Chapter 4
Research design and methodology

As indicated in the previous chapter, my inquiry is located within an interpretive, qualitative research paradigm. Qualitative research is neither a method nor a single approach to research. Instead, it is a cover term for a collection of methodologies devoted to accounting for social events and experiences, using various ways of description and interpretation (Denzin & Lincoln, 2000). However, for definitional purposes, Denzin and Lincoln (2000) describe qualitative research as a research paradigm that "… involves an interpretive, naturalistic approach to the world, meaning that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret phenomena in terms of the meanings people bring to them" (p.3). Creswell (2003) contends that a qualitative inquiry employs different knowledge claims, strategies of inquiry and methods of data collection and analysis from those used in a quantitative investigation.

The conceptual framework set out in Chapter 3 provides an overview of poststructuralist assumptions, captured and categorised as ontological, epistemological and methodological assumptions as they relate to the focus of this study – namely gender in the public health curriculum in higher education. A further exposition of the implications of these assumptions for the conduct of my inquiry is provided below.

Denzin and Lincoln (2000) emphasise that qualitative researchers approach their research from a certain view of reality. According to this view, reality is socially constructed and there are multiple versions of reality (Denzin & Lincoln, 2000; Wood & Kroger, 2000). This *relativist* stance (Neuman, 1997) positions the researcher as having her own view on reality and aiming to understand multiple realities rather than one single truth (Lincoln & Guba, 1985). This, in turn, leads to a *subjectivist* stance (Denzin and Lincoln, 2000; Neuman, 1997). For this inquiry, an interpretive qualitative approach fits with a poststructuralist theoretical framework, where the social construction of the public health curriculum and the representation of gender was one of the points of departure.

From an epistemological viewpoint knowledge is created when the researcher and researched undertake the inquiry. A qualitative enquiry permits the researcher to enter the meaning worlds of the participants, subjects, objects or phenomena under study and to participate actively in the creation of meaning (Parker, 1992). Consequently, findings are said to be the creation of the process of interaction between the researcher and the participants. In this sense, qualitative research emphasises process rather than product (Parker, 1992).

Interpretive researchers study meaningful social action in natural settings (Neuman, 1997) – that is, in the localised context of the participants, where human experience, behaviour and events occur (Creswell, 2003; Denzin & Lincoln, 2000). Denzin and Lincoln (2000) further emphasise that human behaviour and responses can be better understood when the framework or the perspective within which the respondents interpret their thoughts, feelings, meanings and actions is known. Therefore, the goal of qualitative inquiry is to understand the meaning of a phenomenon for persons who experience it. Parker (1992) comments that a focus on meaning making in context is in direct opposition to many quantitative methods, which tend to decontextualise data. According to Neuman (1997), the methodology followed in such a process is referred to as an *interpretive* methodology, using research methods such as participant observation, field research and text analysis.

4.1 Research design

Denzin and Lincoln (2000) define a research design as "… a flexible set of guidelines that connect theoretical paradigms first to strategies of inquiry and second to methods of collecting empirical material" (p.22). Figure 4-1 depicts the linkages between the theoretical perspective (poststructuralism) and interpretive qualitative strategies and methods that will be discussed in the subsequent sections. Apart from different knowledge claims employed in a qualitative inquiry, Creswell (2003) also refers to strategies of inquiry and methods of data collection and analysis as important aspects of the research design.

4.1.1 Research strategies

In order to answer the research questions, this inquiry followed a two-pronged research design, a survey design and a case study design. This type of design has also been used elsewhere. Wagner (2003), for example, made use of this type of survey to gather information

on the content of undergraduate research methodology courses at South African universities, and then at the second level, explored the beliefs held by some academics that informed the way in which these courses had been constructed.

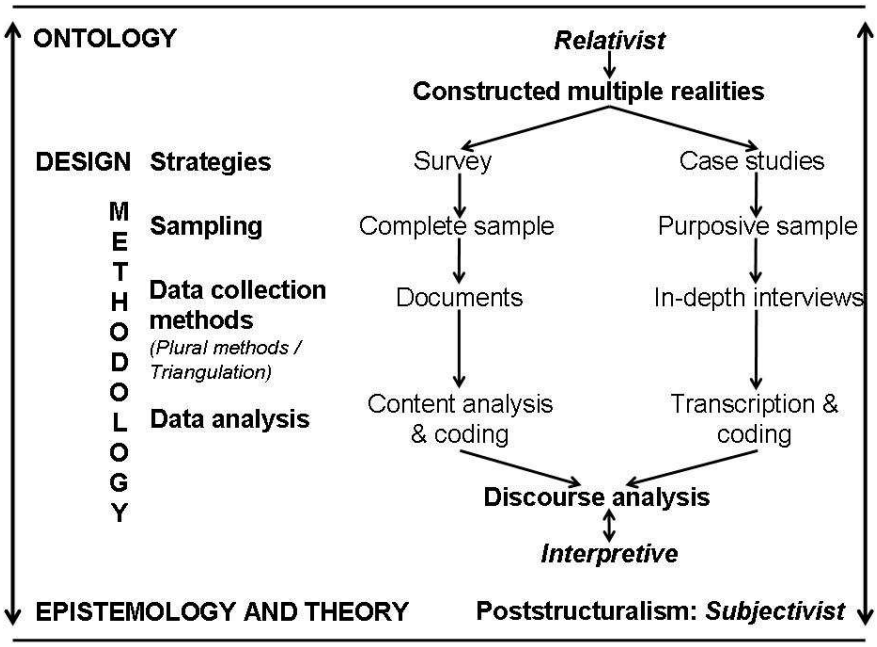

Figure 4-1: Levels of the research process

4.1.1.1 Survey design

Survey research is a popular social science research method. In this study a survey of documents was carried out to answer the question on how gender was represented within the official public health curriculum. Gathering information from documents by means of a survey is an acceptable practice. Cheek (2000), for example, describes how she surveyed and located articles appearing in Australian print media related to Toxic Shock Syndrome.

A typical survey research design involves questionnaire construction, sample selection and data collection through either interviewing or self-administered questionnaires (Babbie & Mouton, 2001). However, I did not follow this typical notion of the survey but was, instead, guided by the definition offered by the Indiana University Audit Department (1995), which seemed to resonate better with the objective of this inquiry. This department describes a

survey as a process for gathering information without detailed verification on the activity being examined, with the aim of:

- Understanding the activity under review;
- Identifying significant areas warranting special emphasis; and
- Obtaining information for use in performing the audit.

If rephrased for this inquiry, the survey was a process that was used to gather information on official public health curriculum documents, which was then used for performing further analysis on the phenomenon under study.

4.1.1.2 Case study design

Secondly, a case study of two schools of public health was employed to provide a more in-depth and nuanced understanding of how gender was represented within the public health curriculum. Stake (2000) offers some insights on case study designs. He emphasises that a case study is not a methodological choice, but a choice of what is to be studied. Therefore, the focus should be on the individual cases and what could be learnt from the single case. Stake (2000) further identifies three types of case studies:

- *Intrinsic case study*. This is employed when the researcher seeks a better understanding of a particular case – "in all its particularity and ordinariness" (p.437). In other words, the case itself is of interest and the study is undertaken primarily because of an intrinsic interest, not for theory building.
- *Instrumental case study.* This is employed when

  > … a particular case is examined mainly to provide insight into an issue or to redraw a generalization. The case is of secondary interest; it plays a supportive role and it facilitates our understanding of something else. The case is still looked at in depth, its contexts scrutinized, its ordinary activities detailed, but all because this helps the researcher to pursue the external interest. The choice of case is made to advance understanding of that other interest. (p. 437)

- *Collective case study.* This is employed when a researcher collectively studies a number of cases in order to investigate a phenomenon, population, or general condition. It is an instrumental study extended to several cases.

In line with Stake's categorisation, our inquiry was an *instrumental case study*. Two cases were selected for further in-depth understanding of the phenomena under study, but also to

triangulate other sources of data collection used in the inquiry. In using a case study for this inquiry, my aim was to get a deeper and more nuanced understanding of how gender was constructed and represented in the public health curriculum by the participants within their different contexts (see Denzin and Lincoln, 2000). The case studies in this inquiry, conducted by means of in-depth interviews, enabled the inquiry to answer questions on the perceptions of public health academic staff in sub-Saharan Africa with regard to gender, the resources that had shaped these perceptions, the way in which forms of subjectivity were constituted and taken up within these discourses, and how academics' own perceptions and experiences contributed to the construction of current discourses on gender in the public health curriculum.

4.1.2 The researcher's role

In qualitative research, the researcher is the primary instrument for data collection (Creswell, 2003) and also a co-creator of knowledge (Babbie & Mouton, 2001; Parker, 1992). The orientation of the researcher towards knowledge creation is termed as an outsider (etic) or insider (emic) perspective (Patton, 2002). Young (2005) defines emic as having "personal experience of a culture/society," while etic is described as "the perspective of a person who has not had a personal or 'lived' experience of a particular culture/society" (p.152). To illustrate the concept of insider/outsider perspective, Byrne (2001) explains that "[i]f an ethnographer studied the culture of perioperative nurses and had no perioperative nursing experience, that researcher's interpretations would be from an etic perspective. If a perioperative nurse studied the culture of the OR [Operative Registered Nurses – NMAM] or the organization of AORN [Association of periOperative Registered Nurses – NMAM] those interpretations would be from an insider's, or emic, perspective" (p.83).

Eppley (2006) argues that researchers who have an insider or emic perspective share very specific and important subject positions or experiences with their participants and come close to being an insider. However, they could never reach complete insider status, but the shared subject positions and experiences at least preclude them from being an absolute outsider. Eppley (2006) further contends that insider/outsider positions are socially constructed and entail a high level of fluidity that further impacts on a research situation. This author also comments that a researcher, by nature, has to have some level of outsider perspective in order to conduct research. Although this does not necessarily mean that the insider perspective

should be surrendered, he believes that both perspectives could exist simultaneously and that it is necessary to step back or distance oneself in varying degrees. He concludes that "[t]here can be no interpreting without some degree of othering. Researchers, then, can be neither insider nor outsider; they are instead temporarily and precariously positioned within a continuum" (p.3).

With this concern in mind, Creswell calls on qualitative researchers to systematically reflect on their biographies, their biases, values and interests, and to highlight how these could shape the study, an action known as *reflexivity* (Creswell, 2003). In Section 4.3.5, I give a reflection on my subjectivity, on how my biography, experiences and interests may have shaped this inquiry and the measures I took to minimise personal bias.

4.2 Research methodology

A research methodology pinpoints the research process and the kind of tools and procedures to be used. According to Denzin and Lincoln (2000), it follows on the research design phase and entails the methods of collecting and analysing empirical material.

4.2.1 Site selection

The sites of the inquiry were schools of public health in sub-Saharan Africa offering postgraduate training. One of the reasons for this choice was the fact that I worked in a school of public health and was at that stage already working on a gender project in this region. (See Sections 1.2 and 2.2.2.7b.) I was, however, interested in exploring the phenomenon of gender in public health curricula in greater detail, using a qualitative instead of a quantitative lens.

The study was interested in those sites (schools, institutes or faculties of public health) that were autonomous (i.e. not integrally linked to schools or faculties of medicine as departments). This also implies autonomy in terms of financial, administration and programme offering. In addition, they were to be multidisciplinary (i.e. admitting students from different disciplines) and were to be offering preventive and promotional aspects of public health in their curriculum at postgraduate level. The scope was further delineated to only include the Master of Public Health (MPH) degree. Further, due to language limitations, francophone and lusophone schools and institutes of public health that met these criteria were excluded. These

criteria were used in order to delineate a uniform sampling frame and to align to the notion of public health. (See Section 2.2.1.) According to available Afrihealth (2003a) data, there were 10 such institutions in sub-Saharan Africa. Half of these were based in South Africa. There was also evidence of work on gender in the medical curriculum specifically being carried out in medical schools (Garcia-Moreno, 2005; Mwansa-Nkowane, 2005), but little or no work at all in the autonomous schools of public health.

4.2.2 Sampling

Sampling was linked to the two-pronged research design described in Section 4.1.1 and was thus carried out at two levels. Figure 4-2 gives an overview of the sampling procedures.

4.2.2.1 Sampling procedures for institutions to be included in the survey

At the first level, a complete sample of all the institutions described above was included for this analysis, except one school, which was at the time of data collection going through a huge restructuring process. There was a need to be sensitive to this and avoid adding undue pressure to the system. This brought the total number of institutions whose documents were surveyed to nine. By including all these institutions, the researcher aimed to ensure that as much diversity as possible was represented in the vast region of sub-Saharan Africa. It was important to get a broad and comprehensive view that would ensure maximisation on the range of information that could be collected and the provision of a potentially rich supply of data (Cheek, 2000) to be relevant for understanding the representation of gender in the public health curriculum. This part of the procedure is depicted in Figure 4-2.

4.2.2.2 Sampling procedures for the cases and the members of academic staff

At the next level, sampling was carried out in two phases. Firstly, the two cases were purposively selected, and thereafter the academic staff members in each of the two schools.

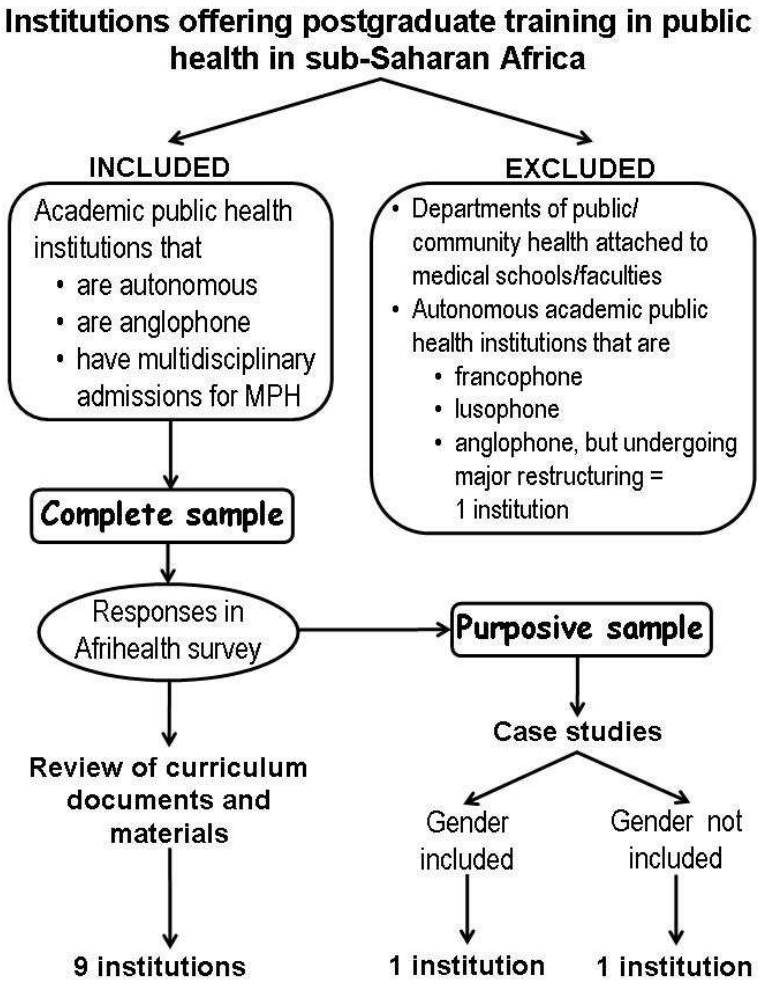

Figure 4-2: A depiction of the sampling procedures

a) Purposive sampling of the cases

From the findings of the Gender, Education and Training (GET) project (Section 2.2.2.7b) two schools of public health were selected for further in-depth analysis. The following criterion was used: one school where it was apparent that there was a dedicated course on gender, complete with staff and resources allocated to it; and one school where the reverse was true. This enabled the researcher to gain insight into how gender was understood, experienced and incorporated in the two schools. This part of the sampling is also depicted in Figure 4-2.

The sampling procedures of the two cases described above were in line with Silverman's (2000) suggestions that, firstly, purposive sampling should allow us to choose a case because it illustrates some feature or process in which we are interested (the representation of gender in the public health curriculum) and secondly, it enables us to limit the number of cases to the resources (which was also true in the case of this inquiry). Stake (2000) also proposes that we should select cases that are likely to offer us an opportunity to learn rather than focusing on the issue of representativeness. In this case the two cases were selected on the basis of what we could learn from them (absence or presence of gender and why) rather than on the basis of whether they were representative of all the units under investigation. A more detailed description of each of the schools selected as cases is given in Appendix 1.

b) Purposive sampling of the academic staff members

Stake (2000) refers to the way in which academic staff members were sampled as sampling of "cases within the case" (p.440). He explains that after sampling of the main case, there are still subsequent choices to make about persons, places and events to observe. He adds that specified criteria need to be used, and is emphatic that these criteria should be based on the opportunity to learn rather than on representativeness.

In this instance, in-depth interviews were conducted with academic members of staff from the two cases mentioned in Section a) above. Certain criteria were therefore considered in the selection of the academic members of staff and the number to be interviewed. In this case, seven academic members of staff were interviewed from each institution, bringing the total number to 14. Data had reached saturation by the time this number of members of staff from each school had been interviewed and there was therefore no need for additional interviews. Data saturation implies that no more new categories emerge from the data: "When data are saturated, events do not remain as a single instance, they have been replicated at least in several cases, and with that replication lies verification" (Morse & Richards, 2002, p.174). This number (14) was purposively decided upon in order to ensure not only data saturation, but also an adequate mixture of academic staff to be interviewed, based on the following criteria: age, sex (where possible), rank, experience, qualifications, and different domains of public health such as epidemiology and biostatistics, occupational and environmental health, health promotion, health policy and management, disease prevention and control, and family and population health.

4.2.3 Data collection procedures

This section provides an explanation of the process of data collection that included the collection of curriculum documents and in-depth interviews. These activities took place during the period August 2007 and February 2008.

4.2.3.1 Collection of documents

The researcher requested curriculum documents from the nine selected schools of public health and ensured their collection either through e-mail, post (registered or priority mail) or personal collection. It is important to point out here that all curriculum documents describing all courses were collected and not just those with gender content. The documents that were collected included:

- Course descriptions representing different domains of the public health curriculum; and
- Any course descriptions of the public health curriculum available on the Internet.

4.2.3.2 In-depth interviews

In-depth interviews were held with selected members of academic staff in the two institutions identified to serve as case studies. Each participant signed a consent form to indicate voluntary participation (Appendix 2). An interview guide was used for ensuring that all the topics of interest were covered comprehensively with the respondent (Appendix 3). Each interview lasted between 30 and 45 minutes. The researcher ensured that the interviews were conversational and interactive by encouraging the participants to talk freely, while guiding the conversation towards new topics from time to time. The emphasis was on eliciting as much narrative as possible, in order to get the participants' own perspectives and experiences – a rich description of their contexts and situations (Campbell, 1999). The main value of in-depth interviews is their ability to provide insights and understanding of the context in which behaviour occurs and the broader structural determinants of behaviour. The main disadvantage of in-depth interviews is the generation of huge amounts of data, and thus methods of collecting and analysis become very time consuming. Accordingly, smaller manageable sample sizes are encouraged (Campbell, 1999). In this case, a sample size of seven from each school was considered to be manageable.

All the interviews were audio-taped, except in one case where the researcher forgot to switch on the record button of the tape recorder. When this was discovered at the end of the day, I reconstructed this interview from the notes I had taken. This reconstruction was treated as field notes and not as an interview transcript. I aimed to conduct all the interviews in a pre-arranged room that would ensure good acoustics and privacy. However, this aspect was out of my control when the participants insisted on being interviewed in their offices, some of which were quite noisy. This made the transcription difficult and time consuming, as the recordings had to be replayed several times more than anticipated to ensure the accuracy of the transcriptions. The audio-taping was supplemented by note taking during the interview. Notes were expanded on at the end of each interview session, and again after all the interviews of the day. The advantage of audio-taping is that no information is lost and the researcher can listen to the flow of the discussion and the exact words that were used. The disadvantage of audio-taping is its intrusive characteristic, especially for sensitive topics (Campbell, 1999; Creswell, 2003). In addition, an efficient filing system was developed, which was kept under lock and key (with duplicate copies kept separately) to ensure the maintenance of a reliable audit trail (Creswell, 2003).

4.2.4 Data analysis

The data underwent three processes of data analysis, as listed and discussed below. The organisation of the data for analysis was followed firstly, by content analysis, and secondly, by discourse analysis.

4.2.4.1 Organising the data for analysis

Unique identifying codes were given *to each school.* The codes, which were derived from the GET project described in Section 2.2.2.7b were maintained for the schools that were included in this inquiry. The nine schools included in this study were assigned the following codes: 1200; 1500; 1600; 1700; 1800; 2100; 2200; 2400; and 2500. The gaps in the numbering represent schools in the GET project that did not fit the inclusion criteria for this study. The two schools that served as case studies maintained their school codes 1600 and 2500 respectively.

Curriculum documents were given unique identifying numbers that corresponded to the school from which they were collected. They were then available as text for content analysis and subsequent discourse analysis.

In-depth interviews with academic staff were transcribed with the help of an expert. The transcripts produced became the text that was subjected to analysis. The transcription of the material emphasised readability and did not feature detailed intonations or pause lengths. Such a detailed level of transcription was not necessary given that the analytic focus was directed at the content of the discursive practices drawn from the respondents. Where the tape recording could not be heard clearly, this was shown in the transcript as "[inaud]" (Burman & Parker, 1993). The participants selected from the two schools for in-depth interviews were given unique identifying codes reflecting their school codes, the sequence in which they were interviewed and their sex. For example, a participant from School 1200 who was the first participant to be interviewed and was female was assigned the code "1600:1F". A participant from School 2500, who was the sixth participant to be interviewed and was male, was assigned the code: "2500:6M". (See Table 6-1 for the rest of the participant codes).

In the rest of this thesis, the above two data sets or sources will sometimes be referred to as 'text' in the singular. Each of these two 'texts' actually comprise of a collection of texts in the traditional sense of the word. This is in line with a poststructuralist focus on text as the object for analysis as already described in Section 3.1.3.5.

4.2.4.2 Content analysis

Content analysis usually refers to analysing text (interviews, transcripts, diaries or documents). In qualitative research it is used for data reduction, helping to make meaning out of the large volume of data and other material in an effort to identify core consistencies and meanings, patterns and themes (Patton, 2002). All the above sources of data, now in the form of text, were subjected to a content analysis, but this was done separately for each data source.

In carrying out the content analysis of all the data sources, I was guided by the following steps, synthesised from several authors on qualitative research (Campbell, 1999; Creswell, 2003; Hsieh & Shannon, 2005; Marrying, 2000):

1. The data was organised and prepared for analysis as already mentioned.
2. I got 'immersed' in the data by reading and re-reading the curriculum documents and transcripts, to familiarise myself with the data, as well as to identify important themes, categories, dimensions and interrelationships. This action resulted in the emergence of new insights and gaining of a deeper and richer understanding of the phenomenon under study. In this way I allowed the categories and names for categories to flow from the data rather than to impose my own categories.
3. Data was then coded according to themes. Coding involved taking text data sentences or paragraphs into categories, and then labelling those categories with a term, and often terms based in the actual language of the participant (Creswell, 2003). Both manifest (obvious) and latent (underlying) content were themed.
4. A thematic analysis was then carried out to identify broad themes that emerged from the text.

While mainly considered as a quantitative technique, some qualitative researchers are sceptical of using content analysis for qualitative analysis. Stemler (2001), for example, points out that, "[t]he most common notion in qualitative research is that a content analysis simply means doing a word-frequency count" (p.1). Those qualitative researchers opposed to the use of content analysis for qualitative data include Parker (1992) and Wood and Kroger (2000). Parker and the Bolton Discourse Network (1999) reject content analysis on the grounds that it fails to capture the context in which the inquiry is carried out. He argues:

> When we try to grasp patterns in a text, we always have to carry out that exercise against a cultural backdrop, which is made up of many different social worlds (such as classrooms, families, clubs), subcultures (including bands, classes and regions), and in most societies, language and dialects. These provide shared systems of meanings that we selectively draw upon to communicate to each other." (p.2)

Wood and Kroger (2000) also reject the classification of content analysis as a qualitative approach, and instead, view it as quantitative. They argue:

> Conventional content analysis involves the coding of a text into mutually exclusive categories, the counting of category occurrences and their statistical analysis. The content that is coded is limited to the representational, referential or propositional meaning of the unit. Depending on the categories that are used, the coding may involve varying degrees of interpretation, but both the categories and the way the text is to be interpreted and coded are predetermined, that is, they are not guided by the discourse. Further, there is usually a check on the reliability of the coding via some sort of quantitative assessment of the degree of agreement among coders. (p.32)

Indeed, the arguments of both Parker (1992) and Wood and Kroger (2000) are valid for any researcher interested in carrying out a discourse analysis, and this is why this inquiry went beyond content analysis.

4.2.4.3 From the descriptive to the discursive

Poststructuralist approaches lend themselves to a distinct research focus. Cheek (2000) has some useful observations about moving from the descriptive to the "discursive". She asserts that data as text becomes the focus of analysis, emphasising that "[d]iscursive analyses of texts are thus not simply descriptions or analyses of content, rather, they are critical and reflexive, moving beyond the level of commonsense" (p.42). Texts are embedded within discursive frameworks, and therefore in discourse analysis; text is an example of the data itself. Meanings as they occur in texts are the product of dominant discourses that permeate those texts. Therefore, texts are interrogated to uncover the unspoken and unstated assumptions within them. In such analysis our concern is not so much whether these are a poor or good record of the events, but rather what the nature of the reality produced by these texts entails. Such a focus moves the research beyond the descriptive and locates it within the realm of the discursive. The focus is not so much on what is recorded, but on why it is recorded, and conversely, why other things are not recorded. Cheek (2000) encourages one then to ask incisive questions that would bring out these underlying assumptions and dominant discourses that then become taken for granted as knowledge.

In this study the descriptive findings from the content analysis were used for the further development of a discourse analysis of the representation of gender in the public health curriculum. The discursive practices in the emerging themes and patterns were explored in terms of the original research questions regarding the discourses emerging from the public health curriculum documents and the perceptions of public health academic staff in sub-Saharan Africa with regard to gender.

The emerging discursive practices were then triangulated among the two data sets to identify common and contrasting practices within the data sets.

4.2.5 Reporting the findings

Since this was a naturalistic inquiry, the findings are presented in narrative form, and in some cases interspersed with quotations and diagrammatical depictions of relationships between themes and patterns where necessary, in order to provide 'thick descriptions' of how gender was represented in the public health curriculum (Creswell, 2003).

4.3 Validity and reliability, trustworthiness and credibility

This section describes how issues of validity and reliability were addressed in this inquiry by embracing current constructs of quality assurance from a qualitative paradigm that include 'credibility', 'transferability', 'dependability' and 'confirmability'.

Lincoln and Guba (1985; 2000) outlined some useful insights in addressing issues of validity and reliability in qualitative research. They also came up with constructs that are equivalent to those in the quantitative research paradigm and state that in qualitative research:

- Credibility is equated with internal validity;
- Transferability is equated with external validity;
- Dependability is equated with reliability; and
- Confirmability is equated with objectivity.

Based on Lincoln and Guba's (2000) categorisation, I aimed to maintain the quality of the inquiry described in the sections that follow.

4.3.1 Credibility of this inquiry (internal validity)

Credibility refers to establishing that the results of qualitative research are credible or believable. Credibility in this inquiry was established through rigour of techniques and methods and the credibility of the researcher.

Rigour of techniques and methods. To ensure rigour of techniques and methods, a full description of the research design, methods, and the fieldwork procedures and processes has been given in this chapter.

Credibility of the researcher. The researcher gives a full report of her biography, experience, knowledge, values and biases that she brings to this inquiry. (See Section 4.3.5.) This self-reflection creates an open and honest narrative that will hopefully resonate well with readers (Creswell, 2003).

4.3.2 Transferability (external validity)

Transferability answers the question of how research findings can be applied to other contexts or to other respondents. However, the intent of qualitative research is not necessarily to generalise to a population, since the inquiry is context based (Marshall & Rossman, 1993) and uses purposive sampling. Lincoln and Guba (2002) suggest that transferability can be achieved by providing 'thick descriptions', by collecting sufficiently detailed descriptions of data in context, and by reporting the data with sufficient detail and precision (see also Creswell, 2003). Thick descriptions may transport readers to the setting and give the discussion an element of shared experiences. By using purposive sampling the range of information that can be collected about that context is maximised (Lincoln & Guba, 2000). In my study, sufficient data was collected from two different sources already referred to in Section 4.2.3 and subsections. In-depth interviews were conducted until the data reached saturation. The recordings were then transcribed and analysed to give thick descriptions of the participants' narratives (Morse & Richards, 2002). Care was also taken to report on the findings in as great a level of detail as possible, and with as much accuracy as possible in order to ensure transferability (Creswell, 2003).

4.3.3 Dependability (reliability)

According to Merriam (1995), reliability revolves around repeated measures of the same phenomenon and the more times findings of a study can be replicated, the more stable or reliable the phenomenon is thought to be. However, she contends that in the social sciences the notion of reliability is problematic because human behaviour is not static:

> Qualitative researchers seek to understand the world from the perspective of those in it. Since there are many perspectives and many possible interpretations – it is not possible to take repeated measures since a replication of qualitative research will not yield the same results. (p.56)

Accordingly, Lincoln and Guba (2000) address this 'dilemma' of reliability by suggesting the use of the term 'dependability' to check whether the results of a study are consistent with the

data collected. The strategies they suggest for ensuring consistency were applied in this study as follows:

Triangulation refers to the use of multiple methods in data collection. Triangulation was carried out using two different sets of data requiring different methods of data collection. One data set was collected by means of a survey of the official curriculum documents. The other set was collected by means of in-depth interviews with staff working at two diverse public health school settings. (See Figure 4-2 and Section 4.2.3 and subsections.)

Peer examination refers to the checking of the consistency of the emerging findings with the methods of data collection. Apart from providing sufficient details of the whole research process in this chapter, several presentations were given at academic meetings in the School of Health Systems and Public Health, University of Pretoria, South Africa where the findings were discussed in relation to the methodology followed. A critical reader was used not only to check the coherence of the whole thesis but also to check if there was consistency between the findings and the methods of data collection.

An audit trail describes in detail how data was collected, how categories were derived and how decisions were made throughout the inquiry (Wideen et al, 1998). The researcher kept and maintained an audit trail by developing and maintaining an efficient filing system of all the raw data, analysis printouts, curriculum documents and any other materials used for this study so that, should the need arise, these could be availed for peer examination to verify if the findings were consistent with the methods of data collection. (See also Sections 4.2.3.2 and 4.2.4.1.)

4.3.4 Confirmability (objectivity)

'Confirmability' refers to the degree to which the findings are the product of the focus of the inquiry and not of the biases of the researcher. Lincoln and Guba (2000) suggest that confirmability can be best achieved if the researcher leaves an adequate audit trail to make it possible for the auditor to ascertain that the conclusions, interpretations and recommendations can be traced to their sources and that they are supported by the inquiry. The audit trail should include: raw data; data reduction and analysis products; data synthesis and reconstruction products; process notes; materials related to intentions and dispositions; and instrument

development information. The way in which I kept and maintained an audit trail has already been discussed in Section 4.3.3 above.

4.3.5 Researcher's statement of subjectivity

In order for the reader to make a judgment on the credibility of the study, my personal experiences and subjectivities also need to be revealed. In both the private and public spheres of my life, I live in a world that is highly structured along gender lines, which has led me to construct gender in a special way – I therefore hold a certain view on gender. In this section I ponder reflexively on the relationship between myself, the participants and the research process in order to account for any potential bias this may have had on the findings.

I entered the field with multiple axes of difference. These included considerable academic knowledge and personal experience of gender, sex and gender differences between the researcher and the participants and differences in professional ranks and geographical space. One of the strongest points of affinity and commonality was that the researcher and the participants were all from schools of public health in sub-Saharan Africa.

As an academic from a school of public health, I felt great affinity with the other schools in which I carried out my research, which located me with my research participants. In this regard I was positioned as an 'insider' and was able to put my questions with ease and confidence. However, being an academic and coming from an academic institution made some of the participants also offer academic answers to my research questions, and in this case I had to creatively steer the questions to more nuanced and personal understandings of gender. Whilst going through the curriculum documents in search for constructions of gender, I had to consciously and constantly set aside my own prior constructions of gender in order to open up my understandings of what others were saying about gender.

Sex and gender differences also came into play during the research process. As a woman, and based on my own personal struggles of sex and gender issues, I often found that I became too deeply engrossed in and empathetic to the narratives of women participants, especially when they talked about similar struggles. I had to be consciously aware of such feelings and work through them during the research process. Most of the women were open, friendly, and gave more detailed answers, and I felt that this was due to our shared sex and gender. In general

most of the male participants were quite respectful and friendly, whereas a few were defensive and gave guarded answers. In one instance I encountered a male participant who exhibited a lot of scepticism towards the topic of gender and was somewhat difficult to interview. I had to politely engage and listen to his answers, while at the same time steer them back to my research questions. However, I felt that the responses emanating from the male participants were not necessarily due to my sex; I picked up that in one school men were generally uncomfortable talking about gender. This may have been as a result of their historical and cultural contexts in which gender issues were not openly discussed. In the other school the men were quite uninhibited talking about gender and it was apparent that their historical and cultural contexts were very different from those of participants from the first school.

Another marker of difference between the researcher and the participants was professional rank. At the time of the research I was a senior lecturer. I held interviews with a broad spectrum of academic staff, including directors of schools, heads of departments, professors and senior and junior lecturers. In order to minimise hierarchical power relations during the research process, I personally communicated with each participant, letting each one know about the research and its objective, and negotiating the day and time of the interview with them. With each communication where appropriate, I addressed them as ‘Dear Colleague’, a term I knew would not indicate any hierarchy and position of power. However, I still had to acknowledge and be sensitive to each position, for example by addressing professors as such, since I knew that this was very important in such contexts. I noticed that the junior lecturers were a bit too shy and too respectful and regarded me as ‘other’, an expert outsider who had come to ask them questions and they immediately assumed a subservient position. I worked through this by asking them a few more questions about their lives (for example, where they studied and the kind of work they were doing) until I was able to enlist their trust to continue with my main research questions.

The final difference I encountered during the research process was one of differences in geographical space. One of the case study institutions was located in a country and region of Africa that differed significantly from the country and region in which I resided. In this school, even though I felt the affinity earlier referred to, the fact that I had come from far made me feel like an ‘outsider’. This community treats visitors from ‘far’ with a lot of respect, which actually sets you apart from the rest, further amplifying the fact that you are an

'outsider'. This made me even more conscious of my feeling as an 'outsider' and made it a bit more difficult for me to negotiate and occupy my space as a researcher and not a visitor. In this respect, reverse power relations came into play and I was led and did not have much choice on where to hold the interviews. I had earlier in my communication requested a neutral venue to hold the interviews, but the participants were much more comfortable holding the interviews in their offices. I had no control over disturbances, noise and setting up my recorder. In this context, I had to work extra hard to create rapport and put the participants at ease to make them realise that I was just one of them, a colleague from a similar institution who had come to carry out research amongst them. The second school that served as a case study was in the same country as the one I resided in and I felt I was treated as a colleague and not a visitor since I had not come from 'far' and this helped me blend and settle in with ease.

In conclusion, I would say that the way in which I consciously negotiated and worked through my biography with its potential biases, values and interests served to enrich, rather than have a negative effect on the inquiry.

4.4 Ethical considerations

The research proposal was submitted to the Research Ethics Committee of the Faculty of Health Sciences for approval (Appendix 4). The principle of informed consent was applied. In order to collect data from the official curriculum documents, a letter was written to all the selected schools of public health, clearly setting out the aims and objectives of the study and eliciting their consent and that of the staff to participate in the study (Appendix 5). In this regard, two schools chose not to offer their official curriculum documents but instead referred me to their curriculum content on the school's websites. No school was coerced into participating in the study.

For the in-depth interviews, the research participants were fully informed of the following in the participant information leaflet (Appendix 2):

- Aims, methods, anticipated benefits and potential hazards of the research;
- Their right to abstain from participation in the research and to terminate the interview at any time during the interview; and
- The confidential nature of their communications.

In order to protect the identity of the research participants, confidentiality and anonymity was assured, whereby identifying information would not be made available to anyone who was not directly involved in the study, and by using pseudonyms for participants and institutions. In any report emanating from this study, the schools and individual participants would therefore not be identified.

4.5 Limitations of the study

In the delineation of the scope of the study, several decisions had to be made on the areas of and perspectives on public health curricula in sub-Saharan Africa to include and exclude in the study. With regard to the theoretical conceptualisation of the study, a choice was made in favour of poststructuralism (Chapter 3) and no comparisons with findings derived from other perspectives were therefore made. Although various types of curricula were highlighted in the literature review (Section 3.3.2), this inquiry did not consider the full spectrum of types of curriculum, but only limited itself to two types of curricula: the official curriculum (public health curriculum documents) and the hidden curriculum (as reported by academic staff members).

An investigation including other types of curriculum as point of departure could have enriched the findings. This pertains especially to the exclusion of the views of student experiences of a gendered curriculum (the experiential curriculum). Inclusion of students' voices would have enriched the study by interrogating their constructions of gender and by showing to what extent students demanded tuition on gender issues and whether they felt they were getting sufficient teaching on gender. The operational curriculum was also excluded from the study. Observing exactly what the lecturers were teaching on gender, how they presented their constructions of gender and which methodologies, examples and case studies they used would have enhanced the depth of this study. However, these decisions were trade-offs that had to be made in order to navigate an already complex conceptual framework. These exclusions did not in any way compromise the rigour with which the study reported in this thesis was conducted and the quality of the data obtained. With adequate resources and time, the mentioned gaps could still be investigated and the findings compared with findings from this study.

A second limitation of the study is that descriptions of courses in official curriculum documents were not detailed enough to give a thorough version of the courses. Some schools also gave greater details than others. Accordingly, the findings from the official curriculum documents are only a reflection of what the researcher could 'scrape' from the available documents. To try and address this limitation, two schools were used as case studies to try and elicit a more elaborate picture of the public health curriculum through in-depth interviews. (See Sections 4.1.1.2 and 4.2.2.2.) However, again the findings from these two cases cannot be generalised to make conclusions about the other schools that were not studied in depth, as each has different contexts and histories that are different from the selected case studies. In addition, the curriculum documents were collected in 2006 and the reader who may be reading this thesis today should note that a lot of curriculum changes have since taken place in various schools. Another limitation is that the content described on paper was not necessarily what was actually taught. Changes in classroom content are not always accompanied by change in the official curriculum document. This limitation would have been overcome by an investigation into the operational curriculum through direct observation and recording of what was actually taught in the classroom.

A third limitation of the study is that only anglophone countries in sub-Saharan Africa were included due to the difficulty of translations and interpretations. (See Figure 4-2.) The findings of this study are therefore only limited to anglophone schools of public health in sub-Saharan Africa, although the other schools could still learn useful lessons from the findings. With availability of resources, this study could be replicated in francophone and lusophone countries in sub-Saharan Africa. Due to their different historical contexts, different or additional findings on the construction of gender could have enhanced the perspectives developed from the study for this thesis.

4.6 Conclusion

In this chapter an exposition of the research methodology used in the study was given, indicating the main research method, design and strategies that were used to guide the study. The criteria used for selecting the study sites and participants were elucidated, after which the way in which the data was collected and analysed was explained in detail. I also gave an account of my 'reflexivity' during the research process in order to account for any bias that may have affected the findings and I also addressed credibility, dependability, transferability

and confirmability concerns of my research. Finally, the limitations of the study and ethical considerations were highlighted.

The findings from the analysis of the official curriculum documents are presented in Chapter 5. Chapter 6 covers the findings from the in-depth interviews with staff members from the two selected schools. Chapter 7 is devoted to the reconceptualisation of gender in public health curricula according to the poststructuralist framework presented in Chapter 3.