

CHAPTER THREE - RESEARCH METHODOLOGY

The preceding chapter reviewed literature related to inclusive practices in educational institutions including teachers' colleges. The chapter discussed the theoretical and conceptual framework of the study that led to the production of this book. It also established various methodological, conceptual, time, theoretical, and contextual gaps and gaps in scope and study field. This chapter focuses on the research methodology. The chapter outlines the research paradigm (interpretivism), research approach that is qualitative and the research method that is multiple case studies. The chapter explains the use of face-to-face interviews, observation guide, and document analysis as procedures for gathering data. Further, the chapter outlines the selection of key informants and participants who are students with disabilities, students without disabilities, lecturers and administrators. The chapter explains the ethical and legal considerations that were upheld during the study. Other issues covered in the chapter are strategies to ensure the trustworthiness of the findings such as triangulation, pilot study, the trustworthiness of findings, data analysis and data presentation procedures.

A research paradigm refers to beliefs, assumptions and values the researchers have in common in terms of the nature of research (Kuhn, 1977). It is, therefore, a structure or framework that determines values, assumptions and beliefs on what a research is based on. A paradigm is "... a cluster of beliefs that directs what to study, how to study and how to interpret the results", (Bryman, 2008, p. 696). Saunders *et al.* (2009, p. 118) define a paradigm as a "... way of examining social phenomena from that particular understandings of these phenomena can be gained and explanations attempted." Therefore, a paradigm is a set of beliefs that guide the research process and helps one to understand and explain the phenomenon under study.

The research culminating into the production of this book was guided by the interpretivism paradigm on the understanding of the behaviour, attitudes and beliefs of the participants about the implementation of the inclusive education in teacher training colleges. The book was based on a phenomenon that is contemporary because inclusive education is a topical issue under debate in educational circles. Interpretivism is concerned with the interpretation of the deeper meaning of what participants say (Creswell, 2004). In the book, the focus was on describing inclusive education as it relates to teachers' colleges. The general research approach was qualitative as this enabled the researcher to solicit narratives of inclusive education from the participants. Therefore, interpretivism was best suited as it allowed for some interpretations to get a deeper meaning. There was a need to establish the experiences of students with disabilities in teachers' colleges and this philosophy was very relevant.

Researchers adopting the interpretivism paradigm believe that there is no prescribed way that provides answers to existing problems (Willis, 1995). Interpretivism takes an ontological position that regard the social world as being constructed by human beings (Cohen *et al.*, 2001). Walshman (1993) cited in Kelly (2011) notes that interpretivism is based on the idea that the reality of life is constructed socially. Researchers using interpretivism could socially construct reality based on the data they gathered from the participants. This paradigm was adopted as it supported the researcher's interest in understanding the social world of participants and key informants about their experiences about how inclusive education was implemented in teachers' colleges in Zimbabwe. The views of the participants and key informants in this book helped to construct the social world of inclusive education in teachers' colleges. There is no single objective position and, in this case, various views from various participants are relevant to explain inclusive education in teachers' colleges. Concurring with Willis (1995), Denzin (2010, p. 271) states, "Objective

reality will never be captured. In-depth understanding, the use of multiple validities, not a single validity, a commitment to dialogue is sought in any interpretive study". In the study leading to this book there was no prescribed answers on inclusive education in teachers' colleges. The search for multiple diverse perspectives from diverse participants was central to the book. Therefore, the researcher gathered and interpreted data from participants.

The interpretivist paradigm was relevant for the study as it involved making interpretations, inferences and analysis of what the participants said concerning inclusive education in teachers' colleges and what could be observed. The research on inclusive education was a contemporary phenomenon that should be interpreted. Moreover, the research was inductive in nature and interpretivism was relevant for this book. The meanings were generated inductively from the social interaction of participants in as far as inclusive education in teachers' colleges (Creswell, 2003). The various instruments used in the form of face-to-face interview guides, direct observation guides and document analysis helped to derive and construct meanings from the data gathered. The paradigm was adopted as it rejected the cause and effect relationship that was emphasised by positivism. The focus was on giving contextual meaning to the life experiences of students with disabilities. Epistemologically, knowledge was derived from various meanings that were interpreted from the views and experiences of the participants and key informants as they interacted with the researcher.

In interpretivism, the researcher is a participant observer who is part of the activities (Carr & Kemmis, 1986). As such, the researcher, who worked in one of the teachers' colleges, could interpret actions as they occurred in a specific context. The use of interpretivism enabled the researcher to have a wide scope to ask why and how events and practices occurred the way they did. It allowed the researcher to deepen the understanding of the management and implementation of

inclusive education in colleges. According to Reeves and Hedberg (2003), interpretivism stresses the need to analyse issues in context. The book focused on the subjective experiences of individuals in a specific context of inclusive education in teachers' colleges. The interpretations were context-specific and derived subjective analysis. As a result, the findings might not be generalised to a different context but particularised to a specific context (Leedy & Ormrod, 2012; Marshal & Rossman, 2011; Mapolisa, 2015).

The interpretivism paradigm is based on meanings derived from methodologies such as interviews and observations that help to derive meanings and not measurements (Reeves & Hedberg, 2003). Such methodologies rely on subjective relationships between the researcher and the participants. Kaplan and Maxwell (1994) state that the interpretivism study does not predefine dependent and independent variables in the study, but focuses on interpreting events as the situation emerges. With inclusive education, there were no dependent and independent variables. It was about how the researcher interpreted data that had been presented by participants concerning their experiences and practices about inclusive education in teacher training colleges. The focus of interpretivism was to judge and evaluate inclusive practices in teachers' colleges.

Despite its relevance to the book in capturing participants' beliefs, views, attitudes and experiences in a specific context, Cohen *et al.* (2003) argue that participants may provide false data that may be biased to their specific group. This would then affect the transferability of research findings. The researcher had to triangulate what the participants said during face-to-face interviews with observations and document analysis.

The research approach is the overall methodology of the research process. The approach is a term that is "...wider than theory or

methodology. It includes epistemology or questions about the theory of knowledge, the purposes of research, whether understanding, explanation, or normative evaluation . . ." (Porta & Keating, 2008:1 in Neuman, 2014, p. 99). There are three main research approaches that are Qualitative, Quantitative and Mixed methods (Miles & Huberman, 1994). Each approach influences the research and is based on philosophical assumptions. The book was guided by the qualitative research approach as influenced by interpretivism. The research problem and research questions in this book supported the use of a qualitative approach to study the implementation of inclusive education in teachers' colleges. Patton (2001, p. 39) defines qualitative research as "... approach that uses a naturalistic approach that seeks to understand phenomena in context-specific settings, such as real-world settings, where the researcher does not attempt to manipulate the phenomena of interest..." Denzin and Lincoln (2005) add that qualitative research interprets the phenomenon in the natural settings to understand the meanings that people bring to these natural settings. Being context-specific allowed for deeper interpretations and meanings derived from that specific context as prescribed by the interpretivist paradigm.

According to Steinke (2004), qualitative research draws attention to social realities, processes, structural features and meanings of patterns of events. This suited the book that focused on the reality of inclusive education in teachers' colleges and tried to understand the meaning and patterns of such. Creswell (2004) notes that a qualitative research approach is based on various meanings derived from the participants' experiences. These meanings could be based on the social and historical context to get a deeper understanding. This is informed by the interpretivism paradigm adopted in the book. The basis of a qualitative research study is interpretations, analysis, descriptions, explanations, inductive and deductive reasoning and judgements. According to Creswell (2003), different knowledge claims, enquiry

strategies and data gathering methods and analysis are employed in qualitative studies. For this book, different data gathering tools were used and analysed by two methods (thematic analysis and NVivo software).

Qualitative research focuses on the qualities of entities, processes and meanings that are not experimentally examined or measured (Denzin & Lincoln, 2005). The methodology does not use statistical measures to explain phenomena. The book could not measure experiences, views or attitudes of participants about inclusive education in teachers' colleges; hence, a qualitative approach was best suited. Also, a qualitative methodology was suitable for this book because it helped to secure fuller, more and richer descriptions of how inclusive education was practised in teachers' colleges than what could have been established using quantitative methodology (Denzin & Lincoln, 2005). The qualitative approach was adopted instead of the quantitative methodology that seeks to quantify relationships and does not apply to the phenomenon under study. Inclusive education as presented in this book is about attitudes, views and opinions and these could best be understood using qualitative methodology.

The qualitative approach allowed for more personal and literary style such as the participants' language and perspectives to be included in the report (Leedy & Ormrod, 2005). In this book, the exact words of participants were noted to bring out their views and ideas. Written descriptions of people and events, attitudes, views and experiences are gathered in qualitative research and are a source of data (Lincoln & Guba, 1985). In this book, the researcher presented participants descriptions to describe and explain the implementation and management of inclusive education in the context of teachers' colleges. Thus, qualitative research is inductive and was relevant for this book on inclusive practices in teachers' colleges.

The researcher, as the primary instrument of data gathering and analysis, is central in qualitative research. The researcher became a research instrument that was part of the data gathering process and then analyses the data gathered. It was the researcher's duty to gather data in a non-interfering manner and deduce multiple interpretations from the natural setting to determine the findings (Creswell, 2003). In a qualitative research study, results might differ depending on the researcher who gathered and interpreted the data. The qualitative methodology allowed the researcher the opportunity to provide subtle details that underpinned the practices of inclusive education in teachers' colleges to make suggestions on how best the implementation of inclusive education could be improved. However, the researcher's subjectivity should not be ignored in qualitative research. Lincoln and Guba (1985) emphasise that the interests, motivations and perspectives of the researcher must be made clear throughout the study. This way, biases associated with subjectivity are likely to be reduced.

Furthermore, a qualitative research approach was relevant for this book because it does not need to quantitatively test a hypothesis since it was not possible to predict the outcome. There were bound to be different perspectives of participants that influence the outcome of the research (Neuman, 2014). This contradicts quantitative studies that require testing hypotheses using numerical or statistical data to establish relationships between variables. The views of administrators, lecturers and students with and without disabilities were different and these influenced the findings that could not be predicted had it been in a quantitative study. However, there was a need for adequate time for participants to trust the researcher to give full and honest data.

The researcher was aware that one of the shortcomings of qualitative research is that the result may not be generalised to a larger population because the sample used was relatively small and that non-probability sampling technique had been used (Hancock *et al.*, 2007). However, it should be noted that the sample does not need to be

large because people with disabilities constitute a minority and are special in their way. As such findings could be particularised and transferred to similar situations with students with disabilities in teachers' colleges.

A research method is a research strategy that gives a plan on what the research is based. A research strategy is the "... general plan of how the researcher will go about answering the research questions" (Saunders *et al.*, 2009; p. 90). It enables the researcher to answer the research questions that underpin the book. Therefore, Saunders *et al.* (2009) emphasise that the choice of the research strategy is determined by research objectives and questions. A research strategy or method gives the research process a template that could be followed to come up with answers to the research questions. There are various research strategies or methods that include surveys, experimental design, case studies, ethnography, grounded theory, action research and archival research (Saunders *et al.*, 2009). This study adopted a multiple case studies method.

A case study is an investigation to answer the research questions from different sources of evidence in a case setting (Gillham, 2000). According to Yin (2009, p. 18), a "...case study is an empirical inquiry that investigates a contemporary phenomenon in its real-life context". This research method is suitable where the book is based on contextual situations. Inclusion of students with disabilities was contextual and might depend on the specific teachers' College that warranted the researcher to adopt the case study method. The nature of this research on inclusive education could not be studied outside its natural setting and therefore, the case study was a suitable research method. There are various types of case studies. Case studies could be a single case study (intrinsic) or could be multiple case studies (collective) (Yin, 2009). These depend on the research paradigm, research philosophy and research approach that guided the book.

The current research adopted collective or multiple case studies method in studying inclusive education in teachers' colleges as determined by the interpretive paradigm and the qualitative approach to research. This type of case study enabled the researcher to select several cases from many case sites. The multiple case studies method is characterised by a multiplicity of perspectives that are rooted in a specific context (Lewis & Ritchie, 2003). Hence, with various categories of participants in this book, there are multiple perspectives and experiences that are better understood using the multiple case studies method. According to Stake (2006, p. 4), "... in multiple case study research, the single case is of interest because it belongs to a particular collection of cases". The cases are bound together depending on their common characteristics. The three sites in the book have the common characteristics of being teachers' colleges while the participants are key stakeholders in implementing inclusive education in teachers' colleges. Stake (1995) notes that cases (sites and participants) are selected based on uniqueness that is of interest to the researcher. The selected case study sites allowed the researcher easy access to the key informants and participants.

Multiple case studies method was suitable in this book because the researcher wanted to study more than one case, that is, three teachers' colleges and the informants and participants. As a result, the researcher triangulated data from multiple sites and participants so that the data gathered were authentic and replicable. Yin (2003) explains that the case study method uses multiple data sources such as interviews, document analysis, archival records and direct and participant observations to get thick descriptions of the phenomenon. The researcher used face-to-face interviews, direct observations and document analysis to solicit data from multiple sites and participants. The method allowed the researcher to use multiple data generation instruments that generated a rich and thick description of inclusive practices in teachers' colleges. The descriptions are useful to the

researcher who gathers multiple data and gives interpretations. Baxter and Jack (2008) further support the use of a multiple case study based on its ability to generate strong and reliable evidence. This is because the data were triangulated by multiple cases.

The other reason for using multiple case studies was that they enabled the researcher to analyse data both within each situation and across other situations that might not be possible with the single case study (Yin, 2003). Yin (2003) emphasises that multiple cases strengthen the results by replicating the patterns thereby increasing the trustworthiness of the findings. The book had literal replication where the cases corroborated each other and theoretical replication where the cases covered different theoretical conditions (Vohra, 2014). The researcher was able to study multiple cases to understand inclusive education from a broader view and have different experiences of participants. Each case helped to confirm or disconfirm the conclusions drawn from the other cases. According to researchers, multiple case studies are relevant to determine similarities and differences between cases (Stake, 1995; Baxter & Jack, 2008; Yin, 2009). The researcher was able to make inferences and deduce meanings of the experiences of participants about inclusive education in teachers' colleges. From the experiences of the various categories of participants, the researcher was able to understand the inclusive practices of different colleges and to determine how best teachers' colleges could be inclusive. Yin (2009) states that multiple case studies provide external validation to the findings by using analytical and not statistical generalisations.

In the book on inclusive education in teachers' colleges, the multiple case study method was relevant in that it enabled the generation of new knowledge as obtained from different cases. Eisenhardt and Graebner (2007) in Gustafsson (2017) explain that multiple case studies enable the generation of new theories and assist in discovering of

theoretical evolution and research questions. A case helps to get an understanding of a phenomenon or to contribute to prove existing theories or develop new theoretical frameworks. According to Willig (2001) in Mapolisa (2016), the strength of the case study method lies in theory generation. Inclusive education is a contemporary issue and therefore demands more theories and knowledge to be generated. This could be achieved using multiple case studies method in the book. Despite, generating new knowledge, multiple case studies could confirm the existing theory and there was a need to guard against the influence of the theory on the results.

Multiple cases studies are evaluative (Willig, 2001 & Flick, 2009 in Mapolisa, 2016). The book was guided by interpretivism that focuses on judging, interpreting and evaluating inclusive practices in teachers' colleges. This enabled the researcher to establish the extent to which inclusive education (with specific reference to students with disabilities) is being implemented to establish challenges and design strategies for inclusivity in teachers' colleges.

However, the researcher was aware of the weaknesses of the multiple case studies method. One such weakness is that they use non-representative samples. As a result, the researcher had to gather data from various people involved in working with students with disabilities in colleges such as lecturers, college leaders/administrators and students with and without disabilities. This enabled different experiences and perceptions that might be representative of groups of individuals. Multiple case studies are criticised for lack of scientific rigour and lack of producing findings that could be transferable to other settings (Yin, 2009). The researcher mitigated the purported lack of scientific rigour by having clear descriptions of the case selections, data gathering procedure and justification for data gathering methods. As such the findings might not be transferable but might be particularised to another setting. Also, Denzin and Lincoln (2000,

p.193) argue that having "... multiple actors in multiple settings enhance generalisability". However, given the rich descriptions from various cases used in the book, the findings could be transferable in similar settings.

Cornford and Smithson (2005) note that case studies are prone to researcher bias and other forms of biases due to different interpretations arising from the complexity of data gathered. To reduce bias, the researcher was as objective as possible by respecting all views from various participants. Also, the researcher had to go through the data gathered and explore all possible meaning and interpretations. The researcher had to request peers to review the findings to reduce biases (Lincoln & Guba, 2000). The researchers guarded against their own bias through member checking (Cohen & Crabtree, 2006 in Harper & Cole 2012). This was done by asking participants to review the findings and confirm what they had said so that the information was authentic and accurate. Also, the researcher had to limit bias by upholding ethical conduct such as ensuring fairness and confidentiality. Despite the limitations of case studies, it remained most suited for this study for its ability to give a detailed revelation of the experiences and perceptions of participants about inclusive education in the context of teachers' colleges. This was best achieved qualitatively using multiple case studies and would not have been achieved quantitatively.

The research sites were three teachers' colleges in Harare Metropolitan Province, Zimbabwe. The colleges are government institutions. Two of them train primary school teachers and the other trains secondary school teachers. These were purposively sampled due to their geographical location. The participants of the study were college administrators, lecturers and student with disabilities and student without disabilities from the three teacher training colleges in Zimbabwe. This allowed the researcher to have mixed views about

inclusive practices from participants from different research sites (teachers' colleges). These participants interacted with students with disabilities and their views on inclusive education were very important. The students without disabilities helped to determine if their peers with disabilities were adequately being included and their needs met in teachers' colleges. Lecturers, as implementers, were an important source of data on inclusive education in teachers' colleges. The college administrators and lecturers helped to establish whether or not their practices, policies and activities were inclusive enough to accommodate students with disabilities. These participants helped to determine the possible ways in that teachers' colleges could be more inclusive.

Key informants refer to a group of people with special or additional knowledge and insights on a specific topic or issue. Despite being knowledgeable, key informants should be willing to participate in the book. They possess some qualities that make them more useful in the research. Lavrakas (2008) in *Encyclopedia of Survey Research Methods* notes that key informants are selected because they may be affected by a phenomenon under study and not that they are representative of a given population. Students with disabilities were the key informants in this book. Eight (8) key informants participated in the book. They provided in-depth information about their experiences in inclusive education that are critical to establishing how inclusive education is being implemented and managed in teachers' colleges in Zimbabwe. They were the ones whose experiences in teachers' colleges determined whether there was the successful implementation of inclusive education. They were the ones who helped in finding ways to enhance the implementation of inclusive education.

Usually, there was a need to involve the affected group in programmes that affect them. Among the community of people living with disabilities, there is a popular saying that says, 'Nothing about us

without us' (Charlton, 1998). Therefore, one might not effectively conduct a study on how students with disabilities are included in colleges without involving them. Students with disabilities, as key informants, were incorporated in the book because they could speak for themselves about their personal experiences. In this case, the involvement of students with disabilities was relevant as it created a platform from which they shared their experiences and determined how best their needs can be met in teachers' colleges without just being placed in teachers' colleges.

According to Reiger (2007), the use of key informants in research could assist the researcher to reach out in situations where the researcher cannot directly observe and could explain to the researcher behaviour that needs clarity. As such, the students with disabilities were useful as they shared their experiences of inclusive education. Also, the key informants allowed the researcher to clarify some biases that could have been presented by other participants who did not have disabilities.

However, the researcher was aware that there was a need to establish a good rapport with the student with disabilities to get more data. This was done at the initial stages of the interview when the researcher made an appointment for the interview and explained the purpose of the interview. Also, the researcher was aware that the key informants were likely to present their impressions and biases. To mitigate this, the researcher probed further and requested more explanations of the views they expressed.

Kelly (2011) notes that qualitative research is concerned with the selection of sites, participants and documents and these are selected for a purpose. The book could not include all the participants or key informants in the population. As a result, there was a need to sample the participants and key informants to gather data from

valuable sources. Studies guided by the interpretivist paradigm select samples to select information-rich cases that allowed for in-depth study (Mertens, 2010). In qualitative research, the participants do not need to be representative of the population as long as they are important to the book. Cohen *et al.* (2001) emphasised that the quality of research depends on the suitable sampling strategy. Therefore, the researcher was careful to select participants and key informants who were useful and relevant to the book. They had relevant knowledge about inclusive education and how it was being implemented in teachers' colleges.

Non-probability sampling is mostly used in qualitative research studies (Patton, 2002). Welman and Kruger (1999) considered purposive sampling as the most important type of non-probability sampling to identify the primary participants. The sample was selected based on the researcher's judgement and the purpose of the book. The researcher focused on those who "... have had experiences relating to the phenomenon to be researched" (Babbie, 1995). In this book, purposive sampling was used to identify key participants who had relevant knowledge of how inclusive education was being managed and implemented in colleges. The research objectives of this book determined the selection of the purposive sampling technique to select participants and key informants. According to Creswell (2003), purposive sampling refers to the selection of sites or participants that will best help the researcher understand the problem. Therefore, purposive sampling was chosen basing on the nature of the study. There was a need to look for those who have had experiences related to the phenomenon under study (Kruger, 1988 in Groenewald, 2004). The type of purposive sampling used was homogenous sampling. The three teachers' colleges purposefully sampled formed a homogenous group of teachers' colleges that offer Diploma in Education as the basic qualification for teachers.

Borg, Gall and Gall (2007) state that the purpose of homogenous sampling is to select a sample of similar cases that will be studied in-depth. According to Mertens (2010), homogenous purposive sampling involves identification of cases or individuals who have similar characteristics. Homogenous purposive sampling enabled the researcher to select individuals who had valuable information concerning inclusive education in teachers' colleges. Also, purposive homogenous sampling enabled the researcher to select those informants who had the characteristics of interest to the researcher and who provided the richest information to inform the study (Best & Khan, 2006). In this book, participants selected included college leaders/managers (Principal, Vice Principal or Head of Department), lecturers and students without disabilities. The eight (8) key informants were students with disabilities as a homogenous group to be studied.

College leaders and lecturers formed a homogenous group as the implementers of inclusive education. Also, college leaders or administrators of selected colleges were focal persons and are answerable to all programmes in the college. They were responsible for implementing inclusive education in teachers' colleges. The lecturers were directly involved with students with disabilities as they implemented inclusive education. In this book, the researcher purposively sampled a lecturer with a disability (Case 7; LWD) to get an understanding of inclusive education from her point of view. The view of a lecturer with disabilities was vital as part of the affected group.

Students without disabilities were also relevant to the book to share their experiences of how students with disabilities were included in the colleges. The representatives of students without disabilities were selected by lecturers in the three colleges. This was because as the representatives, they could speak for their peers regarding inclusive

practices in the colleges. Being student representatives made them homogenous groups that possessed some knowledge and therefore, were relevant to the book. By nature of their positions in the college, they were bound to divulge in-depth information. This allowed the researcher to get more relevant data from this group of people that helped to inform inclusive practices in teachers' colleges. The number of participants as determined by data saturation was 25: eight (8) key informants and seventeen (17) participants. This happened when data were repeated or confirmed continuously.

However, the researcher was aware that findings from a purposive homogeneous sample could not be generalised to a general population who might not have the same homogenous characteristics. To mitigate this, the researcher had to go in-depth with data interpretations in such a way that those in similar context could particularise the findings to their settings.

In addition to homogenous purposeful sampling, the researcher also used the snowballing sampling technique. This sampling technique enabled the researcher to reach the homogenous group of students with and without a disability. Snowballing sampling technique is when the researcher asked gatekeepers to recommend other participants for the interview (Babbie, 2010). The persons in authority in teachers' colleges such as lecturers and college leaders/managers were asked to recommend suitable participants from students with and without disabilities. Gatekeepers are those persons whom entry and access to the research site and participants are gained. Neuman (2000, p. 352) defines gatekeepers as, "... someone with the formal or informal authority to control access to a site." It is from such a person that permission is sought. The researcher had to make use of gatekeepers to get permission to interview students with and without disabilities in teachers' colleges. However, the snowballing sampling technique was likely to isolate the researcher from the relevant participants (Bailey,

1996). Given this, the researcher had to explain adequately to the gatekeepers the characteristics of participants that she was targeting so that they identified participants with the relevant experiences. The gatekeepers helped to identify students with disabilities and those without disabilities but were in a position to shed light on inclusive practices in teachers' colleges. As a result, students with and without disabilities who were in the Student Representative Council (SRC) were identified as key participants in this book.

All in all, the use of homogenous purposive sampling enabled the researcher to draw up a sample of multiple cases in terms of research sites, key informants and participants that were relevant for the book.

Qualitative research relies on multiple sources of data such as interviews in various forms, observations, documents and artefacts. The research methodology, paradigm and method determine the instruments to be used in a study (Creswell, 2012). In this view, Patton (2002) states that the common sources of qualitative data include interviews, observations and documents that cannot be analysed by statistical methods. This researcher used face-to-face in-depth interviews, the observation guide and document analysis and the researcher as the primary data gathering instruments (See Appendices 6, 7, 8, 9, 10 and 11). The different data sources used were meant to corroborate and converge the findings so that they are credible (Bowen, 2009). Below is an in-depth discussion of the data gathering tools.

Qualitative studies make use of the researcher as the primary instrument (Paisley & Reeves, 2001; Rossman, 2011 in Mapolisa, 2015). In this book, the researcher was the primary instrument in data generation. The researcher had to purposively identify the research sites (three colleges) and to seek permission from the Ministry of Higher and Tertiary Education, Science and Technology Development

(MHTEISTD) to gather data in the three Teachers' colleges. The permission to conduct the study in teachers' colleges was granted by the MHTESTD as shown by Appendix 3. It was the duty of the researcher to access the research site and to uphold the ethical issues in as far as the study was concerned (Creswell, 2003). Furthermore, the researcher had to select the participants and key informants based on the characteristics they had that made them eligible for selection into the sample for the book. As the primary instrument, the researcher determines the values, assumptions and the focus of the book by determining the research questions. It was the researcher who designed the instruments used to gather data for this book. The instruments were pilot tested by the researcher and adjusted accordingly to be relevant for this book.

The researcher conducted face-to-face interviews, made observations and analysed the documents on the practice of inclusive education in teachers' colleges. This enabled the researcher to analyse and interpret data accordingly based on the data generated by the researcher and not by another person. It was the duty of the researcher to explain the purpose of the book to the participants. Furthermore, the researcher's role was to uphold ethical and legal considerations during the process of gathering data so that the rights of the participants were observed.

Being an employee in one of the colleges enabled the researcher to appreciate the environment and context within which data was being generated especially when using interpretivism paradigm. The researcher was also the one to present, analyse and interpret the data gathered. However, there were possibilities of the researcher being biased as the researcher works at one of the colleges. In this case, the researcher tried to be as objective as possible in presenting and interpreting data gathered by using direct excerpts. Pre-conceived ideas of the researcher were put aside so that they did not influence

the data gathering process, analysis and interpretation. The researcher had to be empathetic towards participants and had to view the world from the participants' views.

Furthermore, the researcher was the one who identified the documents to be submitted and analysed them. The researcher had to keep a document analysis guide in analysing documents from the three colleges to be consistent (See Appendix 11). This helped to determine inclusive practices in the three colleges. With the permission of relevant authorities, the researcher analysed documents that helped to describe the phenomenon of IE that underpins the book.

One way to get an in-depth understanding of participants' views and experiences about a phenomenon is by interviews. Face-to-face in-depth interviews with students with disabilities, students without disabilities, lecturers and college leaders were conducted to generate data for the book (See Appendices 6, 7, 8 and 9, respectively). Qualitative researchers often use semi-structured interviews (Hancock *et al.*, 2007). These contain open-ended questions based on some topics that are to be covered in the book. Face-to-face interviews were conducted using semi-structured interview guides. A semi-structured interview guide was developed for this book to ensure uniformity of questions asked and data generated. This helped to keep on track and not to divert from the focus of the book. However, the questions to the participants differed about the issues raised by the interviewee that were probed further.

Semi-structured interviews were flexible to allow the researcher to probe further on participants' responses. The questions solicited data on the key informants' and participants' views, experiences and practices about inclusive education in teachers' colleges. The questions were meant to make participants describe their lived experiences in as far as inclusive education was being implemented in teachers' colleges

in Zimbabwe. Also, semi-structured interview questions allowed the researcher to use non-verbal cues to encourage the interviewees to give more information on the questions asked. However, this was done carefully in full recognition of the need to avoid influencing participants' views. The researcher used interviews because they enabled the generation of beyond the surface meaning on the implementation of inclusive education in teachers' colleges. Observations of non-verbal language and other body expressions made during the interview process were noted soon after the interview process. The interviews were audio-recorded and were later retrieved for data interpretation (Bailey, 1996). The duration of the interviews differed with each participant.

Face-to-face interviews allowed the researcher to deeply engage and interact with participants and key informants on the practices of inclusive education. Following the interpretivism paradigm, interviews were best suited for this research as they enhanced gathering and interpretation of data on an individual's experiences, opinions, beliefs and feelings (Moustakas, 1994). This is due to the face-to-face interaction between the interviewer and interviewee. The researcher conducted interviews until the point of data saturation as shown by repeating themes. It was not the number of interviews conducted that mattered, but the amount of data gathered that adequately answered the research questions. The interview schedule is attached in Appendix 13.

However, the researcher was aware of the bias and subjectivity that is associated with interviews (Creswell, 2004). To overcome this, the researcher ensured that there was clear communication during the interview process through the use of simple and clear language that was not ambiguous. The researcher was as objective as possible during the interview process and when analysing data. Also, the researcher tried as much as possible to put aside preconceived ideas (bracketing)

that could have led to bias (Groenewald, 2004). Instead, the researcher focused on the lived experiences of the participants and key informants concerning the implementation of inclusive education in teachers' colleges. The researcher made appointments with the interviewees so that they made time available and were prepared for the interviews. The researcher had to manage time as much as possible by timing the interview process to reduce fatigue associated with the interview process.

Also, the researcher was aware that some participants could give imaginary information to make the interview interesting (Kothari, 2004). Some participants could say what it should be and not what was currently obtaining. Data from participants was triangulated through the use of the observation guide and document analysis. The researcher had to be very courteous during the interview and avoided showing any signs of surprise, approval or disapproval of participants' views. Furthermore, the researcher had to keep the participants on track of the interview by avoiding unnecessary conversation.

Another data gathering tool used in this book to complement face-to-face interviews was the observation guide (Appendix 10). In qualitative research, observations are used to detail events, behaviours, contexts and surrounding events (Best & Kahn, 2006). Best and Kahn (2006) add that observations could be of the physical setting or environment, physical activities, social interactions and unobtrusive indicators such as dust on equipment. Cohen *et al.* (2007, p. 396) state that observations allow the researcher to gather "live from naturally occurring social situations." For this book, an observation guide was used to generate data on the physical environment of the colleges and the resources available for successful implementation of inclusive education. The researcher had an opportunity to observe directly what was happening in the physical and academic environment and not to rely on second-hand information.

Hancock *et al.* (2007) emphasised the use of observations as relevant for verifying or nullifying data provided during face-to-face interviews. Some participants may claim to behave in one way and yet the observation may confirm or reject such claims. For example, the lecturers could claim to use inclusive methods in delivering lectures and this might be confirmed by direct observations. The researcher conducted direct observations without asking the participants (Hancock *et al.*, 2007). Observations could be done independently of the participants hence, the researcher was not compelled to demand cooperation from participants like in the case of interviews and questionnaires (Kothari, 2004). The method was relevant for it provided data on current practices on inclusive education. The observations took the form of structured observation where there was a clear observation guide to follow during the process (Kothari, 2004). This ensured standardised conditions under which observation took place in all the three colleges. In this book, the available services, infrastructure, facilities, materials and resources on inclusive education were best described through a direct observation guide conducted in teachers' colleges.

The researcher took notes during the observations (Lofland & Lofland, 1999). This was best suited to the as compared to video recordings that tend to have an effect of influencing how individuals behave when they are behind the camera. According to Kothari (2004), observation becomes a scientific tool and method of data collection for the researcher, if it is planned, recorded and subjected to checks and controls on validity and reliability.

An observation guide provided a checklist on indicators of inclusive education with a view of exploring the implementation of inclusive education in teachers' colleges. The rationale for observation was to provide a comprehensive explanation of the context in which data were being generated (Creswell, 2003). The observation process allowed the researcher to determine how inclusive the physical and

social environment were to the students with disabilities in teachers' colleges. This helped to complement what the participants had said during the face-to-face interviews. Among the aspects observed were:

- The physical environment;
- The infrastructure available;
- Material and equipment available;
- Support services available for students with disabilities;
- Lecture rooms, hostels, and other buildings; and
- Instructional methods.

With the interpretivism paradigm guiding the research, observations were best suited as they enabled the generation of context-specific data and interpretations that were focused. Patton (1990, p. 202) suggested that data from observation is to, "... describe the setting that was observed, the activities that took place in that setting, the people who participated in those activities, and the meanings of what was observed from the perspective of those observed" The researcher had to understand the context of programmes such as inclusive education in teachers' colleges and to discover things that participants may not disclose. Observations enabled invisible data to become visible (Farber, 2006). The researcher had to guard against being influenced by pre-conceived ideas while collecting data using observations by being as factual as possible.

However, observations were done in a short space of time and were likely to affect issues of trust. There were high chances that participants were likely to mistrust the observer who interacted with them within a short period. This was overcome by clearly explaining the purpose of the book to the participants and establishing good relationships with participants on a social platform. Also, the researcher clearly explained that the observation process was not supervisory, neither was it fault-finding, but was meant for academic purposes. Also, the direct observation was repeated over three months at a frequency of once per month for the three colleges. This was meant to confirm the observations made.

Documents analysis was adopted to complement data obtained from face-to-face interviews and observation. Bowen (2009) explains that document analysis is a practice of qualitative research where the researcher interprets documents and derives voices and meaning from them on the topic under study. A document analysis guide was used to direct the analysis as shown in Appendix 11. Cohen *et al.* (2011) define a document as a record of an event or process that is produced on the basis of social, historical and administrative information. A simple definition by Macmillan and Schumacher (2010) refers to documents as printed and written records of past events. Documents studied in this book contained information that was relevant to the topic being investigated. Documents show the history and current status of an organisation and help give the background information about an organisation (Mertens, 2010). Therefore, there was a need for the researcher to use documents to get background information and insights about inclusive education in teachers' colleges. Furthermore, the researcher could not observe everything and such information could be retrieved from documents, hence their relevance in this book. This ensured a focus on what documents to study about the research questions for the book.

The book used various documents to determine inclusive education practices in teachers' colleges. Such documents are:

- ☐ College curriculum;
- ☐ Syllabi;
- ☐ National, college and departmental policies;
- ☐ Enrolment procedures;
- ☐ College statistics on enrolment;
- ☐ Teaching programmes; and
- ☐ Special Education files and records.

These documents were critically reviewed to determine how they supported inclusive education in the teachers' colleges and conclusions

were made based on the findings. Access to these documents was negotiated with the college principals. This was done through a letter requesting permission to access the documents as shown in Appendix 12. However, Hodder (1994) in Mertens (2010) noted that access to documents may be easier but restricted by law regarding privacy for access to records. This could be the case where there are "Official Secrecy Acts" signed by public sector workers compelling them not to divulge work-related information. As such, the permission from the Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development (MHTEISTD) and teachers' colleges allowed the researcher to gain access without restriction (See Appendix 3). Also, the researcher being a public sector worker had already signed the "Official Secrecy Act" and was bound by it. Therefore, the researcher could not divulge work-related information even during a research study unless it was meant for research purposes.

Document review enabled proper interpretations of the findings of the phenomenon under study. Documents presented valuable data by supporting findings obtained through interviews and observations (Best & Khan, 2006). The documents provided data that the researcher could not observe and that the participants might have forgotten to provide. Also, document review drove the researcher to observe some situations and to ask some questions on inclusive practices in teachers' colleges. Thus, data from documents complemented data from face-to-face interviews and observations to adequately explain the implementation and management of inclusive education in teachers' colleges. Furthermore, document analysis assisted in providing background data that helped to contextualise the study within its research field (Bowen, 2009). The researcher could relate inclusive practices in teachers' colleges with the background as given from college documents.

However, misrepresentation might occur when documents are secondary data (second-hand) that were compiled by other people (Farber, 2006). However, primary data gathered by the researcher complimented these secondary sources. The researcher was aware of the likely bias of the creator of the document and the researcher's own bias (O'Leary, 2014). As such, the researcher had to establish patterns, relationships and inconsistencies of data from documents reviewed. As noted by Bowen (2009) that when using documents in research it is important to determine whether or not the document was solicited or edited and that the author was first hand or second hand. Despite the limitations, document analysis was very relevant for this book.

A pilot study was conducted before the data generation process to test the consistency and trustworthiness of the research instruments. Polit *et al.* (2001) define the pilot study as small scale feasibility study that is done in preparation of the major study. Bless and Higson-Smith (2006) defined a pilot study as a small study that is conducted before the main research to establish whether the sampling, instruments, methodology and analysis are appropriate and relevant. Therefore, a pilot study can be referred to as a trial study done before the broader study. Pilot studies are useful procedures as the preparation of a full-scale study (Tashakkori & Teddlie, 2003). A pilot interview was conducted to one college administrator, one lecturer, one student without disability and one key informant at one of the colleges. These were not part of the participants and key informants who took part in the study. The researcher selected the participants for the pilot study using the same criteria (purposive sampling) for the participants of the study.

According to Baker (1994), a pilot study is a pre-testing of a particular research instrument. The pilot study enabled the researcher to assess the feasibility of data generation instruments such as a face-to-face

interview. The pilot study was also meant to establish the feasibility of the study to adjust and improve the study. The pilot study resulted in the time frame for the interview being reduced from 40 minutes to 25-30 minutes to maintain the interest of the interviewee.

Piloting for interviews serves to test the interview questions and to gain some practice in interviewing (Majid et al 2017). Through conducting the pilot study, the researcher improved on the skills necessary for the interview process to enhance the flow of conversation. The pilot study enabled the researcher, as the primary instrument, to gain more experience with the interview process and to be more conversant with qualitative data generation process. The researcher had to be exposed to the process of data gathering and recording audios during the interview process. Also, the researcher had to be conversant with ethical and legal considerations before the research. This enabled a smooth flow of the actual data gathering process.

The researcher got permission from the Ministry of Higher and Tertiary Education, Science and Technology Development and the Principals from the respective colleges to carry out the research (Appendix 3). The researcher prepared adequately for face-to-face interviews, direct observations and document review. This was done by making appointments with relevant college authorities (Principals) and participants before the processes. Building a good rapport with the participants and key informants could lead to valid responses in interviews (Jacob & Furgerson, 2012). As such, the researcher engaged in social conversations with the interviewee to establish a good relationship and to create a conducive environment.

The researcher conducted the face-to-face interviews with students without disabilities, students with disabilities, lecturers and college leaders to gather their experiences concerning inclusive education in

teachers' colleges (See Appendices 6, 7, 8 and 9). Appendix 13 shows the interview schedules. The use of face-to-face interviews allowed for clear interpretations of what the informants said using verbal and non-verbal cues. Communication skills such as listening, reflection, questioning, nodding, eye contacts were adopted to encourage the interviewees to give more information. Audio recordings were done to capture everything the informants said for retrieval later during analysis of data. Data interviews are usually recorded, transcribed and then inspected for evident themes (Al-Yateem, 2012). Audio recordings helped to protect the identity of the interviewees unlike when video recording was done. Ethical and legal considerations were taken note of during data generation.

Direct observations were conducted to generate first-hand data on inclusive education practices in teachers' colleges using a direct observation guide (See Appendix 10). Field notes were taken as the observations were made to avoid missing out on some important findings (Patton, 2002). Therefore, the researcher made field notes, and these were secondary data storage. Field notes are important in qualitative research because they aid the researcher to retain data gathered (Lofland & Lofland, 1999). The researcher might not be able to remember everything, so field notes were relevant. Separate notebooks were kept safely for observations made and for document analysis.

The data from interviews and observations were triangulated by data obtained from documents analysed. Structured observation guide and designed guidelines for document analysis (See Appendices 10 and 11) were used and completed during the respective processes. There was a need to ensure that the interview process was efficient, and that the data generated were rich, accurate and reflecting the real phenomena of inclusive education in teachers' colleges being studied (Al-Yateem, 2012). This might result in having accurate conclusions about the phenomena. Table 3.1 below illustrates the primary and secondary data sources adopted for this book.

Table 3:1; Data sources

DATA SOURCES	
Primary sources	Secondary sources
The Researcher as the primary instrument Face-to-face interviews Direct Observation guide	Document analysis guide

Data analysis in qualitative studies begins at the same time as data are generated (Patton, 2002). As such the researcher would generate and analyse data at the same time. One example is when attitudes and other non-verbal clues were noted and analysed as they emerged. Burns and Groove (2003) define data analysis as a mechanism for reducing and organising data to produce findings that are interpreted by the researcher. As guided by qualitative methodology, data gathered were to be presented and analysed qualitatively. According to Creswell (2003), in qualitative studies, data are organised categorically and chronologically, reviewed and coded continually. Themes derived from research questions set in chapter one guided the presentation and analysis. Further sub-themes were derived from the data gathered from what different key informants and participants said.

The data from the various research instruments were presented, analysed and interpreted concurrently to avoid repetition. Findings from face-to-face interviews were substantiated by findings from direct observation and document review. Data generated were interpreted and meaning derived from such interpretations. These helped to bring out rich descriptions of inclusive education practices that would bring out possible ways to enhance the practices. Denzin (2010) propounds that in qualitative studies, descriptions are thick lived experiences, events and situations. The descriptions from the findings brought out rich in-depth detail and meanings on social context and experiences of key informants and participants in an attempt to understand the implementation of inclusive education in teachers' colleges. The exact

words of the participants were used to substantiate the views of the participants.

Analysis of data in this book was done in the pretext of the conceptual framework of inclusive education and concerning literature reviewed from other studies. This was in an attempt to explain the implementation of inclusive education in teachers' colleges and to suggest possible ways to enhance its practices. Referring to related literature helped the researcher to bring out relationships, patterns and gaps in findings of various studies with the book. However, the researcher was careful enough to guard against misinterpreting themes. This was done by reviewing and redefining themes using NVivo software. Two methods were adopted in the analysis of data. These were NVivo Qualitative Software analysis and thematic analysis.

Braun and Clarke (2006) define thematic analysis as a method of identifying, analysing and reporting themes derived from data. Maguire & Delahunt (2017) concur that thematic analysis is the process of identifying patterns or themes within qualitative data. The themes could be derived during the data gathering process such as during the interview process. In the book, the researcher ensured that relevant themes were identified so that the data could be analysed in line with the research questions. Data analysis in qualitative studies is meant to bring out themes, patterns, concepts, relationships, insights and understanding (Patton, 2002). The process of data analysis took the various common features as indicated by Miles and Huberman (1994, p. 9) in Robson (2011, p. 469). These are:

- Coding, and labelling of data gathered from various instruments;
- Categorising, adding comments and reflections;
- Establishing, themes, relationships, patterns, difference;
- Using the pattern and relationships to focus on data gathering;
- Elaborating generalisations; and

- Linking generalisations to a set of the body of knowledge or theories.

Data analysis in this book was meant to be transferable to the context of teachers' colleges on the implementation of inclusive education. The purpose of qualitative data analysis is not to generalise to a larger population but to apply and particularise the data in many contexts (Patton, 2002). One of the benefits of thematic analysis is that it is a flexible and useful tool that provides rich descriptions and detailed data (Braun & Clarke, 2006). The flexibility was demonstrated by allowing the researcher to select the themes that were related to the research questions. It was adopted for this book because it enabled the researcher to manage complex data that were gathered through various research tools. Furthermore, thematic analysis assisted in the management and synthesis of data, giving new understanding and developing new knowledge on inclusive education in teachers' colleges.

According to Braun and Clarke (2006), the thematic analysis could be a realist method that enables the researcher to report experiences, meanings and the reality of participants. It is a research tool that examines events, realities and experiences of participants within a context of a society. It was best suited with qualitative studies where the inductive approach to data was used. According to Patton (1990), an inductive approach means that the identified themes are linked to the data gathered. Data analysis and interpretation were inductive in line with the expectations of qualitative studies and the interpretivism paradigm that explore and interpret real-life experiences of participants (Patton, 2002). This book sought to bring out the real-life experiences of inclusive education by student teachers, both with or without disabilities, lecturers and college leaders in the context of teachers' colleges. This method assisted the researcher to answer the research questions for the book on inclusive education in teachers' colleges.

The researcher also adopted the use of Computer Assisted Qualitative Data Analysis Software called NVivo 12 Pro to assist in deriving themes from data generated. This was used to assist in managing volumes of data from face-to-face interviews, direct observations and document analysis. The software-assisted in generating themes under which data were analysed. The software was used because it helped in establishing patterns and relationships among data (Richards, 1999). It assisted in the management and synthesis of data, giving new understanding and developing new knowledge on inclusive education in teachers' colleges. This assisted the researcher to answer the research questions for the book on inclusive education in teachers' colleges.

The researcher created cases from interview cases and data from observations and document analysis that were imported. These were coded and classified accordingly using NVivo. The cases were classified under transcriptions, observations, documents, and interview notes. The software enabled the researcher to code the data. From the data, the researcher identified themes under which data were grouped or coded. Miles & Huberman (1994, p. 56) define codes as "... tags or label for assigning units of meaning to the descriptive or inferential information compiled during a study". The process of coding involves identifying and pursuing related words, phrases, sentences and paragraphs mentioned by participants or from documents and observations made. The data were coded about the themes derived. From the themes, subthemes were coded to show what the different groups of people said on the same theme. For example under the theme "inclusive education practices in teachers' colleges, there was sub-theme such as "enrolment" that was further broken into sub-themes of "number of students with disabilities" and "types of disabilities". Also, there was a node/theme on perceptions of participants towards inclusive education. That node was classified into what lecturers, managers, students with disabilities and students

without disabilities said on that node/theme. Queries were also used to identify common words and codes from data sources. The process of coding and making nodes/themes assisted the researcher to be accurate by revisiting and redefining the nodes. NVivo helps to improve the accuracy of qualitative studies (Bazeley, 2007). The use of NVivo made it easy for the researcher to reorganise codes and nodes within a short space of time (McLafferty, 2006). It was easy to delete, copy, paste, move and to combine nodes.

NVivo assisted in analysing biographic data of participants. From the transcriptions imported into NVivo, it was easy for the researcher to analyse the demographic data of the participants and key informants. Demographic data helped to explain, interpret participants' views and to establish patterns and relationships of findings. While using NVivo software, it was realised that data were securely stored and could be retrieved easily (Azeem & Saldi, 2012). The files were stored in different places and the links created made it easier to retrieve them unlike having to retrieve them manually through searching in files of papers. The codes could be referenced through a created link and the direct words of participants and key informants. It was easy to bring out how many nodes the researcher had coded from some data sources or specific cases.

Furthermore, the software could be used even if there was no internet connectivity. However, it was costly to purchase the software and to undergo through the training to use the software though it was worthy to use. Although it was easy to manage data using NVivo, the process demanded high computer literacy skills. The researcher had some computer literacy skill but had to go through training on how to use the software despite having a detailed tutorial attached to the software.

According to Neuman (2011, p. 143), "Ethics begins and ends with you, the researcher." It is the moral, legal and professional obligation of the

researcher to be ethical even if the participants are not aware of or seem unconcerned with the ethics (Neuman, 2011). The current research was conducted with the researcher fully aware of the ethical implications. The researcher was aware of the potential ethical issues that could emanate from research goals, the need to gain access, data collection and interpretation, the use of results and the relationships between the researcher and participants. For the researcher, ethical considerations were a primary consideration and not an afterthought (Hesse-Biber & Leavy, 2006 in Creswell, 2012). The ethical issues are noted below:

The researcher acquired letters from Zimbabwe Open University that confirmed the researcher as a student and granting the researcher permission to generate data (See Appendix1). These letters helped the researcher to apply for permission to generate data from the Government through the Ministry of Higher and Tertiary Education, Science and Technology Development (See Appendix 2). The researcher was granted permission by the Ministry of Higher and Tertiary Education, Science and Technology Development to research teachers' colleges (See Appendix 3). Each college further granted the researcher access to carry out the study by stamping and signing on the application letters submitted.

In a bid to ensure ethical research conduct, informed consent of the participants was sought before setting an appointment for the interviews so that participants could freely choose whether to participate or to withdraw from the study. The researcher introduced self to the participants and articulated the purpose of the book before conducting the interview. Appendix 5 provided the introduction part by the researcher and the informed consent form that was signed by participants and key informants. The informed consent form informed the participants that they were participating in the book and the purpose of the book. It also informed participants of the benefits of the

study and the procedures of the study. Furthermore, it showed the participants that they were participating voluntarily and that they had the right to stop at any time and that their confidentiality was guaranteed. The consent agreement form was detailed to provide adequate information to the participants and key informants regarding the research so that they consent voluntarily.

The researcher tried as much as possible to guarantee the confidentiality of participants and key informants. Participants in a research study expect that information provided to the researcher should be treated in a confidential manner (Houghton *et al.*, 2010). As such, such information should not be divulged to anyone. The interview questions were open-ended where participants would bring in their personal information that the researcher had to keep confidential.

In all the instruments, the researcher ensured that the names of the participants and names of colleges were withheld to protect their identity. Confidentiality could be addressed to participants and to research sites where the study was conducted (Houghton *et al.*, 2010). Anonymity is when the data are not linked to a participant or key informant (Burns & Groove, 2001). This issue of anonymity was enhanced by protecting the identities of the participants when generating data, analysing and reporting findings. The researcher did not write down the names of participants during data generating. Anonymity ensured confidentiality by detaching names from the data. For participants, they were identified with case numbers such Case 1, 2 and 3 while colleges were identified as College A, B and C. Pseudo names or tags can be used to identify different characteristics of participants and research sites (Saunders, Kitzinger & Kitzinger, 2015).

Although it is difficult to fully guarantee anonymity in qualitative research, the researcher tried as much as possible to protect the data gathered by from unauthorized people. The data was used for the

study only and not for any other purpose or divulged in other settings.

To ensure privacy, the researcher tried as much as possible not to disclose any data from participants and key informants other than in this book. No unauthorised persons were given access to the data. Howe and Moses (1999) state that confidentiality and anonymity are two ways of guaranteeing privacy. Also, the researcher was very careful not to infringe on the rights of all participants and those with disabilities as a group that is vulnerable and sensitive to various issues. By protecting the rights to privacy of participants, the researcher was respecting their autonomy, welfare and self-determination (Howe & Moses, 1999). Some participants were students and what they said was not supposed to be heard by their lecturers and college administrators. Privacy was also observed when dealing with records and documents in the colleges. Information from the documents was not divulged to unauthorised people except for the study.

Respect for participants was important in this study. The researcher showed sensitivity towards participants with their uniqueness. Different participants needed to be respected in their way. Scholars such as Shamoo and Resnik (2015) advise that researchers have to respect the decisions of the participants whether or not to participate in the study). Information about the study was provided to the participants verbally and through the informed consent form. Also, the researcher did not use her position as a lecturer in one of the colleges to coerce students to participate in the study. Those who participated did so voluntarily. The researcher made it clear to them that the study was being conducted to lobby and to promote the implementation of proper strategies that would enhance the inclusiveness of teachers' colleges.

Researchers are obliged to do their best to minimise possible harm and risks to participants and to maximise the benefits for participants

(Shamoo & Resnik, 2015). While conducting the study, the researcher anticipated some possibility of harmful information (that could be psychological) that might hurt participants and key informants. This was mainly anticipated among students with disabilities who could have faced some form of abuse as they tried to find their space in the inclusive setting in teachers' colleges. The researcher was very careful not to use offending words, denigrating and abusive language to participants that were likely to affect their self-esteem and subsequently their participation in the study. The researcher used disability-friendly terms and person-first language to refer to persons with disabilities. The researcher ensured the safety of such participants and key informants.

Trustworthiness in qualitative research is when the researcher accurately represents the experiences of participants (Lincoln & Guba, 2000). It is a way of determining the validity and reliability of qualitative studies so that the findings are worth. Trustworthiness is about establishing whether or not findings are confirmable, credible, transferable, and dependable (Lincoln & Guba, 2000). There are various ways to determine the trustworthiness of the findings. To ensure the trustworthiness of the findings from this study, four strategies were employed.

Transferability is the degree to which findings and the representation are applicable in some particular setting (Lincoln & Guba, 1985). Findings can be generalised to a larger population. To ensure that the findings are transferable to other settings, the researcher provided rich descriptive information about the participants, research process, and the context in which data were generated so that readers could determine the applicability of the results to their situations. Thick descriptions assisted researchers to replicate studies with similar conditions in other settings (Anney, 2015). According to Mertens (2010), the burden of transferability lies with the reader who should

determine the degree of similarity between the study site and the receiving context. As such, the researcher was detailed about the time of study, context and site of the study so that the findings could be transferred to a specific context.

Another strategy adopted in this study to ensure the transferability of findings was the use of purposive sampling. Purposive sampling allowed me to focus on key informants and participants who were knowledgeable of the inclusive education in teachers' colleges. The sampling techniques ensured that decisions could be made about participants selected (Bernard, 2000 in Anney, 2015). The sample provided in-depth data on inclusive practices in teachers' colleges to that the findings can be transferable to similar settings.

Dependability refers to the consistency of the research process (Lincoln & Guba, 1985). Triangulation was used to ensure that data were dependable. Triangulation is a process of guarding against the accusation that a study's findings are a result of a single method, a single source and might be liable to errors and be biased (Patton, 2002). In this study, triangulation was done using face-to-face interviews, direct observation and document analysis. The findings were corroborated using data from different instruments. This ensured that the weaknesses of one instrument were covered up by another. Thus, the weaknesses or biases of face-to-face interviews were likely to be overcome using direct observation guide or by document analysis. Further, gaps established by one instrument of gathering data would be covered by the other. Furthermore, by corroborating findings from different data sources, the researcher reduced the impact of possible bias. Triangulation helped to provide a confluence of evidence that ensured that there was credibility (Bowen, 2009).

The researcher also triangulated the theories of the study. The study was guided by the social model of disability, the Ecological Model by

Bronfenbrenner and the Social Learning Theory by Albert Bandura. This enabled the study to be approached from different theoretical perspectives to help explain inclusive education practices and to determine strategies to enhance its practices. Also, data were triangulated by having different groups of participants. According to Bloor (1997) cited in Groenewald (2004), having different informants and participants was a form of triangulation to contrast and validate the data. Triangulation was also done using thematic analysis and NVivo software of data analysis. The diagram below shows how triangulation enhanced dependability of the findings in the book.

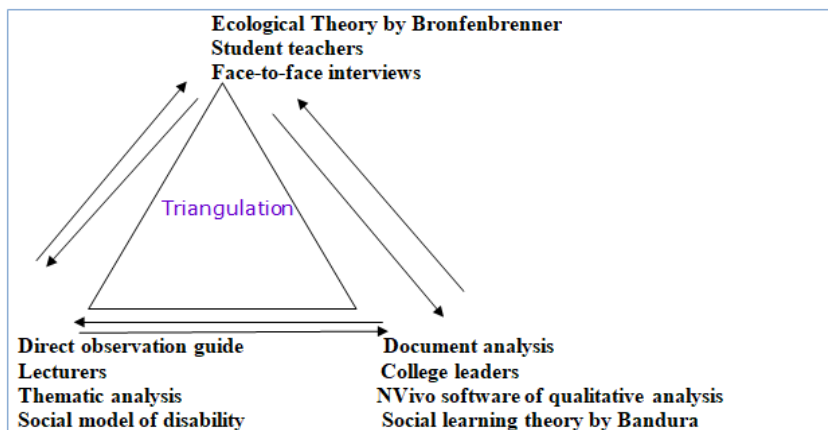


Figure 3.1: Triangulation of data sources, theories, participants d data analysis (*Researcher Developed*)

Figure 3.1 showed how data sources, theories, participants and data analysis were triangulated in the study. This helped to enhance the dependability of the research process and findings.

Confirmability relates to the extent to which findings could be confirmed or corroborated by other researchers (Baxter & Eyles, 1997). To ensure confirmability in the book, an audit trail was

conducted. According to Bowen (2009), an audit trail shows evidence from process and product and that the findings are derived from the data. Bowen (2009) adds that an audit trail involves examining the inquiry process and product to validate the data, whereby a researcher accounts for all the research decisions and activities to show how data were collected, recorded and analysed. An audit trail is when raw data were kept safe during data generation (Robson, 2011). The researcher kept a record of all activities, observation and document review notes, audio recordings, interview schedules and transcripts. These records assisted the researcher to refer during the analysis of data and to confirm with what the participants had said. This reduced misrepresentation and misinterpretation of participants' views. Keeping a record of activities and ideas enabled another person to assess and evaluate the findings and conclusions made by the researcher. This improved consistency and helped reduce researcher bias.

Furthermore, the researcher produced an audit trail that gave information on who were the participants and why they were involved in the study. Personal information such as qualifications and positions held by the informants were given to justify their relevance in the study. The researcher accounted for all research decisions in terms of research methodology by giving justification for their relevance in the study. The research paradigm, approach, strategy, and sampling were justified in the book. The findings from this study could be corroborated by other researchers as they were linked to the previous findings from related literature. Findings from a research study should be confirmed by other studies. The researcher linked to related literature with the findings the implementation of inclusive education in teachers' colleges.

Credibility refers to the confidence placed in the truth of the research findings (Holloway & Wheeler, 2002). According to Lincoln and Guba

(1985), credibility establishes whether or not the research findings are drawn from data provided by participants and that there is a correct interpretation of the data. To establish credibility, the researcher used a peer reviewer. The use of a peer reviewer is when someone familiar with the phenomenon under study is tasked to review the data generated. In this study, the researcher used a peer who is familiar with inclusive education to validate the findings. The individual was an experienced cadre in disability issues and is a PhD holder in inclusive education whose expertise and knowledge ensured quality feedback. Lincoln and Guba (2000) note that the purpose of a peer reviewer is to provide support, challenge the assumptions of the researcher, push the researcher to the next level and ask further questions about methods and interpretations made. The peer reviewer helped to identify the areas that had not been covered by the research questions.

To increase the credibility of data generated and of the subsequent results, the researcher prepared for the interviews and ensured that the interviews were conducted properly under a conducive environment. Credibility depends on the richness of the data and analysis (Patton, 2002). The researcher further ensured that the research methodology was appropriate and relevant to the central research question under study.

Chapter Summary - This chapter discussed the research methodology that underpins the study. The chapter focused on the interpretivist paradigm that guides the study on inclusive education in teachers' colleges. Further, it focused on qualitative methodology as being relevant for the study that focuses on lived experiences of participants that are context-specific. Multiple case studies were discussed as a suitable method of gathering data as informed by qualitative methodology. The selection of three teachers' colleges as research sites was discussed. The chapter focused on how homogenous purposive

and snowballing sampling techniques were used to select participants and key informants who are college leaders/managers, lecturers, students with and without a disability. Four research instruments were identified and discussed. These are the researcher as the primary instrument, semi-structured interview guide, direct observation guide and document analysis guide. The chapter also discussed the pilot study that was done to test the feasibility of the face-to-face interviews. Also, data generation procedures were highlighted. NVivo qualitative software analysis and thematic approach analysis were discussed to provide answers to research questions guiding the book. Legal and ethical considerations were also discussed in the chapter with a clear emphasis on the need to protect participants' rights to privacy, confidentiality and access to research findings. A clear outline of the trustworthiness of the findings was given focusing on how the findings are transferable, confirmable and credible. The next chapter presents, analyses and interprets the findings of the study.