualitative and quantitative data sets to produce well-validated conclusions.
- 4) Enhance a study with a supplemental data set, either quantitative or qualitative.

To counter the weaknesses of surveys, this study was enhanced with supplemental qualitative data sets in the form of unstructured classroom observations and focused interviews. This helped explain or elaborate on the quantitative results. The qualitative data sets enabled me to gain a comprehensive understanding of the topic under investigation. The respondents were observed in action and were asked to reflect on their practice during the focused interviews.

3.2.3 Mixed Methods Procedures

Creswell, Plano, Clark, Gutmann and Hansom (in Maree 2007:263) identify four basic mixed methods designs, namely the explanatory design, exploratory design, triangulation design, and embedded design. I have chosen the explanatory design because of the complex nature of the topic under investigation and the fact that the three research questions all seek to find answers on the same research topic.

In an explanatory design, data are collected in two separate phases, and the qualitative findings are used to help clarify the quantitative findings. The quantitative findings “provide a general picture of the research problem, while the qualitative results refine, explain or extend the general picture” (Creswell et al., 2003; Ivankova et al., 2007). In the present study, the questionnaire was used in the first phase of the research in order to obtain a general picture of school, teacher and learner profiles; contextual information relating to the schools, and questions relating to MOI policy

interpretation and implementation. In the second phase, classroom observations were utilized to observe language policy implementation in practice. In the third phase, two purposively selected teachers were interviewed on their observed classroom language behaviour. The second and third phases used qualitative approaches, while the first phase mainly employed a quantitative approach.

3.2.4 Sampling Strategy

Cohen et al., (2000) state that there are two main methods of sampling, probability and non-probability sampling. In non-probability sampling the researcher deliberately chooses not to represent the wider population and focuses only a smaller section of the population. In a sense, non-probability sampling may demonstrate skewness or bias. In a probability sample, the chances of members of the wider population being selected for the sample are known and the findings are generalizable.

Cohen, Manion and Morrison (2007:117-118) identify the following steps in planning the sampling strategy:

1. Decide whether you need a sample or whether it is possible to have the whole population.
2. Identify the population, its important features (the sampling frame) and its size.
3. Identify the kind of sampling strategy you require.
4. Ensure that access to the sample is guaranteed. If not, be prepared to modify the sampling strategy.
5. For non-probability sampling, identify the people you require in the sample.
6. Calculate the numbers required in the sample, allowing for non-responses, attrition and sample mortality.
7. Decide how to gain access and contact.
8. Be prepared to weight the data, once collected.

Question 1 required that probability sampling be employed for the survey. However, after taking into account the resources available for conducting the study, the fact that schools in the rural Eastern Cape are sparsely distributed, and that accessing the sample would involve a lot of time and money, I chose to draw my sample from conveniently selected schools that were close to my workplace. Cohen et al., (2007) state that although a large sample size is ideal for surveys, it does

not mean that surveys cannot be carried out on small sample sizes. However, convenience samples do not seek to generalize. The researcher chooses the sample from those to whom he/she has easy access. Questions 2 and 3 required purposive sampling since they followed up on the question underpinning the survey in the first phase.

The study targeted subject teachers of Geography, English, History, and Business Management/Economics in the conveniently selected schools and deliberately left out other subject teachers. I therefore opted for non-probability sampling to address the questions underpinning the study. Cohen, Manion and Morrison (2000:103) state that in purposive sampling “researchers handpick the cases to be included in the sample on the basis of their judgement of their typicality.” The choice of participants in the first phase of the study was also influenced by the fact that I deliberately wanted to work with teachers whose subject/learning areas I was familiar with. Because the population size was rather small (one teacher offered the subject across Grades 10-12), I decided to administer the questionnaire to all the teachers offering the targeted subjects in the selected schools. This decision was taken to also allow for non-responses, attrition and sample mortality.

3.2.5 The Study Population and Sample Size

The population from which the sample was drawn comprised Grade 10, 11, and 12 teachers of English, Geography, Business Management/Economics and History from the 56 high schools in the Mthatha District. Depending on the total enrolment figure of the school and its curriculum, the norm in most schools would be for a teacher who had specialized in the subject to generally offer it from Grade 10-12. In a few cases where there was a wider subject offering and a large pupil enrolment, there would be two teachers offering the same subject in different grades in the same school; for example, in two urban-based high schools offering English First Language and Second Language, there were two different teachers for English L1 and L2. The total population from which the sample was drawn was worked out as follows: (56 schools x 4 subjects) plus 6 teachers from the three high schools with a wider curriculum, making a total of 230 teachers.

In the first phase, a questionnaire was administered to teachers who were drawn from six conveniently selected rural and urban high schools out of the fifty-six high schools in the Mthatha

District. The study sample was drawn from 10% of the total number of high schools in the Mthatha District, i.e. six randomly selected high schools, and the figure was rounded off to six high schools. The six high schools were chosen because of their accessibility and the cost-effectiveness in terms of travelling. Of the six schools chosen, there was an equal split between rural and urban schools. The sample was calculated as follows: (6 high schools x 4 subject teachers) plus 6 teachers from the three high schools with a wider curriculum, and this came to a total population of 230 teachers. The questionnaire was administered in order to obtain a general understanding of how urban and rural high school teachers made sense of medium-of-instruction policies in practice. Out of the 35 questionnaires that were distributed manually to the selected schools, 31 were returned. Four of these were incomplete and did not form part of the sample.

In the second and third phases, sampling was informed by the teachers' responses to the questionnaire, their willingness to participate in the second phase of the study, and the context in which the schools were situated. Cohen et al., (2007:115) maintain that in many cases purposive sampling, though it is not generalizable or representative, is used to access "knowledgeable people, i.e. those who have in-depth knowledge about particular issues." Five purposively selected teachers who had participated in the survey took part in the second phase of the study. In the third phase, two teachers, one offering History at a rural high school and the other Business Economics at an urban desegregated school, were selected for the focused interviews because of the location of their schools and the interest they had shown in the project.

3.2.6 The Research Context

This research was undertaken in the Mthatha District in the Eastern Cape Province in South Africa. The most commonly used languages of communication in the Mthatha District are isi-Xhosa and seSotho. Most of the schools in the province are situated in the rural areas. In the rural schools, English, which is hardly spoken in the communities where the learners live, is the preferred main language of learning and teaching (LOLT). Isi-Xhosa is used by teachers to promote understanding of content, especially when learners experience difficulties with English. Most of the teachers in the schools share an L1 with their learners. However, there are a few expatriate teachers in these schools whose knowledge of African languages is limited to basic conversational isi-Xhosa.

English is used exclusively as a MOI in desegregated schools, whilst in township schools the learners' home languages and English are used for teaching and learning.

I constructed the following brief profiles for the selected teachers, their schools and their learners on the basis of demographic and background factors that they provided in their questionnaire responses and the interactions I had with them during classroom observations.

Teacher A is a Grade 10, 11 and 12 History teacher at a rural high school on the outskirts of Mthatha. She is multilingual and speaks English, seSotho (her home language), isiXhosa and Afrikaans. She has a Bachelor's degree and a B.Ed, which is a professional teaching qualification. Her teaching experience is 12 years. The learners in her class are all LI isiXhosa speakers. Her school endorses English and the learners' LI as media of instruction.

Teacher B is a first-language speaker of isiXhosa and teaches Business Economics in an urban desegregated school in Mthatha from Grade 10-12. His highest academic and professional qualifications are Matric and a College Higher Education Diploma (CHED). He has 11 years' teaching experience. The MOI at his school is English only, and he offers tuition only in English. There is a strong element of diversity in this school, as teachers and pupils come from different linguistic and cultural backgrounds. Although most of the pupils are Xhosa-speaking, there is a smattering of seSotho and English-speaking Coloured pupils, as well as expatriates.

Teacher C speaks isiXhosa and seSotho and he offers Geography from Grade 10-12 at a township school in Mthatha. He has a professional degree in Education (B.A Education) and has 11 years of high school teaching experience. His school language policy is English only, but he employs English and the learners' HL (isiXhosa) for teaching.

Teacher D is an expatriate teacher of Indian descent and speaks several languages plus a smattering of conversational isiXhosa. He offers Geography to Grade 10, 11, and 12 pupils at a rural high school in Mthatha. He has a Bachelor's degree and a Higher Education Diploma (HDE) and has 21 years' teaching experience. Learners in this school speak isiXhosa as a first language

(LI). He adopts an English-only policy, although the school language policy allows teachers to employ other languages for teaching and learning.

Teacher E is isiXhosa-speaking and offers English First Additional Language (EAL) to Grade 10, 11 and 12 learners at a rural high school in Mthatha. Learners in this school speak isiXhosa as a first language (LI). Teacher E is a B.A and B.Ed graduate and has 13 years' teaching experience. His school adopts an English-only policy and he offers tuition in English only.

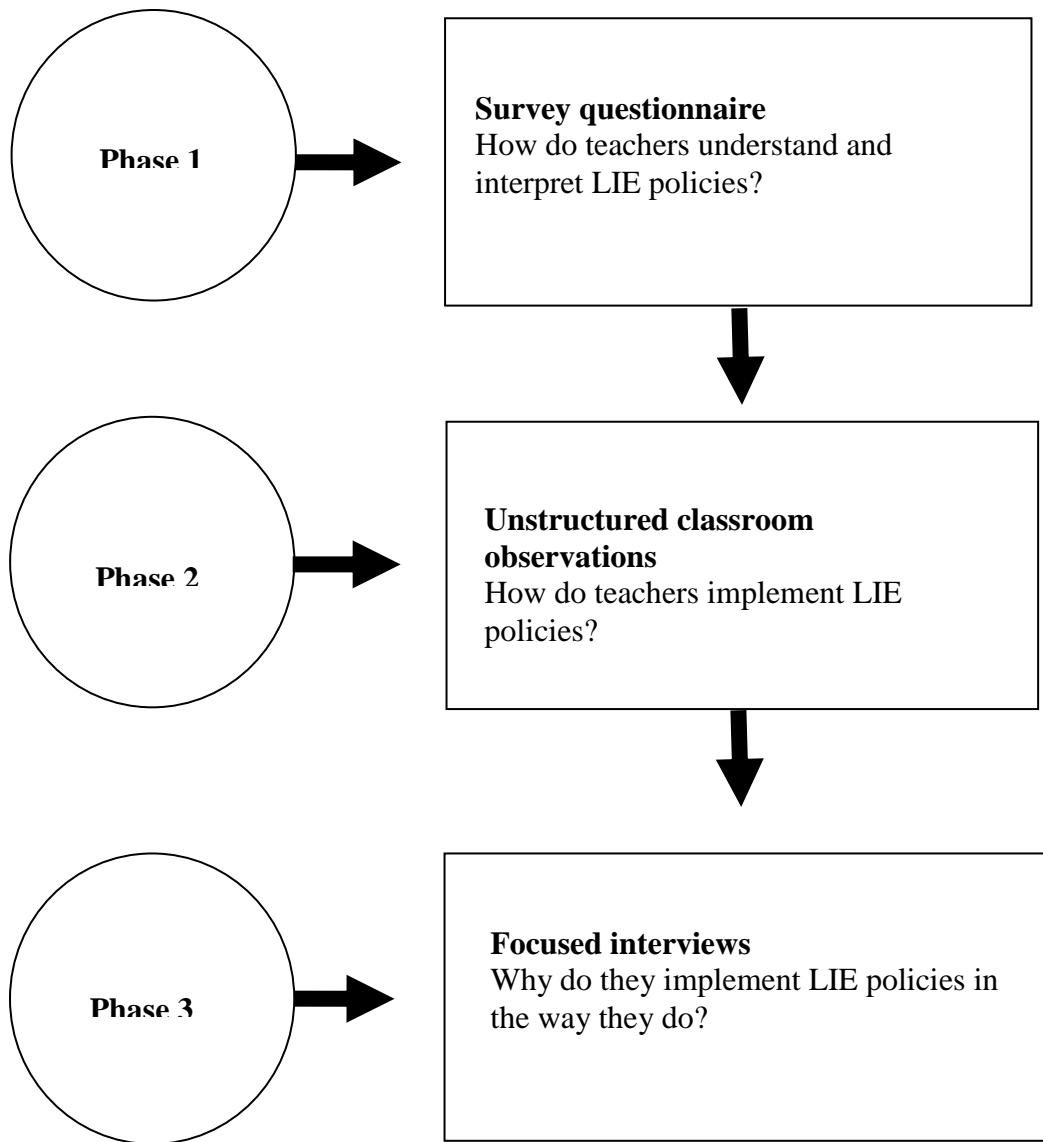
Initially, six teachers were purposively selected for classroom observations and were drawn from the sample that had participated in the first phase of the research. In one of the schools it was not possible to conduct classroom observations as the school was preparing for trial examinations and district CASS moderations, as a result, five teachers participated in the classroom observations. My interest as a researcher was in exploring the ways in which teachers in public schools exercised their agency vis-à-vis language policy provisions. My other justification for choosing predominantly black public schools over private schools was that the literature on medium-of-instruction (e.g. Chick & MacKay, 2001, and Muthwii, 2001) reveals that private and desegregated schools pursue a monolingual policy which promotes English-only discourse, whereas in black schools, depending on context, indigenous languages and English are used to varying degrees as media of instruction.

3.3 Data Collection Tools

In keeping with the nature of mixed methods research approaches, data for this study were collected using different tools, for example, a questionnaire, classroom observations and focused interviews, to strengthen the validity of my study. Cohen, Manion and Morrison (2000:112) define triangulation as “the use of two or more methods of data collection in the study of some aspect of human behaviour.” The advantages of a multi-method approach are that it acknowledges the complexity of human behaviour, minimizes researcher bias, and increases researcher confidence. When triangulation is employed, the researcher is not method-bound (Cohen, Manion & Morrison, 2002:112), and this improves the validity of the study.



FLOWCHART SHOWING PHASES OF THE RESEARCH PROCESS



3.3.1 Survey Questionnaire

Questions in a questionnaire or interview try to get at the underlying attitudes and dispositions (the orientations) surrounding a piece of information (Barker, 1993:174). Surveys, whether they are exploratory, confirmatory, analytical or descriptive, gather data which are intended to describe existing conditions, identify standards against which existing conditions can be compared, or determine the relationships which exist between specific events (Cohen et.al., 2007). Surveys are

useful because they gather data which can be statistically manipulated. They can use large-scale data from which generalizations can be made about given factors or variables, presenting information which is uncluttered by contextual factors, and representing a wide target population. Careful sampling is required in order to gather standardized information, ascertain correlations, and provide descriptive explanatory and inferential information. Data can be gathered on a one-shot basis, particularly in order to generate numerical data. Key factors and variables can be manipulated to derive frequencies, support or refute hypotheses about the target population, and observe and make generalizations about patterns of response in the targets of focus (Morrison, 1993, in Cohen et al., 2007:2006).

However, surveys have a number of potential weaknesses. They can gather remembered information which may be faulty, selective and inaccurate. Respondents may forget, suppress or fail to remember some facts, and interpretations may not be contemporaneous with the actual events. Simple causality is unlikely; a cause may be an effect and vice versa. Results are seldom easy either to confirm or falsify; and the roots and causes of the end state may be multiple, diverse, complex, unidentifiable or difficult to unravel (Cohen et al., 2000).

In this study, the “piece of information” on which I intended to get the teachers’ perspectives was their understanding and interpretation of the medium-of-instruction policy, how they implemented the policy, and why they implemented the policy in the ways they did. I wanted to get baseline information on the teachers’ classroom language practices.

The design of the questionnaire was informed by the three questions on which the study is based. The first part of the questionnaire covered questions on teachers’ demographic details/personal information, the second part focused on contextual factors relating to the schools in which the data was collected, while the third covered questions relating to the teachers’ LIE policy interpretation and implementation.

The questionnaire was pre-tested and piloted at Holomisa Senior Secondary School in Mqanduli, to determine its effectiveness/validity, reliability and practicability. Teachers were asked to comment on the wording of the questions and whether the questions made sense to them. Their

comments on the content of the questionnaire and the wording of the questions were taken into consideration at the revision stage of the instrument.

I distributed and collected the questionnaires at the selected schools. As very few teachers had filled in the questionnaires, a second batch was left for the targeted subject teachers to fill in. The return rate of the questionnaires was not good, even in the second round of distribution. A few teachers from the subject areas which had not been targeted had also filled in the questionnaire.

3.3.2 Classroom Observations

Classroom observations were another lens that I used in order to understand the purposively selected teachers' language behaviour and motivations. Observational data enables a researcher to gain a comprehensive understanding of the situation being described (Paton, 1990:200). Although I had initially planned to carry out structured observations as explained in my research proposal, I abandoned this idea at the data collection stage and opted for discursive observation, the reason for this being the fact that I was going to use observation not as a design type but as research tool. Henning, Van Rensburg and Smit (2004: 82) states that "observation may be brief and serve only as a discrete research tool for gathering information within a study that is not ethnographic."

Henning et al., (2004:96-97) maintain that observation for discourse analysis purposes is "focused on the research question, which will direct the researcher to be sensitive to issues of structure and form." The researcher would be on the lookout for the following during data collection and analysis: language forms and other communication actions dominating a piece of discourse; discourse shapers such as symbols and signs shaping the backdrop to the inquiry; and the stage on which the social actors performed their roles. The researcher would then make conceptual links to connect what he/she hears and sees. The researcher's field notes would focus on what is not seen or recorded and as such would add another dimension to the analysis. Observations carry the risk of bias; factors involved may include, for example, the selective attention of the observer; participant reactivity; attention deficit; selective data entry, selective memory; interpersonal matters and counter-transference; expectancy effects; the number of observers, the problem of inference; and decisions on how to record (Shaughnessy, Zechmeister & Zeichmeister, in Cohen et al., 2007).

The classroom observations were video-recorded by someone who specializes in video-recordings. He was briefed on the purpose of the task at hand and on how he was expected to carry it out. I visited the research sites with him and sat at the back of the class as a non-participant observer. The use of video-recording during the classroom observations and focused interviews strengthened the qualitative integrity of the study in that the recordings were accurate and comprehensive. They could be re-played to ensure accuracy of interpretation. Their advantage was that they captured both verbal and non-verbal behaviour.

Together with a student assistant, I transcribed the video-recorded lessons, the original copies being duplicated for safe-keeping. The advantage of transcribing the lessons myself emerged clearly at the time I was doing the analysis, as I could recall most of the content in the tapes. I then read through the transcribed lessons several times and made notes and comments where I observed interesting or relevant information on the teacher's classroom language practice. I kept going back to the literature chapter in search of answers to some of the questions that I raised as I was reading through the transcripts.

The interest displayed by the teachers in the study was a key reason for their selection for participation in the classroom observation. On average, three one-hour lessons were recorded, transcribed and analysed for each teacher. A major consideration in the choice of participants was the proximity of the schools to my work situation and the fact that I wanted to work in subject fields to which I could relate.

3.3.3 Focused Interviews

Focused interviews, sometimes referred to as "discursively-oriented" interviews (Henning, 2004), concentrate on the respondent's subjective responses to a known situation, one which has been analysed by the interviewer prior to the interview. The data collected are employed to confirm or reject previously formulated hypotheses (Cohen et al., 2000:290). The major difference between this type of interview and the structured or semi-structured interview is its open-ended character and the fact that it can challenge the preconceptions of the researcher (May, 1993). It allows the interviewee to talk about a subject from his or her "frame of reference" and offers a greater understanding of the subject's point of view (May, 1993).

The two interviewees who had previously responded to the questionnaire and were then recorded during classroom observations, provided me with some insight into what informed their classroom language behaviour. In order to generate meaning from the interview data, their responses were coded. Cohen et al. (2007:369) describe coding as “the ascription of a category label to a piece of data, with the category label either decided in advance or in response to the data that have been collected.” Key concepts in Qualification Analysis and Social Constructivism provided the codes for analysis of classroom observations. Recurrent themes were then identified in the three data sets. Consequently, I formed conclusions about the participants’ linguistic behaviour and the belief system underpinning their classroom practice. As the interviews were employed at the last stage of the research, I acquired a deeper understanding of the teachers’ classroom language behaviour, as I could now reflect on the previous two phases of the research and theorize about the findings.

3.4 Field Notes

Field notes are a researcher’s aid when it comes to compiling narrative accounts of what takes place in the field. Berg (2004:172) maintains that detailed, complete and accurate field notes in the form of cryptic jottings, detailed descriptions, analytical notes, and subjective reflections should be completed immediately following every excursion into the field. In the different types of observations, field notes capture what is not seen or heard on the recording (Henning et al 2004:96). Although I was not consistent in taking down notes during classroom observations, when I did remember to record what was not captured in the video, I made cryptic jottings which I revisited after the excursion. By the time I came to conducting interviews I was acutely aware of the value of field notes in qualitative studies.

3.5 Research Diary

I consistently kept a research diary from the time that I commenced with field work in order to reflect on and record memorable events or happenings during my research journey. These included informal conversations with the teachers at the schools, disappointments and frustrations encountered in those schools which viewed research as a luxury they could not afford to indulge in because of OBE/NCS curriculum demands, the suspicion with which research was regarded in

some schools, the enthusiasm shown by some teachers who had interesting contributions to make on the subject of my investigation, even though they did not take part in the study, and insights that I gained on the topic as I was collecting and analysing the data.

However, the diary entries were not subjected to any form of analysis. They only provided me with insights into the complexity of the topic, enriched my narrative and inspired me to plough through the data with a renewed sense of enthusiasm.

3.6 Data Collection, Management and Analysis

3.6.1 Data Collection and Management

Video-tapes containing the observed lessons and focused interviews were duplicated and stored in a safe place after they had been transcribed. The questionnaires were also stored in a safe place for future reference. The data collection tools appear in the Appendices of this thesis.

3.6.2 Quantitative Data Analysis

The questionnaires were first coded in preparation for capturing on the SPSS spreadsheets and the data were reduced to numbers. Questionnaire responses were captured and analysed using the SPSS programme in order to perform a descriptive analysis of the data. The frequency tables were then imported to the research narrative in Chapter 4 for reference purposes and easier interpretation.

3.6.3 Qualitative Data Analysis Processes Used

Babbie (2001:379) asserts that “qualitative analysis is the non-numerical examination and interpretation of observations.” It involves a continual interplay between theory and analysis. When analysing qualitative data, the researcher seeks to discover patterns and possible causal links between variables (Babbie, 2001). In the present study, the transcripts of the classroom observations were subjected to coding in order to discover patterns of LIE policy implementation, discourse structures used by the teachers during lesson delivery, reasons behind the observed patterns of language use, and the effect that these had on teaching and learning. Vygotsky’s Social Constructivism theory and Qualification Analysis informed my choice of units of analysis. In Brock-Utne’s Qualification Analysis framework, the concepts of proficiency, adaptability and

creative qualifications are employed as units of analysis. Thus each lesson was analysed to establish the extent to which teachers developed the different types of skills through their engagement with learners. Key concepts in Vygotsky's theory were also used to analyse the lessons.

Focused interviews were subjected to open-coding to discover the two key informants' views on LIE policy implementation at high school level. Babbie (2001:366) states that in open-coding, data are broken down into discrete parts and compared for similarities and differences, and questions are asked about the phenomena under investigation. This creates an opportunity for the researcher to reflect on both his/her own and others' assumptions about how the topic/phenomena are questioned and explored; this in turn leads to new discoveries.

The data were analysed and the results, together with the study research questions, the literature review and the theoretical framework, assisted me in forming conceptual links between the questionnaire, classroom observations and the focused interview data. I then drew a table in (Chapter 4, p.147 - 150) to present the data from the three sources. I looked for similar or different patterns from the three data sets and established relationships amongst the themes.

3.7 Quality Assurance

3.7.1 Reliability

Reliability in empirical research refers to precision and accuracy. This means that if the study were to be replicated on a similar group of respondents, in a similar context, then similar results would be found. Reliability in quantitative research means stability over time, internal consistency and equivalence. Cohen et al., (2007) assert that criteria of reliability in quantitative methodologies differ from those in qualitative methodologies. Test-retest reliability is a measure of consistency over time and over similar samples. The term reliability is thus synonymous with dependability, consistency and replicability (Cohen et al., 2007).

The present study employed both qualitative and quantitative methods, and my discussion on how quality assurance issues were taken care of will cover both qualitative and quantitative techniques. During the pilot stage, the questionnaire was administered to a group of teachers similar to the

group which took part in the survey, in order to determine whether similar results would be achieved. Inter-rater reliability was not addressed as there was only one researcher conducting the study.

In qualitative research, reliability “can be regarded as a fit between what researchers record as data and what actually occurs in the natural setting that is being researched, i.e. the degree of accuracy and comprehensiveness of coverage” (Bogdan & Biklen, 1992:48, cited in Cohen et al., 2007). Cohen et al., (2007) state that in qualitative methodologies, reliability is concerned with fidelity to real life, context- and situation-specificity, authenticity, comprehensiveness, detail, honesty, depth of response and meaningfulness to the respondents. In the qualitative phases of the design, the classroom observations and the focused interviews were video-recorded to achieve “accuracy and comprehensiveness of coverage.” To ensure accuracy in my interpretation of data, I read through the transcripts several times. To ensure dependability, data collection was done over an extended period of two and a half months, from August to October, 2009. Field notes were taken during the classroom observations, and the context of the research, school context and teacher profiles were explained fully in Chapters 1 and 3 of this report.

3.7.2 Validity

Cohen et al., (2007:135-140) state that earlier conceptions of validity emphasized the importance of the instrument measuring what it purports to measure. However, a more comprehensive view of validity now includes different kinds of validity, for example, ecological, predictive, and concurrent validity.

In qualitative data, validity may be achieved through the honesty, depth, richness and scope of the data collected, the participants approached, the extent of triangulation, and the objectivity of the researcher (Winter, 2000, in Cohen et al., p.132). The video-recorded classroom observations and interviews made it possible for me to capture the data as it was presented. The advantage of video-recording was that I could re-play the tapes to check whether I had captured the lessons and interviews accurately in the transcripts. This strengthened the validity of the data collected and counteracted any researcher bias or selectiveness.

External validity in observations is concerned with whether the results of the research are applicable to other situations and whether the results represent the real thing (Cohen et al., 2007). To address the external validity requirement, purposive sampling was employed because the intention was not to generalize the findings, but to gain a micro-perspective view of how a selected number of high school teachers understood, interpreted and enacted LIE policies in their classrooms.

Internal validity in observations is concerned with addressing fears about whether the observer's judgements will be influenced by his/her close association with the subjects under investigation (Cohen et al., 2007). From the outset, I knew that I had to detach myself from the research in order to achieve objectivity. I strove to achieve this by briefing the subjects fully on what the study was about in each phase and by maintaining a professional relationship with them.

In quantitative data, validity can be enhanced through careful sampling, careful instrumentation and appropriate statistical treatments of the data (Cohen et al., 2007). Frequency tables and cross-tabulations were computed to reduce the data and establish possible associations between variables. The potential for researcher bias was counteracted by ensuring that questions were worded in the same way during all the interviews. Alterations to question sequencing were accommodated only when I wanted to follow up on an interesting or unexpected response. The questionnaires were piloted first and then refined in terms of wording, content, layout and length. I delivered the questionnaires in person to the schools and collected them at a later date in order to counter the problem of a lack of response. I re-administered the questionnaire for a second time in cases where teachers had "misplaced or forgotten" the questionnaire.

3.8 Limitations of the Study

Cohen et al., (2007) argues that surveys can be undertaken on a small-scale basis, but the generalizability of small-scale data will be slight. As the sample size for the survey was small, its findings, like those obtained from classroom observations and focused interviews, cannot be generalized. Findings from this study are propositional and can be extrapolated only in similar contexts. However, insights gained could inform LIE policy and practice.

3.9 Ethical Considerations

A key concern in social research is the question of ethics, that is, the need to treat participants with dignity and respect in one's pursuit of new knowledge as a researcher. Cohen et al. (2000:49) maintain that ethical issues arise from the nature of the research problem, the research context, data collection methods, the nature of the participants, and what is done with the data. Ethical dilemmas facing researchers could involve factors such as privacy, anonymity, confidentiality, as well as questions of deception and betrayal, ethical problems endemic to particular research methods, and the ethics of teacher evaluation (Cohen et al., 2000:60-66).

In order to gain access to the schools, I sought permission first from the Eastern Cape Department of Education. A letter was written to the District Director explaining the nature and purpose of my study. On receiving a positive response from the District Office, I drafted consent letters to the school principals and would-be participants, that is, to teachers offering History, Geography, English and Business Economics /Entrepreneurship (See Appendix 1).

I then made telephone arrangements with the principals of the selected schools to come and make a presentation on my research study and ask for permission to carry out the investigation. The letter granting me permission to conduct the study was attached to the consent forms in order to confirm to participants that I had received consent from the Department of Education. Gaining entry into the schools through the principal was not a problem for me in most of the schools because these were schools I had been to for practice teaching. The principals wrote letters granting me permission to conduct research in their schools after the briefing session. However, I experienced some reluctance on the part of some of the subject teachers who maintained that they had a lot of catching up to do with their students, especially Grade 12s, and had to prepare for Continuous Assessment (CASS) moderations. I therefore moved on to other schools in which the teachers were more willing to participate. Teachers who agreed to participate in the study were left with the questionnaire and consent letters to fill in. These were collected two or three weeks later.

Ethical issues such as informed consent, confidentiality and explaining the consequences of the interviews were taken care of prior to the recording of classroom observations and interviews. To

secure their anonymity and confidentiality, the respondents were not required to furnish their names on the questionnaire, nor were they required to reveal the names of their schools. A coding system was used to help me identify participants for the next phase of the research, that of classroom observations. Each teacher was given a code, and those who participated in all three phases of the research were given the same code.

Before I conducted the classroom observations through video, participants were again assured of confidentiality. They were informed that the tapes would only be viewed by my supervisor and by the external moderator when examining the thesis. At the interview stage, candidates were further assured of confidentiality and of their right to privacy. The steps described above were addressed in the Ethical Clearance application that I submitted to the University of Pretoria's Ethical Clearance Committee which granted me permission to conduct the study. A sample of the consent letters appears in the Appendices of this thesis.

3.10 Conclusion

In order to gain contextual and individual perspectives on the complex subject of LIE policy implementation in South Africa, a mixed methods research approach was selected. Multiple methods, in this case a survey questionnaire and focused interviews, provided the key to obtaining an in-depth understanding of the subject under investigation.