

Chapter 4

The empirical research design and methodology

4.1 INTRODUCTION

Chapter 2 dealt with a background literature study on the problem statement of this study, focusing on efficient management and effective leadership by school principals. The literature study also concentrated on adverse influences of a lack of school infrastructure and school atmospheres conducive to teaching and learning on matriculation pass rates.

In chapter 3, the literature study focused on how teachers, learners and parents could influence matriculation pass rates. This chapter describes the research design and methodology followed for the qualitative research. The researcher will adopt a **qualitative empirical** approach to the question of whether school principals at schools with low matriculation pass rates in the Eastern Cape Province lack the management and leadership skills necessary to improve the current poor matriculation pass rates.

This chapter will discuss

- the qualitative research methodology as choice of approach,
- ethnography in qualitative research,
- phases of data collection,
- the random selection of research participants,
- data-gathering techniques, namely the ethnographic interview and participant observation,
- some ethical considerations during the qualitative research study,
- the method followed in gathering data,
- data analysis

- reliability and validity of the research study, and
 - possible shortcomings of this study.
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4.2 QUALITATIVE RESEARCH METHODOLOGY

Chenail (1992), McMillan and Schumacher (1997:502 & 534), and Johnson and Christensen (2000:17) point out that qualitative research involves an inductive, reductionalistic approach whereby theory is generated by and formulated from the data obtained by the researcher. McMillan and Schumacher (1997:391) refer to qualitative research as “a naturalistic inquiry, the use of non-interfering data-collection strategies to discover the natural flow of events and processes and how participants interpret them ... most qualitative research describes and analyses people’s individual and collective social actions, beliefs, thoughts and perceptions”. This inductive process will generate a descriptive synthesis of the data. Description provides the “firm foundation upon which qualitative inquiry rests” (Wolcott 2001:31). Hence, qualitative research, as a descriptive inquiry, provides respondents with the freedom to express spontaneously how they regard their life-world. Furthermore, Lemmer (1992:294) outlines qualitative research methodology as a “tradition which focuses on the in-depth, the detail, the process and the context of schooling offers the educationist a valid and worthwhile research method”. Holliday (2002:4) adds that qualitative research “invokes the need to discover as much about how the research subjects feel about the information they provide as about the information itself”. Importantly, the qualitative research methodology will systematically provide answers to questions related to the problem statement of a research study.

According to Tuckman (1988:12-14) and Gummesson (2000:132), the main features of qualitative research methodology are that it is

- systematic. The research methodology is regarded as a structural process whereby

data are collected in the light of the problem statement of a research study.

- logical. By applying a logical examination of the procedures employed, the researcher is able to check the validity of the research conclusions drawn.
- empirical. Qualitative research is concerned with the collection of data that classifies it as being empirical, that is, data are the end result of the research process.
- reductive. The researcher analyses the data with the main aim of reducing any confusion of particular events. Through the process of reduction and conceptualisation of the data, it will be possible for a researcher to identify general, emerging patterns.
- transmittable. Hence, research results are recorded and may be used by other researchers for further, related qualitative or quantitative research.

McMillan and Schumacher (1997:534) refer to a pattern as a relationship among categories; that is, an abstract name for the meaning of similar topics. Finally, in this research study, qualitative research concerns itself with *process*, that is, with what has transpired, as much as with product or outcome. More importantly, the qualitative research methodology is essentially concerned with what the phenomenon under investigation means, that is, the *why* as well as the *what*. The researcher will examine and refer to these aspects throughout the study.

Using a qualitative research approach, the researcher will explore the phenomenon under investigation, that is *whether school principals at schools in the Eastern Cape Province have the necessary management and leadership skills to positively influence the existing low matriculation pass rates*. The latter is the main aim of this study and the researcher will endeavour to fill in gaps in existing knowledge regarding the phenomenon under investigation. A description of some of the differences between qualitative and quantitative research methodologies will serve to explain the rationale for using the

qualitative approach in this research study.

4.2.1 Some differences between qualitative and quantitative research methodologies

According to Silverman (2000:8), qualitative researchers “exemplify a common belief that they can provide a ‘deeper’ understanding of social phenomena than would be obtained from purely quantitative data”. Bryman (2001:45) adds that qualitative research entails much more sustained contact than quantitative research, especially when participant observation is used as a technique. Also, during qualitative research, the sustained contact between the researcher and the participants will permit a penetrating account, which can explore incidents in detail and illuminate the full extent of the participants’ accounts of a variety of phenomena. Hence, Chenail (1995) emphasises that the “main focus in qualitative research is the data itself, in all its richness, breadth, and depth”.

Combs (1995) and Winter (2000) state that quantitative research “limits itself to what can be measured or quantified and qualitative research attempts to ‘pick up the pieces’ of the unquantifiable, personal, in-depth, descriptive and social aspects of the world”. Holliday (2002:4) emphasises that qualitative research, as such, defines the backgrounds, interests, and social perceptions it purports to address.

Regarding the qualitative research methodology, the researcher will further substantiate

and elaborate on the choice of this approach as well as his role during the qualitative research process.

4.2.2 Choice of approach

As indicated above, the researcher will use qualitative research methods for the study since he does not wish to construct numeric confidence intervals or project his findings to large numbers of subjects. The researcher will concentrate on a single setting, the school, and will not use any standardised tests as the nature of the investigation will possibly be determined and adapted by the research itself. The qualitative approach will allow the researcher to visit schools with low matriculation pass rates in the Eastern Cape Province where he can personally interview participants in and around their schools. This will enable the researcher to become more involved with the phenomenon as opposed to the quantitative researcher who adopts a more distanced stance.

It is the researcher's hope that in the qualitative research process, he will be taken into the situation under investigation, and be able to obtain information-rich descriptions from the participants, as well as observe their feelings, attitudes and emotions. Therefore, during the qualitative research the researcher should be able to collect larger amounts of information from each participant than would be possible in a quantitative study.

According to Chenail (1992), much of "qualitative research is dominated by research traditions from education, and researchers from this field favour such methods as ethnography, participant observation, and naturalistic enquiry". Mouton and Marais (1990:163) and Holliday (2002:4) indicate that during qualitative field research, data is collected while the researcher interacts with participants in their natural settings, which in this study is schools. According to Hopkin (1992:134), the main feature of qualitative research is its emphasis on understanding the context of the research and it seeks "an holistic standpoint". Hence, the researcher will not focus on individual responses, but on emerging patterns, referred to as recurrent themes or constituents, from a group of research participants. McMillan and Schumacher (1997:518-523, 531) discuss emerging patterns in detail, stating further that in qualitative research, researchers have the

opportunity to present the data “as quotations of participants’ language, citing field notes and interview transcripts as sources”.

This study uses a qualitative approach to identify the chief concerns of various participants, and assess the meaning and merit of whether school principals at schools in the Eastern Cape Province have the necessary management and leadership skills to positively influence the existing low matriculation pass rates. Data will be reported in the natural, non-technical language of the event.

4.2.3 The researcher’s role

The researcher envisages investigating the problem of this study, using the ethnographic interview and participant observation in the life-world situations of the research participants.

As a major research instrument, the researcher will strive for in-depth conceptualisation and operationalisation throughout the data-collection phase and, finally, bias-free capturing and selection of the data. Cohen and Manion (1995:281) suggest any of the following as a means of reducing bias in qualitative research:

- careful formulation of questions by a researcher so that the meaning is clear,
- thorough training procedures so that an interviewer is more aware of the possible problems that may arise during interviewing, and
- possibly matching interviewer characteristics with those of the sample being interviewed.

After interpreting and analysing the data, the researcher will draw reliable and valid conclusions on whether school principals lack the necessary management and leadership skills at Eastern Cape Province schools in order to positively contribute to an improvement

in existing low matriculation pass rates. When monitoring data, the researcher will shelve irrelevant data and store all the data until the study is completed.

4.3 ETHNOGRAPHY

Ethnography is a specialised type of field study and one specific subtype of qualitative research that involves a researcher's extensive immersion in the setting and phenomenon under investigation. *Collins English Dictionary* (1991:534) defines *ethnography* as "the branch of anthropology that deals with the scientific description of individual human societies". Johnson and Christensen (2000:29) state that *ethnography* literally means "writing about people", that is, documenting the interactions of participants, such as, their "attitudes, values, norms, practices, patterns of interaction, perspectives, meanings, interpretations, and language".

Mouton (2001:148) states that ethnographic research aims to provide an in-depth description of the participants' perspectives on practices that are imbedded in their real life-worlds. According to Gummesson (2000:132), the ethnographic approach is concerned with "descriptions of social patterns" and researchers will learn from the participants about their culture and will need to exhibit empathy, open-mindedness and sensitivity. Scott and Usher (1996:152) add that ethnography is based on the fundamental belief that events should be studied in natural settings, that is, be field-based and that researched events cannot be understood unless the researcher understands how these events are perceived and interpreted by the participants. Hence, the researcher will make systematic observations and conduct in-depth interviews.

4.4 PHASES OF DATA COLLECTION

The researcher will follow McMillan and Schumacher's (1997:402-403) five phases of data collection. These phases of data collection will demonstrate the interactive processes of sampling and selecting data, recording data, analysing and displaying data, and possible tentative interpretations throughout the data-collection period. The five phases are:

- Phase 1: Planning.
Planning will become the guide for purposeful sampling and selection. During this phase the researcher will locate a particular site and obtain permission to use the site and network of participants.
- Phase 2: The beginning of data collection.
During this phase the researcher will obtain data primarily to become oriented to the field and gain a sense of the totality of the setting for purposeful sampling. If necessary, the researcher will adapt or change the formulation of the questions to be used in the ethnographic interviewing.
- Phase 3: The basic data collection phase.
Here, the researcher's initial conceptualisation and descriptions will be transformed and summarised. As initial patterns emerge from the ethnographic interviews, the researcher will identify ideas and facts that need corroboration in the next phase, namely, the closing phase.
- Phase 4: The closing of the data collection.
In this phase, data collection will draw to a close as the researcher prepares to leave the research field as he conducts the last ethnographic interviews. The researcher will give more attention to possible interpretations and verification of the emergent findings with the remaining interviews.
- Phase 5: The completion of active data collection.
This phase will blend into a formal data analysis and the construction of meaningful ways to present the data.

4.5 SELECTION OF PARTICIPANTS

The researcher elected to use purposeful sampling. Gummesson (2000:88-89) stresses that generalisation is not an aim of qualitative research. Gummesson (2000:88) and Silverman (2000:37) point out that “working in small groups has become a common feature of modern education”. Sixteen respondents participated in this study and the main criterion was that they should be from schools with low matriculation pass rates in the Eastern Cape Province. Selecting a small sample of participants for a research project has the advantage of enabling researchers to record detailed, quality responses. Therefore, the researcher limited the scope of this study to a small number of participants, namely sixteen (N=16). The study was limited to a small group, which is acceptable and typical of qualitative research. The aim of this qualitative study is to generate further research on a qualitative or quantitative basis.

To ensure that the small sample used in this research study is representative of the larger population, a random sample of participants will be drawn, especially to exclude bias (Johnson & Christensen 2000:176). The researcher will be aware that any participant will have the right to refuse to participate in the interviews. The researcher will respect each participant’s right to anonymity and confidentiality, and the right to expect experimenter responsibility.

4.5.1 Random sampling

The researcher will make use of purposeful sampling as opposed to probabilistic sampling. McMillan and Schumacher (1997:378) describe purposeful sampling as selecting information-rich cases for an in-depth study, using participants who are knowledgeable about the phenomenon under investigation. Before starting the interviews,

the researcher will explain to the participants that they have not been singled out as individuals for the study, but were selected at random in an attempt to study the group of participants they represented.

According to Cohen and Manion (1995:274-275), interviews inevitably may be biased, which needs to be recognised and controlled by both the interviewer and the interviewee.

The researcher will limit bias as far as possible by building controls into the research design, for example, by having a range of interviews with different participants. The researcher will obtain a list of all the schools in the Eastern Cape Province from the Department of Education. Altogether four senior secondary schools with low matriculation pass rates will be selected, namely school 1, school 2, school 3, and school 4.

The following groups of research respondents will be selected from the four secondary schools to be interviewed:

- Group 1: four school principals, one from each senior secondary school,
- Group 2: four Grade 12 teachers, one from each senior secondary school,
- Group 3: four Grade 12 learners, one from each senior secondary school,
- Group 4: four parents, one from each senior secondary school.

After selecting the respondents, the researcher's first task will be to make interview appointments during which he will brief the participants, without bias, that the main purpose of the interviews will be the collection of detailed data regarding the aims of this study. Johnson and Christensen (2000:140) suggest that a researcher should want each potential participant to understand that his/her participation is important for the integrity of the research study.

Research respondents will be asked to answer questions without any bias. All interviews

will begin by outlining to the participants the theoretical basis of the study, its general and specific aims, practical value, and the reasons for using the ethnographic interview. The researcher will prepare a detailed, main interview schedule, which will involve translating the research objectives into the questions. The researcher will explain to the research respondents that he will record their responses in writing.

Setting up and conducting the ethnographic interviews and participant observation will make up the next stage of the research procedure. All interviews will be conducted in the natural setting of each respondent's own school, and the parents will also be interviewed at their children's schools.

4.6 DATA-GATHERING TECHNIQUES

The researcher will use three qualitative data-gathering techniques in this multi-method study, to confirm data within a single strategy of data collection, namely:

- ethnographic, open-ended interviews
- participant observation, and
- artefact collection.

4.6.1 Ethnographic interviews

In this study, the open-ended interview is the primary data-collection strategy. Walker (1993:117) and Walford (2001:84) state that interviews can be perceived as data-collection devices which attempt to capture the varying perspectives of participants to standardised questions that intend to be minimally interventional. McMillan and Schumacher (1997:447) add that ethnographic interviews are "open-response questions to obtain data from participant meanings - how individuals conceive of their world and how they explain or 'make sense' of the important events in their lives." It should be noted that

Johnson and Christensen (2000:144) state that during qualitative interviews “in-depth information about the participant’s thoughts, beliefs, knowledge, reasoning, motivations, and feelings about the topic” can be obtained.

The ethnographic interview, as a research technique, will involve the gathering of data through direct verbal interaction between the researcher and the interviewee. The main advantage is that researchers are free to modify the sequence of questions, change and explain or add wording (Walker 1993:118; Cohen & Manion 1995:271). If necessary, the researcher may pause at intervals and ask the interviewee to recap or to summarise a response. Furthermore, the participants will be afforded the opportunity to try and articulate their own perceptions directly to the researcher. At all times the researcher will conduct the interviews in a friendly manner, but remain impartial to the interviewees’ responses. The researcher will make sure that he is familiar with the questions to be asked during the interviews so that he can read the questions without error or stumbling, in a natural, unforced manner. The questions will be addressed to the respondent in the exact words indicated on the interview schedule. During the interviews the researcher will allow for sufficient time for the respondent to answer. Probes used will be neutral so as not to affect the nature of the participant’s response. The researcher will end the interviews in a positive manner and also thank the respondents. He will focus on the main features of qualitative interviewing, namely that well-reasoned, accurate data may be obtained, and that many features of the participants’ everyday life-world may be shared (Cohen & Manion 1995:274-275).

4.6.1.1 Purposes of the ethnographic interview

Cohen and Manion (1995:271-273) state that the ethnographic interview may be used

- for gathering data which have a direct bearing on the research objectives through

the sampling of respondents' opinions,

- as an explanatory device to help identify emergent patterns, and
- in conjunction with other methods in a study, such as participant observation, to follow up unexpected research results, and to explain the motivations of respondents and their reasons for responding as they did.

Due to the nature of this study, the researcher has decided to use structured and open-ended questions during interviewing. The open-ended questions will start with a broad question or statement and then narrow down to more specific questions. The prepared questions will be embodied in the interview schedule, which will allow for further, unplanned questions to be asked in order to clarify participants' responses.

4.6.1.2 Advantages of open-ended questions

Cohen and Manion (1995:277) point out that open-ended questions have several advantages because they

- are flexible and allow the interviewer to probe and to test the limits of respondents' knowledge,
- encourage co-operation and help establish good rapport between the interviewer and interviewee, and
- allow the interviewer to make a true assessment of what the respondents' believe.

All interview questions will be set in the light of the problem statement of this study and based on issues identified in the literature study in chapters 2 and 3. Individual interviews will be conducted in 2002.

4.6.1.3 Interview format

Building a format into the qualitative research process will enhance its conformability; that is, other researchers using essentially the same format and procedures to examine the same phenomenon in the same setting are likely to arrive at the same conclusions. The researcher will not deviate from his interview format, although some flexibility in the choice of open-ended questions will be permitted.

The researcher will ask the questions (see Addenda A, B, C and D) in a particular sequence which will enable him to determine to what extent the variables are within the observed phenomenon and to what extent the variables are related. The researcher will keep respondents from rambling, but not at the sacrifice of courtesy.

4.6.1.4 Shortcomings of ethnographic interviewing

For the data collection and accurate research conclusions, the researcher will take note of the following shortcomings of the ethnographic interview listed by Cohen and Manion (1995:275 & 283):

- Factors, such as the interviewer's and interviewee's mutual interest, social distance, and control may differ from one interview to another.
- Some respondents may well feel uneasy and adopt avoidance tactics if they should feel that the questioning is too deep or too complicated.
- Many of the objectives and meanings of the open-ended questions that are clear to one participant, may be vague to another.
- The interviewing procedures are based on the assumption that the interviewees have insight into the cause of their behaviour, which may not be so.
- There may be a lack of satisfactory recording of the respondents' replies during the course of the interview by the researcher.
- It is impossible in everyday life to bring every aspect of the encounter during the interview within complete rational control.

In the next section the researcher will describe the second data-collecting technique, namely participant observation. The main reason for the use of participant observation will be to gather more data to cross-validate the data collected during ethnographic interviews by gathering more data through this technique. Together with artefact collection, participant observation will complete the qualitative cycle of exploration.

4.6.2 Participant observation

During the ethnographic interviews, the researcher will make use of participant observation, described by Mouton and Marais (1990:156-157) as “that process by means of which researchers establish a link between reality and their theoretical assumptions”.

McMillan and Schumacher (1997:420) define participant observation as “an active process which includes muted cues: facial expressions, gestures, tone of voice and other unverbilised social interactions which suggest the subtle meaning of language”. McMillan and Schumacher (1997:459) summarise participant observation strategy as a “prolonged field residence to obtain and corroborate salient observations of different perspectives recorded in field notes and summary observations”. Tellis (1997) adds that participant observation “makes the researcher into an active participant in the events being studied”.

Therefore, the researcher will have an immersive experience in the real life-world of the participants and field-based settings. As such, it will imply that the researcher will holistically commit his feelings, thoughts, and emotions to the research study.

Gummesson (2000:29-30) and Johnson and Christensen (2000:147) state that participant observation aims to reveal behavioural patterns of the research participants that will enable the researcher to collect additional information about the participants as “people do not always do what they say they do”. Hence, this technique will provide the researcher with some unusual, unobtrusive opportunities for collecting data, especially the nonverbal

manifestations, an important qualitative area of information. During the interviews he will not require respondents to do anything out of the ordinary that may affect their behaviour or their responses. The researcher will focus on how he directly observes the participants in terms of their

- feelings,
- thoughts and intentions,
- facial expressions of approval or disapproval,
- general thinking styles, frame of reference, and
- organisation of their words.

The undertaken participant observation will be spontaneous and occur in a non-structured manner, and will simultaneously allow for the researcher to record observed events. During participant observation, the researcher will adopt a passive role to ensure the minimum contamination of the setting. A deliberate distance will be maintained between the researcher and the participants. The researcher will keep a logbook to detail the observations.

4.6.2.1 Shortcomings of participant observation

According to Haralambos and Holborn (1998), participant observation has two disadvantages, namely the length of time required to successfully complete it and that researchers might be accused of being subjective, especially if seen to be sympathetic towards participants' responses. The researcher will guard against these shortcomings. Mouton (2001:148) points out that participant observational studies may be limited due to a lack of generalisability of results. However, the researcher's aim is not to generalise the research results but rather to establish whether there are similarities or differences between the research findings and the literature study of this study.

During the analysis of the information gained from ethnographic interviews as well as participant observations, the researcher examine themes or emergent patterns that will help him determine the nature of the management and leadership skills of school principals in the Eastern Cape Province schools that have low matriculation pass rates.

4.6.3 Artefact collection

The researcher will investigate personal and official documents in a non-interactive manner. Personal documents will be investigated to describe individuals' actions, experiences, and beliefs, for example, diaries. The researcher will ask to see official documents at the schools he will visit. These documents may take the form of memos, minutes of meetings, working papers, and drafts or proposals that may provide an internal perspective of the organisation (McMillan & Schumacher 1997:455). It is hoped that these documents will provide clues about the leadership and managerial skills of

the school principal. The researcher will also investigate documents which were produced for the parents, including newsletters, programme brochures, school governing body reports, public statements by the school principal, and news releases. The latter will suggest the official perspective on the phenomenon under investigation.

During the analysis of artefacts the researcher will question who uses them, how they are used, where they are used, and the purpose of their use. The interpretation of artefact meanings will be corroborated with ethnographic interview and participant observation.

4.7 RESEARCH ETHICS

All participants will be made to feel at ease during the interviews and the researcher will not embarrass, frighten or impose on any of them. As mentioned, the researcher will acknowledge the participants' right to non-participation and privacy, to remain anonymous, to confidentiality, and to expect experimenter responsibility. These rights will be described briefly below.

4.7.1 Right to non-participation and privacy

According to Tuckman (1988:14), the right to privacy refers to the right of any participant in a research study to keep from the public certain information about themselves. To safeguard the privacy of the participants, the researcher will obtain direct consent for participation from each participant. Participants will have the full right not to participate in this study.

4.7.2 Right to confidentiality and anonymity

Research participants will have the right to insist that data collected from them be treated with confidentiality, that is, to "demonstrate the trustworthiness of the researcher" (De Laine 2000:41). Johnson and Christensen (2000:83) add that anonymity will imply that the "identity of the participants is not known to the researcher".

Hence, the researcher will mention to all participants that they will remain anonymous as they have the right, as individuals, not be a salient feature of the research. For this reason, the researcher will identify the respondents by number rather than by name and will destroy the original test protocols as soon as the study is completed.

As a further measure of confidentiality and anonymity, the researcher will emphasise to the research participants that he requires group data rather than individual data. The number allocated to the participant will correspond with the number given to the school; in other words, school principal respondent 1, teacher respondent 1, learner respondent 1, and parent respondent 1 will be at school 1. School principal respondent 2, teacher respondent 2, learner respondent 2, and parent respondent 2 will be at school 2, and so on.

4.7.3 Right to expect experimenter responsibility

Regarding the research participants, the researcher will strive to be sensitive to human dignity. The researcher will explain to each participant, without bias, what the study entails in order to overcome any negative effects that might result from any respondent's participation (Tuckman1988:15).

4.8 DATA-GATHERING METHOD

The researcher will visit four schools with low matriculation pass rates in the Eastern Cape Province where he will interview the participants and simultaneously, complete participant observation and artefact collection. The researcher will first interview the school principals (Group 1), the teachers (Group 2), the learners (Group 3) and lastly, the parents (Group 4).

The researcher will collect, analyse, and interpret the data of each group before further interviews are conducted with the next group of participants. Data collection will occur in the school setting, either during or after school hours.

4.9 DATA ANALYSIS

The research conceptualisation incorporated in this investigation will inductive, that is, “patterns emerge from the data rather than being imposed on during or prior to data collection” (McMillan & Schumacher 1997:534). In addition, data analysis involves cyclical phases, namely “discovery analysis in the field, identification of topics that become categories, and synthesis of patterns among categories” (McMillan & Schumacher 1997:534). During data analysis the researcher will make use of coding, “the process of dividing data into parts by a classification system: segmenting the data into topics or using predetermined categories to break it into smaller subcategories” (McMillan & Schumacher 1997:534).

Data analysis will begin with the construction of the facts as found in the recorded data in search of recurring, emergent patterns (McMillan & Schumacher 1997:403). The emergent patterns relevant to the problem statement of this study will be tested through further ethnographic interviews and participant observation. Hence, the theme analysis will describe the “specific and recurring qualities ... expressed” (McMillan & Schumacher 1997:533).

The researcher will incorporate the three qualitative data analysis steps described by Omery (1983:57-58) and Giorgi (1985:10-40), namely

- Bracketing. The researcher will read the transcript several times to obtain a sense of it as a whole. This refers to suspending the researcher’s own meaning and interpretations during data analysis. The researcher will focus on the participant being interviewed and set out to understand what the interviewee is saying rather than what s/he is expected to say.
- Intuiting. The researcher grasps the essential constituents of the research study through direct eidetic intuiting. The researcher will identify constituents in the data

and at the same time clarify the data. The researcher will then attempt to determine whether any of the units of relevant meaning naturally cluster together as common themes. Once the emergent patterns of general meaning have been noted, they will then be reduced to units of meaning relevant to the research question.

- Describing. The researcher will organise the constituents identified into a schematic structural description in order to grasp the relation of the essential meanings through their coherence.

Accurate data analysis should provide in-depth insights into the phenomenon under investigation: *addressing the low matriculation pass rates in the Eastern Cape Province from an education management perspective*. The researcher will write a composite summary of all the interviews to accurately capture the essence of the phenomenon being investigated and note significant similarities and differences that will be developed from the data.

4.10 RELIABILITY AND VALIDITY

In selecting the research techniques, namely the ethnographic interview and participant observation, the researcher will examine how these formats will reflect both reliability and validity.

4.10.1 Reliability

Before drawing any conclusions from the analysed data, the researcher will assess reliability thereof to determine whether the research result is consistent. Reliability “means that two or more researchers studying the same phenomenon with similar purposes should

reach approximately the same result” therefore reliability curbs dishonest research (Gummesson 2000:91). According to Tuckman (1988:172), for optimum reliability, a researcher needs to overcome the following factors that could impede the reliability of a research study:

- poor health, fatigue or emotional strain on behalf of the interviewer or the interviewee,
- poor physical condition of the room in which the interview is conducted,
- fluctuations of the interviewer’s or the interviewee’s memory, and
- a lack of ethnographic interview experience on the part of the interviewer or the interviewee.

4.10.2 Validity

McMillan and Schumacher (1997:404) define validity of qualitative designs as “the degree to which the explanations of phenomena match the realities of the world”. Winter (2000) describes validity as the extent to which a test will measure what it purports to measure, and whether the means of measurement are correct. Cohen and Manion (1995:281) maintain that “the most practical way of achieving greater validity is to minimise the amount of bias”. They describe bias as the characteristics of both the interviewer and the respondent, as well as the features of the substantive content of the questions, that may include any of the following:

- the attitudes and opinions of an interviewer,
- a tendency for an interviewer to associate with the respondent in his/her own image,
- a tendency for an interviewer to seek answers that support his/her preconceived

notions,

- misperceptions on the part of an interviewer of what the respondent is saying, and
- misunderstandings on the part of the respondent of what is being asked by a researcher.

In this study, validity will depend on the degree to which the researcher will faithfully represent the phenomenon under investigation rather than on the number of cases studied.

4.10.2.1 Internal and external validity

Johnson and Christensen (2000:188) refer to internal validity as the “ability to infer that a causal relationship exists between two variables”, that is, the degree to which a researcher is justified in concluding that an observed relation is causal. Therefore, internal validity assures certainty that the research results can be accepted. External validity, on the other hand, will be obtained if the research results apply in the real world to other similar research studies.

Winter (2000) concludes that the measure of external validity is the extent to which the research results can be generalised and thus applied to other populations, although the latter is not a purpose of this research study. Thus, a high degree of validity of the study will give the researcher confidence in conclusions drawn. The researcher will emphasise the measure of the reliability of the data collected as well as respondent validation by means of cross-checking the data, accurate data analysis, and the development of reliable theories from the data.

4.10.3 Triangulation

The researcher will use triangulation that is cross-validation among data sources and collection strategies in a single research study (Johnson & Christensen 2000:212-213; Holliday 2002:43, 75). According to McMillan and Schumacher (1997:520), triangulation will allow the researcher to find regularities in the data, that is, “to see whether the same pattern keeps recurring”. Wolcott (2001:30) adds that the practice of checking multiple sources is often touted as one of the strengths of fieldwork.

Data will be cross-checked for interconnected patterns in order to present a holistic and more meaningful result. Chenail (1997) states that this allow a researchers to locate where they are in relation to some other points in a phenomenon under investigation.

4.11 POSSIBLE SHORTCOMINGS OF THIS STUDY

This study has the following possible shortcomings:

- The data gathered during the ethnographic interviews and the participant observation will only focus on the situation in the Eastern Cape Province schools with low matriculation pass rates. This implies that this study is not applicable to all the provinces of the Republic of South Africa.
- The specific procedure followed in the collection of data includes the random selection of only four schools with low matriculation pass rates.
- A total of only sixteen research respondents will be interviewed.

- Finally, the data collected will not reflect the levels of all the management and leadership of all school principals at schools in the Republic of South Africa with low matriculation pass rates.
- It is beyond the scope of this study to focus on **all** issues pertaining to the problem statement.

A possible source of error in this study could be the potential bias of the researcher.

4.12 CONCLUSION

As a qualitative approach in this research study, the researcher will gather field data by means of the ethnographic interview and participant observation in an area familiar to the researcher, namely, the Eastern Cape Province. The study will include multiple sources of data, namely school principals, teachers, learners and parents, so that the researcher can make the best possible interpretations of the phenomenon under investigation.

The number of participants in this research study is limited to sixteen, as the researcher will primarily focus on the detail and quality of an individual's experiences and no claims will be made as to general applicability or implications of the findings. The researcher will attempt to shed some light on the role of school principals in the improvement of the poor matriculation pass rates in the Eastern Cape Province, so that further, larger scale research could be planned on a sounder base.

Throughout this study, the researcher will bear in mind the appropriate and effective

procedures, outlined in this chapter, for accurate data collection. The researcher will remain objective and be disciplined and conscientious in taking detailed field notes at all stages of the study, clearly separating description from interpretation and judgement. The researcher will become involved in experiencing the setting while maintaining an analytical perspective grounded in the purpose of the fieldwork, namely scientific research designed to answer the research question.

Chapter 5 will present and discuss the research results and analysis and interpretation of the qualitative data.
