VOYAGE THREE
A PARADIGM SEARCH AND METHODOLOGY

Roadmap of the terrain of voyage three

R: I invite you to...

My intellectual heart, first
(Paradigm journey)

A view of the lens that I choose
(Qualitative approach)

Zooming in on the chosen lens
(The constructivist paradigm)

What type of camera suits me
(The case study)

Which terrain do I go with my lens?
(Preschool/Montessori and DICECE)

Whom do I invite for this leg of the journey, to help me to hunt for answers?
(Preschool teachers and children)

What do I choose to focus on?
(Formal learning interactions and teachers' beliefs of DAEP)

How do I focus (observe, and interview) &
How do I get the best of my focusing?
(Recording)

Ethical considerations for the study
(Precautions to ensure the protection of my journey companions)

Looking back to what might have been?
(Reflecting on the limitations of the study)

3.1   INTRODUCTION

Part one of this voyage addresses the genesis of my intellectual quest for a research paradigm, which I connect to my epistemological and ontological metamorphosis, before locating the research in the qualitative paradigm. To this end, I critically explore issues related to paradigms, to be conscientious about the research journey. In the second part, I justify how the constructivist paradigm fits with my study, consistent with the assertion of Maxwell (2005:79) that the choice of design depends on contexts and issues of study. In addition, I discuss the methodology, which includes the case study design, sampling decisions, a brief of the study area and the data generation strategies. I conclude with a section on ethical considerations for this study. The section on data analysis and the presentation framework follow in chapter four.

3.2   THE PARADIGM JOURNEY SEARCH

3.2.1   IT ALL STARTED HERE…

Before I enrolled for doctoral studies at the University of Pretoria, and the subsequent research support sessions presented to all doctoral students at the Faculty of Education, I had had limited exposure to the discourse of paradigms, much less, the need to situate a study within a paradigmatic framework (Rubin & Rubin, 2006:20-21; Mertz & Anfara, 2006:189; Hesse-Biber & Leavy, 2006:12). More so, the positivist exposure I previously had, advocating a quantitative approach to research had imprinted in me a template of research as a quantifiable process (Denzin & Lincoln, 2005:11; 2000:8; Flick, Von Kardorff & Steinke, 2004:9; Hesse-Biber & Leavy, 2006:6, 13).

Some characteristics of quantitative research, among them measurement, objectivity and predictability, to me, were synonymous to scientific research. Equally, in my research template was the formal language to reflect scientific neutrality (Bogdan & Biklen, 2007:201-202; Badenhorst, 2007:138-139; Denzin & Lincoln, 2005:10; Rubin & Rubin, 2005:251-252; Thody, 2006:130). Altogether, I had learnt that research needs to be done "within a value-free framework" (Denzin & Lincoln, 2000:8), in an objective process within controlled scientific procedures (Flick *et al.*, 2004:9; Hesse-Biber & Leavy, 2006:6, 13).

Conversely, in the contact support sessions, one professor echoed the sentiments of authors such as those of Bogdan and Biklen (2007:201), Guba and Lincoln (2005:209) and Henning, Gravett and Van Rensburg (2002), who stress that qualitative research privileges the researcher's voice as it locates it in the research process. Accordingly, referent to the researcher (or the self) in a qualitative approach should be an *"I"* as contrasts *"the researcher"* as if referring to someone else *"out there"* or 'the voice from nowhere' (Lather in Guba & Lincoln, 2005*:*209). Schon and Whitehead (both in McNiff, 2008:352), agree that there is an increasing trend in scholarship to use 'I' as a new form of scholarship to generate living forms of theory.

However, coming from a positivist paradigm, naturally, this exposure jolted my thinking somewhat, from the comfort of the quantitative schooling I had. This new realization disturbed my research knowledge equilibrium. My research paradigm spirit was unsettled. The exposure to flexibility entrenched in the qualitative approach that locates me in text resulted in a cognitive dissonance of sorts. I realized that I needed a research paradigm renaissance to encompass the qualitative approach to accommodate my new growth in scholarship.

I needed a paradigm shift. Consequently, this new dispensation confronted me, not only to revise my old research repertoire, but also, to change my thinking to include the qualitative approach. This 'new realization' was to affect my research journey throughout. In the months that followed this new 'discovery', as I endeavoured to understand the role of a paradigm in research, I experienced intellectual tensions arising from the discourse on paradigm. It was clear after the support sessions that I could use the quantitative and/or quantitative approach. However, before this significant decision to situate my study in either of them, I needed to acquaint myself to the genesis of the knowledge claims of each of them, even as the paradigm war continues (Bryman, 2007).

3.2.2   CLARIFYING THE PATH TO FOLLOW

Paradigm wars or the assumptions that undergird quantitative and qualitative research exist and are likely to continue because of the perceived 'differentness and incompatibility of [qualitative and quantitative] approaches' as 'fundamental philosophical issues about the nature of the human being and society' and how to study it

(Bryman, 2007:14-15). Therefore, the whole discourse in models of research originates from philosophical issues of ontology, epistemology, and methodology, all of which constitute a paradigm framework. Ontology addresses issues of the nature of the human being, and that of reality; epistemology explains the relationship between the inquirer and the known, and methodology embraces procedures of accessing and gaining knowledge from the world (Bryman, 2007; Denzin & Lincoln, 2000:19; Denzin & Lincoln, 1998:185-6:201; Guba & Lincoln, 2005:192; Hesse-Biber & Leavy, 2006:12; Mertz & Anfara, 2006:189; Rubin & Rubin, 2005:20).

Bryman (2007:13-14) observes that whether to refer to the qualitative and the quantitative approaches as paradigms is a different matter, but reiterates that underlying each of these are methodological, epistemological and ontological assumptions. The positivist paradigm usually relates to quantitative research whereas constructivist and interpretivist paradigms relate to the qualitative approach. Other paradigms have since continued to emerge.

Denzin and Lincoln (2005:1-30) present a time-line of eight moments to highlight the emergence of different paradigms from 1970s. However, Jahoda *et al.*, (in Bryman, 2007:15-16) dates the existence of qualitative research prior to this date, noting:

> A study of a community with high unemployment and originally published in German in 1933, is a veritable smorgasbord of data sources, some of which are quantitative and some qualitative (Jahoda *et al.*, in Bryman, 2007:15-16).

The existence of this research using a qualitatively approach prior to the 1970s, might result in another *possible dispute* about the fundamental *cause* of start of the paradigm wars (Bryman, 2007). However, aside from the history of paradigm wars, Denzin and Lincoln's (2005) discussion replete with dissuasions and persuasions is valuable in clarifying the nature of controversy and its development.

A critical reading of the literature about the controversy and resistance to paradigm options and choices reveals constantly shifting spaces and issues to engage. In the beginning, the resistance was about the potential of qualitative approach to contribute reliable knowledge (Denzin & Lincoln, 2005; 2000; Guba & Lincoln, 2005; Flick *et al.*, 2004). For the hardliners then, qualitative research lacked the rigor reflected in quantitative research (Flick *et al.*, 2004; Hesse-Biber & Leavy, 2006). Denzin and

Lincoln, (2005:3, 8; 2000:7) argue that in this discourse, quantitative scholars assumed supremacy over qualitative researchers, referring to the latter as 'soft scientists or journalists'.

Paradigm skirmishes are not only limited to the duality of the basic assumptions of the quantitative and qualitative approaches, as there have also been intra-paradigm wars (Bryman, 2007). For example, besides hegemonic nuances, resistance to qualitative research arose from its perceived approach to research as a colonisation process, which depicted the researched as those savages from other non-white cultures (Denzin & Lincoln, 2000; Guba & Lincoln, in Guba & Lincoln, 2005; Smith, 1999; Swadener & Mutua, 2007; 2008). Swadener and Mutua (2007; 2008) extend the definition of colonialism to include cultural imperialism in approaches to research, which excludes the experiences of the indigenous, racial minority and disabled groups, even within the qualitative approach.

Further, Smith (1999:1) deconstructs a colonialist approach to research. Although she locates her discourse among the Maori, she observes that 'the term research is inextricably linked to European imperialism and colonialism', and suggests that the term 'research' is probably one of the dirtiest words in the indigenous world's vocabulary'. In this discourse, the culprit is hierarchical research, with a supposed superiority of the colonialist to possess knowledge than the colonized 'other'. To counter the concept of colonialists as legitimate sources of knowledge, Smith (1999:36,60) criticizes this perspective and calls for space in which the indigenous can chart their research agenda (Denzin & Lincoln, 2008). Smith (1999) raises an ontological as well as an epistemological issue, and how previous researchers, even as they researched among the indigenous people, excluded them as knowledgeable in the research process.

Apart from excluding 'the researched' from contributing to their own agenda about research in contexts in which they understand best through their experience, another concern that might illustrate the limitation of some of the colonial approaches to derive legitimate knowledge, hence the disquiet among indigenous scholars suffices. Smith (1999:60) acknowledges that research that sorts people as 'nearly human, 'almost human' and 'sub-human', as attributes of possessing a 'soul', which became the basis of educating or offering them salvation, is not only reminiscent of colonial power and domination, but is also highly deficient in defining personhood. Denzin and Lincoln,

(2008:4), agree that the qualitative approach, in many of its characteristics might embody the colonial approach to research. This is just one perspective demonstrating the hegemonic tendency of academic discourse to privilege one over the 'other', as might be the source of paradigm skirmishes.

Currently, paradigm controversy reflects issues of "politics and ethics of evidence and the value of qualitative work" (Denzin, 2008:316), subjectivity inherent in designing qualitative research and the use of non-randomized samples (Denzin & Lincoln, 2005:2; Denzin & Lincoln, 2000:7-8; Guba & Lincoln, 2005:191-2; Flick *et al.*, 2004; Reyna, in Nespor, 2006:117). However, Hatch (2007) and Tesch, (1990) counter neutrality in research, as they argue that bias is inherent in human nature and experience, whether quantitatively or qualitatively researching.

As the paradigm debate continues (Denzin, 2008:*316; Nespor, 2006:123), the qualitative approach has undergone rejection, (Seale, 2003:174), but there is an emerging tentative tolerance and acceptance towards its potential to contribute different forms of knowledge, or sometimes to complement quantitative research (Bryman, 2007). Lincoln and Denzin (2003) confirm that "qualitative research…played pivotal roles in the ruptures, rifts and revolutions" following developments of new ways of doing research apart from the quantitative approach" (Lincoln & Denzin, 2003:3). Further, through an intellectual scrutiny by the scientific community, qualitative research continues to generate standards of judgment for its own plausibility and credibility, an issue that remains contentious (Seale, 2003:*175).

From these shifting philosophical positions and re-alignments, clearly, some of the scholars initially opposed to the qualitative approach have since embraced originally contested paradigms. For example, Guba and Lincoln, (2005:*200), argue that a paradigm framework should include issues about axiology (role of values in research). In what appears to reflect a flexible stance from their previous position on the qualitative approach, they note, "a second reading of the burgeoning literature and subsequent rethinking of our own rationale have led us to think that the issue is much larger than we first conceived" (Guba & Lincoln, 2005:*200).

Regardless, discourse on paradigms might not be ending soon, as 'there are occasional paradigm skirmishes' (Bryman, 2007:17). Even though issues about paradigms are a

contested topic, there have been shifts in positions and tolerance to divergent views about each of them. Guba and Lincoln (2005:205) foresee a future where there will be harmonized acceptance of a dual objective reality, within the limitations of human subjectivity. Rather than focusing on differences, Guba and Lincoln, (2005), recommend an accommodative approach to explore paradigm similarities and differences. That moment characterizes the mixed-methods approach that advances the 'complementary strengths thesis' (Denzin, 2008:317) in which each paradigm approach acknowledge the contributions towards each other to strengthen research outcomes. During this moment 'production of respite in hostilities' between quantitative and qualitative research, which allows the 'mixing of methods that cross the quantitative-qualitative divide' emerges (Bryman, 2007:15). Denzin (2008) appears to support this position with the note, 'I seek a non-military metaphor, something more peaceful, less combative. I believe we are in the midst of a complex set of discourses which are moving in several directions at the same time' (Denzin, 2008:16).

The movement to tolerate and to accommodate the qualitative approach acknowledges that among other issues, bias and subjectivity is inherent in human nature, regardless of the paradigm position (Denzin & Lincoln, 2000:8; Guba & Lincoln, 2005:208; Seale, Gobo, Gubrium & Silverman, 2004:5). The qualitative approach accommodates an in-depth analysis of issues that might appear subjective. Besides, to use a qualitative approach might facilitate multiple views to emerge, giving voice to both the researcher and participants (Denzin & Lincoln, 2005:3; Guba & Lincoln, 2005:209; Hesse-Biber & Leavy, 2006:14,77; Creswell, 2002:49; Crossan, 2003:52-53; Thody, 2006:130). Denzin and Lincoln (2005) capture this multi-voice representation thus:

> Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive material practices that make the world visible. These practices transform the world. They turn the world into a series of representations including field notes, interviews, conversations, photographs, recordings, and memo to the self (Denzin & Lincoln, 2005:3).

The authors stress the advantage of qualitative research to locate both the researcher and the participant's views in the text. Moreover, this embraces a world that exists in many forms, thus a dispensation to represent the world in multiple forms. As part of engaging with the paradigm issues, I have reviewed the contentious issues surrounding ontology and epistemology to foreground my own decisions relating to the same. The exposure to

paradigm debates and the shifting positions awakened my intellectual consciousness as a student of research. Therefore, more critically, I position my thinking closer to this debate as part of my decision to embrace the constructivist paradigm.

3.2.3   PARADIGM POSITION SHIFT AS INTELLECTUAL EXHILARATION BEGINS: THE SUPERVISOR'S ROLE

The section about the intellectual tensions I encountered with paradigm debates, already discussed in the preceding section, initially arose out of a discussion I had with Dr. Carien. She encouraged me to write down my thoughts. I later reworked this section after I got an e-mail from Prof. Irma quoting Edmund Burke that *"All that is necessary for the forces of evil to win in the world is for enough good men to do nothing."* Although the latter was not solely about my thesis, she challenged my voice in research. These invaluable interactions with my supervisors turned out to be my paradigm search, as it re-awakened my level of introspection to embrace a scholar identity.

Whitelock, Faulkner and Miell (2008) locate the responsibility for originality and creativity in PhD students' work on the supervision process. They list some of the processes identified by supervisors that lead to academic creativity; providing guidance while promoting autonomy, building confidence through positive feedback, encouraging risk taking, filtering knowledge, identifying problems, modelling, and sharing practice.

The interplay between some of these supervisor-related processes and the development of my thinking are evident in this discourse resulting from my doctoral paradigm journey. Apart from confidence building, promoting my autonomy, and periodic meetings to explore my thinking, another valuable strategy that my supervisors used was to encourage me to journal my thoughts. Somerville (2008:209) reflects from her experiences that

> In educational research…pedagogical processes for research students in particular, there appear[ers] to be a closing down rather than an opening up of the possibility of generating new knowledge…concern from increasing press from supervisors towards standard forms of thesis production that come to stand in for pedagogies of doctoral supervision.

The call to supervisors is to open-up space for doctoral students to contribute original knowledge, rather than to restrict creativity through rigid measures, because the doctoral

program is 'works in progress towards generativity as "the core of scholarship" (Boote & Beile, 2005:6). My experience was an "opening-up", rather than a "closing down" (Somerville, 2008:209), especially in writing as a generative function.

Let me note from the start that, as a novice, I submit to the rules of discourse in the academic world. I also do acknowledge, like Mcniff (2008:356) and Holliday (2007:116) that academic legitimacy as it operates in the genre of academics with specific standards of acceptance is acclaimed through peer interaction. Therefore, my discourse in this section does not negate my position. Rather, as I position myself in academic discourse, I have three objectives; first is to attempt reflexivity about my journey, secondly, contemplate the status quo to legitimise my identity [of PhD student], and thirdly and final, I aspire to learn the ropes of how to gain authority. Smith (1999:36) legitimizes my stance; 'if we write without thinking critically about our writing, it can be dangerous'. Holliday (2007) too, provides me with the scholarly mandate at this point:

> Showing what you have read is important, but not for the purpose of showing you know the 'facts' reside in there...therefore 'good writing' becomes a complex balancing act between showing what you have read, being critical about it, but doing this by still more citing of other people (2007:118*).

In this section, I attempt a scholarly discourse with the politics of scholarship, from my position as a student of research. I discuss how my encounter with paradigm contestations stimulated an intellectual quest and a deep sense of introspection in me. Besides, I juxtapose the idea of such maturity with 'an academic discourse community' (Holliday, 2007:117-118). Lather (2006:47) justifies my attempt:

> Teaching [or being taught] educational research in such a way that… [I as a student] develop an ability to locate … [myself] in the tensions that characterize fields of knowledge [because after all] we all do our work within the crisis of authority and legitimization, proliferation and fragmentation of centres, and blurred genres (Lather, 2006:47).

In the following section, I locate myself in the tensions inherent in paradigm choices. I engage in this discourse to highlight some of tensions inherent to the development of intellectual maturity. Therefore, while taking up this challenge, I embrace my own identity and voice as a doctoral student, and perhaps that of other doctoral students

whose ontological, methodological and epistemological stances will identify with my voice. Academic discourse has regimented style and language:

> Language users are neither wholly subject to a monolithic language system, nor completely free to create their own meanings. There are contradictions and spaces in which they construct themselves (Huang & Archer, 2008:5).

Holliday (2007) locates this conflict even among writers well versed with conventions, noting that novice writers:

> Find themselves newly constructed, not as experienced professionals, but as [junior members] of an academic discourse community which decides for them what they are allowed to say, how they are allowed to say it and who they are allowed to be as writers (Holliday, 2007:117).

Faced with these dialectically opposed identities of 'emerging scholar' and 'student', novice qualitative researchers need to negotiate through each of these because of the "need to become autonomous within a new, strange discourse..." (Holliday, 2007:117). These contradictions and spaces become the subject of my engagement with paradigm discourse.

I am also aware that as I write, I take a risk as I venture to develop my doctoral scholar identity. Smith (1999:36) warns; "writing is dangerous because sometimes we reveal ourselves in ways which get misappropriated and used against us". From this warning, it appears that a doctoral scholar who engages critically in academic discourse might also need to take a level of risk. To reflect from my own experience, some of the questions arise; foremost, what potential risk does a doctoral candidate face by engaging in discourse that is contrary to supervisor stance? Another example: what potential risks does a doctoral student face by engaging in discourse for which they are yet to grasp or to develop recognition? What perceptions prevail among the experts in the discourse arena about the 'emerging scholar'?

As I explored the contested space of scholarship as a novice, my encounter with contested paradigms left me as a researcher in a position of intellectual inadequacy, even helplessness. All along, I had this nagging question lingering in my mind, "what are students of research to do in the interim before such [paradigms] debates become conclusive?" As I engaged with literature on paradigm discourse, I had hoped to get an

answer to this unsettling question. Instead, as I continued in this quest, I got to a stage of intellectual frustration, arising out of my perception of what seemed to me then, as rhetoric at the scholarly level for ontological as well as methodological hegemony (Guba & Lincoln, 2005:191).

Granted, philosophical debates on paradigms contribute significantly to academic discourse, and knowledge development. Yet, Denzin and Lincoln, (2005:8) warn that, "The field of discourse is wrought with politics such as the academic disciplinary resistances to qualitative research". Johnson and Onwuegbuzie, (2004:17) hypothesize that even with a 'pragmatist approach' that seek to combine both quantitative with qualitative research, thus advocating a synchronized approach, further warn, or even see as desirable, the philosophical debates surrounding intellectual advancement. However, although hegemony remains the reason for contested paradigm space, I now acknowledge the process of 'ongoing conversation' in a particular specialized field as part of validation of knowledge.

However, given their scholar identity in terms of voice and discourse in academia, such rhetoric operates way above many an ordinary scholar's reach, let alone students of research. As I reflected on the discourse on models and paradigms, my heart went out to students doing research then, who might have shelved their qualitative approach pursuits due to these transient and rather conflicting research positions. My 'intellectual heart' at this point resonated with Seale's questions about intellectual uncertainty arising out of paradigm debates; He asks

> What is a practicing social researcher to make of all this? How can these inconclusive debates become a resource for researchers rather than a source of frustration and negativity? (2003:174).

Although these questions are pertinent to the doctoral student, they might not readily answer these questions. Nevertheless, most significantly, how do such debates relate to the doctoral scholar identity development? Paradigm debates have an impact on the doctoral journey from various perspectives. We explore three perspectives.

Firstly, Johnson and Onwuegbuzie (2004) present one perspective about allegiance by graduate students. They claim:

> …debate [between qualitative and quantitative] has been so divisive that some graduate students who graduate from educational institutions with an aspiration to gain employment in the world of academia or research are left with the impression that they have to pledge allegiance to one school of thought or the other (Johnson & Onwuegbuzie , 2004:15)

Johnson and Onwuegbuzie move the research paradigm debates to issues peripheral, but not fundamental to the research process. For example, students who allege loyalty to a school of thought might not nurture critical conscientiousness because to be conscientious might require autonomy as well as the risk to develop the capacity for divergent thinking away from the norm.

Secondly, Rhedding-Jones (2007) locates what might be significant to the development of the doctoral scholar in the supervisor- student power relationship. She argues that methodological choices are complex, sometimes seen as "politically-correct" as doctoral students make their choices, but calls to "beginning researchers [to] seriously think about who they are, and how their ontologies or ways of being might make research a richer and more connected practice" (Rhedding-Jones, 2007:209).

However, in what appears to subdue academic freedom, the author acknowledges and eloquently situates such politics of choice in her own experience as a supervisor. She notes:

> …the fact that I am a Norwegian speaking Australian…[through] my access to international research cultures, I may be colonizing my Norwegian students and getting them to take up what I see as the latest methodologies (Rhedding-Jones, 2007:212).

Redding-Jones (2007) gives perspective to supervisor-student-power relations. Clearly, it appears that supervision that nurtures dialogue with doctoral students develops their critical conscientiousness. In this way, students not only locate a paradigm that they can comfortable identify with, but also one that allows them to emerge themselves as scholars.

The third level of significance of paradigm wars for the doctoral student is located in funding rationale for choosing a paradigm. Nespor (2006:123) further argues that paradigm debates are sometimes located outside the University community that reside

within State agenda and other corporate bodies that fund research. These bodies too, might determine the paradigm approach used, and even sometimes seek particular results.

Therefore, the assertions from reputed scholars introduce complexity to what paradigms doctoral students choose. The issue of allegiance for future employment, supervisor control of the research process, and adherence to academic genre, together with funding as part of the paradigm agenda, makes the research process more complicated. In addition to ontological and epistemological complexities of choice, other issues arise from methodological positionality and academic authority as clearly pointed out by Rhedding-Jones (2007:212).

What is the bottom-line of such debates to my doctoral identity? It would be naïve to suggest that any research agenda might not include these issues. On the contrary, I view these issues as part of a holistic approach to research. However, for a student to develop a scholar identity that allows creativity to emerge, influence from external controls to paradigm choices and interests might not draw on the strengths of the doctoral student to own and to explore critically ideas. I argue that any paradigm originating from outside the student's own interest might be alien as it might also encourage one to imbibe and regurgitate 'others' as contrasts 'own' perspective. Smith (1999:35-6) argues:

> …reading and interpretation present problems when we do not see ourselves in the text…one problem of being trained to read this way [excluding ourselves in text], or more correctly, of learning to read this way over many years of academic study, is that we adopt uncritically similar writing patterns.

Seeing and interpreting text from a personal rather than from another's perspective seems to be the critical point of divergence to creativity and originality as part of the doctoral requirement. Creativity and originality remains a central expectation for doctoral students, the basis upon which they qualify (Whitelock *et al*, 2008). Shulman (in Boote & Beile, 2005:3) adds to these expectations, the value of discipline, publication and peer review as core to scholarship. However, can originality emerge out of hegemonic controls where 'institutional elites ensure academics' comply with established traditions' as McNiff (2008:354) reiterates Bourdieu's concern?

Smith (1999) argues that writing is sometimes a regimented process in academia, which tends to stifle voices other than those recognized in academic writing. Somerville

(2008:209-210) captures these concerns when she refers to 'increasing hegemonic practices of research and doctoral standards', which might hinder doctoral students' contribution to new knowledge, but at the same time proposes an 'ontology of post-modern emergence that emphasizes the irrational, messy and embodied process of becoming-other-to-one's-self in research', to create more informed researchers.

To reflect on the complexity of methodological choice, it is for such 'students' that Johnson and Onwuegbuzie (2004) and Rhedding-Jones (2007) refer to, that I speak for in this intellectual dialogue. Rhedding-Jones' confession and/or assertions raise not only issues related to methodological choice, but also a whole gamut of issues related to developing critical conscientiousness in the doctoral scholar identity.

On reflection, the philosophical debate continues, (Bryman, 2007; Donmoyer, 2006:29; Denzin & Lincoln, 2005:3; Hatch, 2007:7; Johnson & Onwuegbuzie, 2004:17; Lincoln & Denzin, 2003:2; Nespor, 2006:123; Seale, 2003:174), but retrospectively, I appreciate its generative function. Aside of hegemonic agenda, it not only demonstrates the dynamism of knowledge, but also the human capacity to generate new knowledge, besides providing space for 'on-going' conversation among specialists. Paradoxically, the controversy derived the mixed method approach (Johnson & Onwuegbuzie, 2004:15), besides 'purifying' the qualitative approach to research. Further, it highlighted the weaknesses inherent in the quantitative approach, while cautioning about the areas to be wary in the former (Lincoln & Denzin, 2003:8; Creswell, 2002:49-50).

The politics of research paradigms is not an outdated topic (Bryman, 2007; Denzin & Lincoln, 2008; Denzin, 2008; Denzin and Lincoln, 2005:3; Donmoyer, 2006:29; Hatch, 2007:7; Johnson & Onwuegbuzie, 2004:17; Lincoln & Denzin, 2003:2; Nespor, 2006:123; Seale, 2003:174). The existence of 'contested' spaces that doctoral students ought to find a niche presents a new challenge. Institutional hegemonies and supervisor preferences, funding opportunities, and individual motivation for doing research add to the challenges of creating the new 'scholar identity'.

Therefore, for students of research such as at the doctoral level, it might present a challenge to aspire to contribute to knowledge, through critical thinking *as a process* towards intellectual maturity, while being cautious to meet the standards for academic

qualification, in addition to other motives, such as funding. To confront all these choices, while retaining intellectual autonomy and freedom, consciously or otherwise, might restrain graduate students' intellectual exploration, as some thoughts or issues might be outside the domain of 'the current'.

I submit that students' overall intellectual growth is a process rather than a status quo but the issues that emerge from paradigm contests beg some questions. For example, some questions that remain unexplored about doctoral scholar-identity development include the following: Given their positionality in terms of voice and emergent [self] interests, then, can graduate students make a claim of '*being* who they are'? Can they claim a substantive contribution to ontology from what they *bring along* to research? Do they even always have an ontological position in the first place? 'Do students of research *really* have a voice in scholarship?

In addition, some questions beg perspective: Whose knowledge is it that we generate? Who generates knowledge? For what/whom do we generate knowledge? Edward Said (in Smith, 1999*:*37), reiterates these questions in relation to writing. Smith (1999:173) asks several of research- related questions to counter the basic belief that anybody 'has an inherent right to knowledge and truth'. Conceived from their value in developing a critical consciousness in the doctoral student, these questions are not just rhetoric, but become problematic when considered within the paradigm wars vis-à-vis the doctoral creative process. They raise issues that require reflection, as there might be contradicting demands for doctoral students as already pointed out by Holliday (2007*:*117).

Reflecting on the questions raised, for the moment, I might not have answers to these nagging self-introspective questions, but we know that probably most doctoral students, who are yet to earn their own authority and voice in scholarship, might have to work with, and negotiate voice and positionality in the interim. They need the space to engage as they emerge themselves as scholars.

My heightened critical conscientiousness evolved because of the Faculty's quality assurance sessions. In addition, an interactive postgraduate computer study centre gave space to exchange ideas among fellow students, and to think deeply of academia issues. More significantly, I attribute this consciousness to quality supervision, which embraced

a 'let go' approach for me to embrace guided autonomy. This emancipated my thinking, as it nurtured my intellectual growth. This section of the thesis would not exist had my tensions been shared with non-supportive superiors. Therefore, it appears to me that nurturing scholarship among doctoral students hinges on such support, without which superfluous knowledge might be encouraged at the expense of creativity and originality.

For me in this doctoral journey, most importantly, as I lay the intellectual quest to rest, we appreciate the critical consciousness it has heightened in me as an emerging scholar, but humbly turn to answer questions that are more pressing. As I explore my research questions, I locate my epistemological, ontological and methodological framework in the constructivist paradigm.

The kind of research questions and the specific contexts, from where I wanted to get answers to my research questions fitted well with constructivism (Creswell, 2007:211-12; Lincoln & Guba, in Guba & Lincoln, 2005:205; Maxwell, 2005:79). In particular, the characteristics of qualitative research appeared to support my adoption of the constructivist approach to my research questions (Bogdan & Biklen, 2007:4-8; Bryman, 2004:279-287; Creswell, 2007:38-39). In the next section, I explore and locate my research topic in the constructivist paradigm to clarify my research decisions (Hatch, 2007:225).

3.2.4   EMBRACING THE CONSTRUCTIVIST PARADIGM

In this section, I define the constructivist paradigm and discuss its nature and principles, before locating my study in it. In so doing, I acknowledge that all lenses profoundly affect the process of data generation, data analysis and interpretation. I wrap up the discussion in this section with a synthesis of issues discussed, before presenting a way forward to the next section.

Schwandt (1998) proposes that constructivists seek to understand the world of the research participants. To achieve this, first I took a naturalistic approach to generate data, through observations of teachers and children in each of the schools participating in the study. Secondly, I present data by using words and pictures, rather than numbers, to describe and represent teachers and children's educational experiences. Thirdly, one-on-one interviews and observations elicited preschool teachers' beliefs of children's

educational practices within a DAP framework. Through a co-created process, I empowered participants to discuss issues related to the study in order to get their subjective views (Fontana & Frey, 2005:696; Schostak, 2006). The latter asserts about the interview:

> …with every view directed by a subject towards another, there is an inter- view, a space between views…the interview in this sense, is a constructive and deconstructive of cases not as single instances, nor as bounded systems, but infinitely extensible, richly connectable plays or weaving of ever expanding horizons of differences (Schostak, 2006:22).

Through such an interchange of views, I endeavoured to understand the lived experiences of the participants (Creswell, 2002:525), to get answers to questions of meaning, experience, and social significance further supported by Clandinin and Connelly (2000:71,187). Bogdan and Biklen (2007:43) emphasize the goal of qualitative researchers when they affirm that it "is to better understand human behaviour and experience. They seek to grasp the processes by which people construct meaning and to describe what those meanings are".

Further, Creswell (2007) and Bogdan and Biklen (2007) affirm that the researcher is a key instrument in research decisions, heightening my recognition that the data I generated was a consequence of the questions I asked and the focus of the video camera. In summary, I also knew that my design decisions from the choice of topic, data generation, presentation and interpretation were subject to my theoretical assumptions (Bogdan & Biklen, 2007:55; Maxwell, 2005:79; Silverman, 2005:109).

Therefore, within the qualitative approach, I adopted the constructivist paradigm as my ontological, methodological, as well as epistemological lens (Rubin & Rubin, 2006:20-21; Mertz & Anfara, 2006:189; Hesse-Biber & Leavy, 2006:12; Denzin & Lincoln, 2000:19; Schwandt, 1998:222), using it to guide my research process, which underpins knowledge and knowing as socially constructed processes (Denzin & Lincoln, 2005:3; Denzin & Lincoln, 2000:177; Creswell, 2002:49; Crossan, 2003:52-53). In my view, the reality of how I seek to answer my research questions is inherent in my own view of the research topic, and that of my research companions. Such views have gender, class and positionality innuendos. Therefore, interpretations of existence of phenomena might

vary, depending on what individual lenses focus as interpretations of reality. This introduces fluidity to individual views of reality (Hesse-Biber & Leavy, 2006:17; Denzin & Lincoln, 2005:3; Denzin & Lincoln, 2000:177; Creswell, 2002:49; Crossan, 2003:52-53).

Consequently, I subscribe to the view that to generate data is to co-construct it in partnership with the participants, rather than to collect what might appear as already existing data (Hesse-Biber & Leavy, 2006:14). Therefore, the participants' experiences influence the data process and data generated, to result in a situated reality that resides within personal frames of existence and experience.

By embracing a constructivist paradigm (Crossan, 2003:52-53; Bryman, 2004:279), I assumed that teachers, through personal as well as collective perceptions of the same situation (their beliefs of developmentally appropriate educational practices and children's learning experiences), socially construct multiple realities (teachers' beliefs and observed children's educational experiences). As such, these social constructions influence behaviour (Denzin & Lincoln, 2000:177; 2005:3; Fraenkel & Wallen, 2006:430-433; Johnson & Christensen, 2004:33). Therefore, the constructivist paradigm steered my theoretical foundations, to explore and understand the nature of teacher beliefs, and their educational experiences with children in two different preschool curricula.

Denzin and Lincoln's (2005:4) "bricoleur" term aptly describes my researcher position as I embraced methodological as well as theoretical bricolage to answer my research questions. By so doing, I engaged in a number of tasks such as interviewing, observation, self-reflection, and introspection in the research process. A theoretical/conceptual bricolage on the other hand facilitates scope to analyse and interpret the data using the bioecological theory (Bronfenbrenner, 1979; 2005) and the Montessori approach (Braun & Edwards, 1972:111; Gordon & Browne, 2000:15; Montessori, 1920:14-15; Torrence & Chattin-McNichols, 2005:363). In addition, the DAP framework gives depth and richness to data interpretation (Charlesworth *et al.*,1993; Geist & Baum, 2005:28; Goldstein, 2007:378; Klein & Chen, 2001:31; Neuman & Roskos, 2005:25; Kostelnik *et al.*, 2004:18). Such is the scope required to answer the research questions.

Despite my constructivist lens, as I advanced through this academic journey, even after I had embraced this paradigm I still swayed towards thinking quantitatively. I have had to be conscientious, in addition to receiving a constant reminder from my supervisors to embrace the 'new' language, and cognitive processes characteristic of the qualitative approach and constructivist paradigm. Bogdan and Biklen's (2007) caution resonates with my reflexivity through the research journey. They note:

> …research, then as it is publicly known, is a synonym for quantitative research. Learning to do qualitative research means unlearning this social construction of 'research', and opening oneself to the possibility of employing a different vocabulary and ways of structuring the research process (Bogdan & Biklen, 2007:4).

I have had to be continually conscientious and reflexive (Hesse-Biber & Leavy, 2006:141) about this "new" way of doing research, an experience that admittedly, was initially difficult. This *unlearning to learn* that I have had to undergo is a journey I hope to accomplish when I reach my present academic destination.

In the next part of the chapter, I explore the methodological decisions for the journey, which include case study design, the data generating strategies, sampling, description of the research context, and the ethical principles embraced for the study.

3.3   THE METHODOLOGY

Silverman (2005:109) defines methodology as the "general approach to studying research topics… as your methodology shapes which methods are used and how each method is used". It links with the basic assumptions of how 'social reality works' as well as the nature of research questions (Silverman, 2005:112). The strategies chosen align with the constructivist paradigm. In this section, I discuss how the case study design fits with my research and the strategies for data generation. I wrap it up with ethical considerations and limitations of the study.

3.3.1   THE CASE STUDY DESIGN

3.3.1.1   Introduction

I used a qualitative case study design because I needed to understand preschool teachers' practical experiences within the study context, and what beliefs emerged out of

children's educational experiences, as it relates to a DAP framework. By embracing a case study design, I concentrated on an in-depth exploration of a bounded system (Creswell, 2007:73; 2002:485; Bogdan & Biklen, 2007:59; Fraenkel & Wallen, 2006:438; Stake, 2005:444; 2000:437; Johnson & Christensen, 2004:376; Yin, 2003). Creswell (2002:58-59) defines a design as a "specific procedure for collecting, analysing and reporting research", and Bogdan and Biklen (2007:59) view it as "a detailed examination of one setting, or one single subject or one single depository of documents or one particular event". For Stake (2000:435; 2005:445), it is 'a case' to a researcher's "interest in individual cases, not by the methods of inquiry". The case may also be an individual, group or organization (Merkens, 2004:169). Quoting Punch, Silverman (2005:126) stresses that a case is a detailed analysis of a phenomenon in order to understand it better. My study was a detailed analysis of Montessori-trained and DICECE- trained teachers' practices. These are among other reasons for choosing the study site, as my case in a bounded system that I elaborate in the next sections.

3.3.1.2   Fitting my study to the case study design

Flick (in Merkens, 2004:164) suggest three stages during which selection takes place: data collection, presentation and interpretation of findings. I embraced the case study through these three stages. My case study was methodological, a "type of design… an object of study, as well as a product of inquiry" (Creswell, 2007:73). Following Merriam, (in Willis, 2007:243), my study can be situated within the interpretive case study which uses data to "develop conceptual categories or to illustrate, support, or challenge theoretical assumptions held prior to data gathering". Consequently, a case study became the choice of what I studied (the separate classrooms and individual teachers, and teachers with different qualifications) as bounded systems, rather than the way data was generated.

My research questions sought to understand teachers' beliefs as they relate to children's educational experiences. Consequently, the case study approach provided a fit between the research question and the design (Creswell, 2007:75). In addition, I had a current issue over which actions I could not manoeuvre (Yin, 2003:7-8), but only to try and to understand its process. The issue of accessing and sustaining engagement in the research site motivated my use of case study design (Merkens, 2004:166). Finally, the preschool systems and the schools themselves are bounded systems, suitable for case study

research. Creswell, (2007:74) suggests that a case study is appropriate if boundaries for the case are delineable. Some characteristics of the case reside within it while others are outside (Stake, 2005:444). Therefore, delimitations of a case could include a specified place, time or some geographical boundaries. This latter characteristic suggests that a case has a contextual location in a social, political and other contexts, sometimes assuming that the case's settings affect the phenomenon under study (Creswell, 2002:485-486; Stake, 2005:200; 444; Yin 2003:13).

I conducted a collective or multiple case study, or 'case–groups' (Merkens 2004:167), to understand and to interpret teachers' beliefs of the children's educational experiences, within the Bioecological systems framework (Creswell, 2007:74; 2002:485; Stake, 2000:437; 2005:445; Yin, 2003:46). The choice of the multiple-case study in a university context, with two preschool systems was motivated by the need to understand how context factors influence beliefs of developmentally appropriate educational practices for children. Each of the four preschools functions as a bounded system, consisting of children, teachers, classrooms, learning processes, and the community from which the children are drawn. In itself, the school is a sub-system with various sub-systems within itself. The teachers also are part of a school sub-system. All these different sub-systems might affect how teachers organize the learning experiences for children.

Cases selected for a multiple case study should either 'predict similarity' or variance, but for 'predictable reasons' (Yin, 2003:47; Patton, in Merkens, 2004:167) so that they 'supplement knowledge' (Merkens, 2004:167). For instance, the teachers certified with Montessori might provide similar learning experiences to the children. Likewise, DICECE trained teachers might provide similar experiences. In addition, children of similar ages might have similar experiences that might be different from those of another age. However, I focused on educational experiences in each of the four preschools, and the individual teachers that I observed as they interacted with the children (Bogdan & Biklen, 2007:61; Yin, 2003:22-24).

Case studies depend on multiple sources of data which include, but are not limited to documentation, direct observation, interviews, photographs and video (Creswell, 2002:486; Stake, 2005:453-4; Willis, 2007:241; Yin, 2003:84-6). Since it is desirable to use multiple sources of evidence to enhance the quality of case study research (Yin, 2003:85), I used direct-observations to capture children's educational experiences, while

recording video and photographs to complement the observations. In addition, I carried out interviews as additional sources of evidence for my case studies.

For validity reasons, Yin (2003:53) recommends that at least two or more cases are suitable to use in a case study because data from multiple case studies gives a better analytic approach than do single case studies. Therefore, as a collective or multiple case studies, I present data that can give the reader the flexibility to compare Montessori and DICECE educational practices and teacher beliefs at the practical level. Moreover, data from the four settings provide a deeper understanding of how teachers and children of different ages relate with each other.

However, using a case study design can pose a challenge because each case might be unique and so threaten the focus of the research. For example, in my study Belinda engaged children in free-play, while her colleagues used teacher-directed methods. In the following section, I address the issue of generalizability of this study.

3.3.1.3   The value of my case to knowledge

Stake (2005:443) recommends that a case should "optimize understanding of the case rather than generalize beyond it". Case study research provides a deeper understanding of phenomenon of study in the particular context, as it also contributes to theoretical advancement (Stake 2000:435; Yin, 2003:1). Therefore, it has a potential to inform theory rather than to generalize to a given population (Stake, 2005:443; Yin, 2003:37-8). Consequently, theoretical sampling which "makes some cases more sensible and meaningful than others" (Mason, in Silverman, 2005:131) motivates my choice of case. In addition, Stake (2005:454-455) argues that case study adds value in two important ways:

1)   Through a thick description of context, a researcher transposes the reader to the research context, making 'vicarious' experiences possible through a written text.

2)   By interpreting the written text, the readers might identify experiences similar to their own or others previously known.

Therefore, I attempt through a thick descriptive text, to transpose my reader to the research context. I hope that through decoding the text, the reader can 'be there' as well as identify with some of the experiences reported in the study. In this way, the study will not only be useful to contextualise, but might provide a basis of comparison with other contexts as well. In conclusion, Silverman correctly advices about generalizability, that:

> … there is usually no need to be defensive about the claims of qualitative research…the crucial issue here seems to be thinking through ones theoretical priorities. Providing you have done that and can demonstrate a research design driven by those priorities, nobody should have cause for complaint…the secret is to substitute theoretical cogency for statistical language of quantitative research (2005:134-6).

Besides there is need to replace generalizability with extrapolation as the new language of qualitative research (Alasuutari, in Silverman, 2005:136).

3.3.1.4   Summary of case study

In summary, I designed a qualitative multiple case study to explore preschool teacher's beliefs of developmentally appropriate educational practices. By using a multiple case study design, I explored these teachers' practices first in their daily interactions with children, before I interviewed them to explore their emerging beliefs from children's educational experiences. I will describe the study context in more detail in the next section.

It starts with the point of disequilibrium, which disturbed my prior knowledge of the research approaches, and led me to a library search journey, in which I came face-to-face with the paradigm controversies. Rather than resolving my *dis*-equilibrated state, I had more questions than answers available. My continued quest for answers took me down an avenue of methodological, ontological and epistemological dimensions, as the three sites of contention. The controversy and subsequent clarity, which I got after visiting these sites, clarified my dis-equilibrated state. I was ready to adopt a qualitative approach using data-generating strategies, such as the interview and observation, guided by the constructivist paradigm. I turn to these in the next section. Figure 5 (below) gives a summary of the study design.
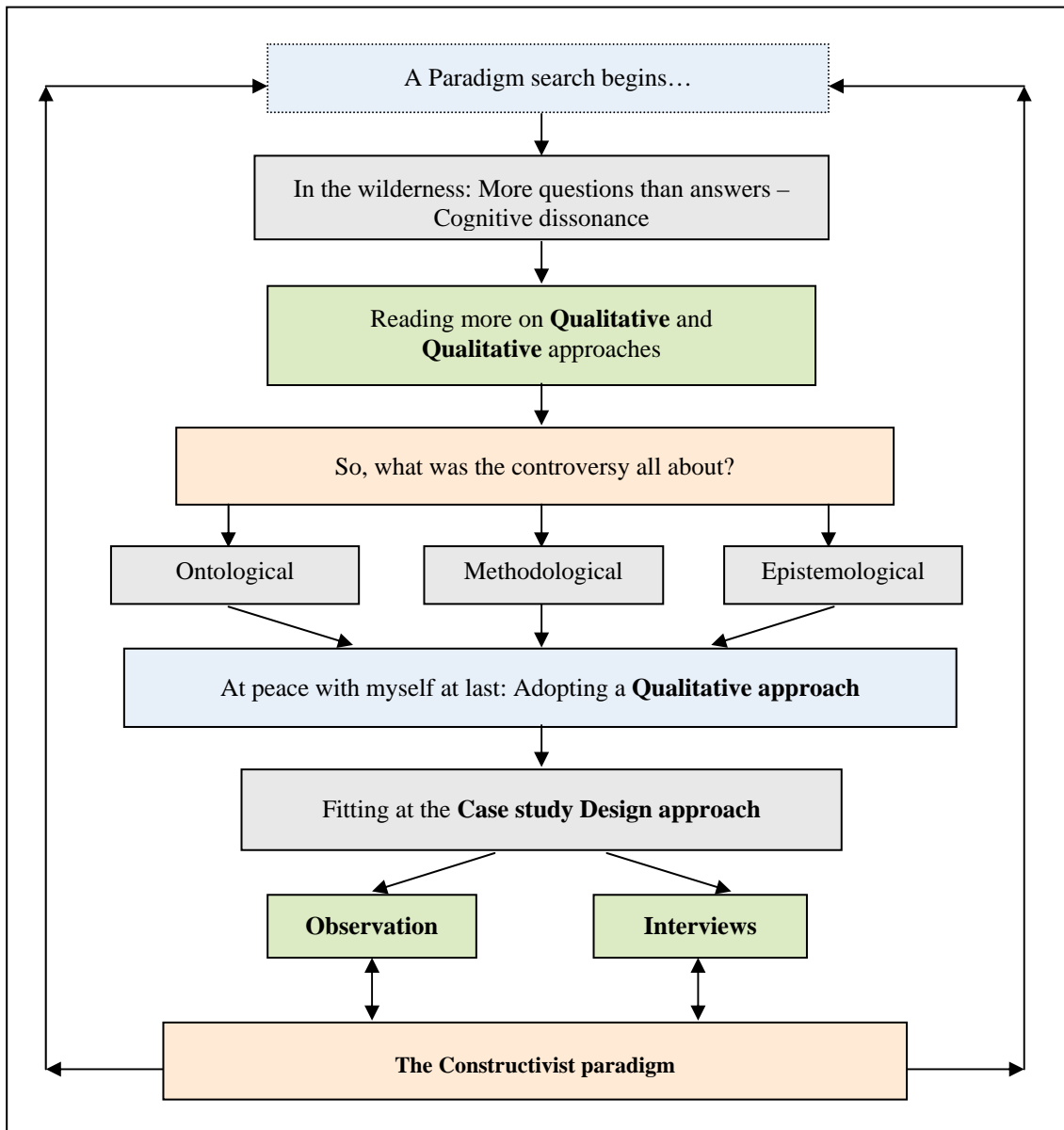
FIGURE 5: **A summary of my paradigm search**

3.3.2   THE STUDY CONTEXT: AN OVERVIEW

3.3.2.1   Introduction

This section of the chapter describes my research participants, the sites that I visited and the description of the study sites. In my attempt to keep my sites and participants anonymous, I assign each of them a pseudonym. Therefore, for purposes of anonymity where possible, I used pseudonyms for the study sites and the participants. To understand and interpret the study findings, I present details about the study participants and the study site.

3.3.2.2 A brief description of the study context

I conducted the research in two different learning preschools systems that offer Montessori and DICECE curriculum located inside a rural University in the Western region of Kenya. The University is located within a rural Division (a socio-political administrative unit) in one of the Districts in Kenya, a relatively isolated catchment-area, about 40km away from one of the main towns in Kenya. The District itself has Montessori and DICECE curricula learning centres. The Division in which the preschools are located serves a diverse population, hence different tribal groupings, with cultural variations and values.

The schools enrol children from diverse cultural, economic and social settings, both from the university community and immediate neighbouring community, sometimes from as far off as 20kms away. Therefore, the children's backgrounds represent a diverse social, economic and cultural profile drawn from business, academic and agriculturally-oriented communities. Although the preschools are within the university compound, none of them serves as a model school that researchers in academia use to test out theory in practice. Rather, these are two preschools, started out of a basic need to prepare children for primary school, with minimal learning resources available. Both schools admit children between 3 and 5 years old. *Tumaini* Montessori preschool is the name I will use to refer to the Montessori preschool and the DICECE preschool becomes *Chemichemi.*

The Montessori and DICECE curricula imply curriculum practices that reflect their philosophical principles. The latter curriculum is eclectically originated and adapted to indigenous needs. Therefore, this study focused on two different environments that ought to be conceptually different because of the certificates held by the participating teachers and the *'label'* of the preschools. In addition, each label carries with it curriculum implications, where a teacher employed in a school fits with either Montessori or DICECE preschool systems.

The Montessori school is a private elitist school, which charges Kenya shillings (Ksh.) 9000 (about $132 - Ksh. 68=US$1) per year, as compared to the DICECE preschool to which parents pay an annual fee of Ksh.1800 (about US$ 26.5- Ksh. 68=US$1). The schools are also semi autonomous, with an elective board to supervise and independently run each of the schools. Usually, such boards mainly oversee the financial logistics and

expenses of the school, rather than become involved in the implementation of the curriculum. As is the norm, in most schools that are public, the school board delegates the daily learning management to the head teacher, who also represents his/her colleague teachers on the school board.

3.3.2.3   Sampling rationale for the study context

I selected the university context as my case study site because it offered an opportunity to learn how the context influenced the teachers use of developmentally appropriate practices in a Montessori and DICECE preschool. This is a bounded system with both Montessori and DICECE preschools. I did a stratified purposive sample (Merkens, 2004:168; Silverman, 2005:129) of the two preschool units of analysis (*the educational activities of four-year-olds and five-year-year olds*). Another stratified sample included only two teachers from each context. I then decided to exclude the DICECE four-year-old teacher in favour of a Montessori teacher in a DICECE preschool, to provide variation sampling (Creswell, 2007:75).

I chose preschools in this location as a potential ideal representative of a peri-urban centre, where competition for standard one places might be high. This setting has a relatively high population, with relatively few 'good' primary schools to admit all children graduating from top class from all the preschools within the catchment area. As mentioned above, some parents living outside the university community enrol their children in either of the two preschools, despite the distance, with the hope of gaining access to the only two primary schools found within the University that have consistently done well in national examinations, relative to the other schools outside this university context.

Further, the researcher is aware, as part of prior knowledge of the case (Merkens, 2004:169), that admittance to either of the only two primary schools depends on performance in the standard one admission written and oral interview. Consequently, the schools were likely to provide the researcher with the 'ideal academised' preschool environment, hypothesized as possibly providing contexts to assess preschool teachers' beliefs of developmentally appropriate educational practices. The advantage of gaining access to contexts in which a phenomenon is likely to be present lends credence to selected case studies. However, my sampling decision to access preschools that prepare

children for primary school entry interview might appear as a pre-emption of the study findings. On the contrary, it heightened my sensitivity to potential prejudice, as I generated the data[21].

Lastly, I needed to select a site where consent and access (Silverman, 2005:127), particularly for video use, would not be problematic. Harper (1998:29-30) acknowledges this difficulty when he warns, "the camera makes access more difficult; in some circumstances, it makes it impossible. Because photographing is much more active than observing, it certainly influences how the fieldworker is received in the field." However, my prior relationship with some of the teacher participants and some parents made it easy for me to establish rapport for consent and access. Table 1 (below) is a summary of the cases in my study.

TABLE 1:   A summary of the cases in the study

Curriculum of school	Age of children	Experience of teacher participants	Teacher's training	Justification for sample as a suitable case
Montessori	Three-four-year-olds	10 years	Montessori	Theoretical
DICECE	Three-four-year-olds	2 years	Montessori	Data-information rich case/Uncharacteristic
Montessori	Five to five-half-year-olds	7years	Montessori	Theoretical
DICECE	Five to five-half-year-olds	12 years	DICECE	Theoretical

3.3.3   TUMAINI MONTESSORI PRESCHOOL

3.3.3.1   A brief background

As part of prior knowledge, the Montessori preschool started several years after the inception of the University, to address the diverse needs of a section of the university community, whose needs at the time the only operational DICECE preschool could not meet. An American professor, who had a preschool-going child at the time, started the Montessori preschool at his car park, with a teacher privately employed by the then few

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21   I discuss the constructive decisions that I took to pre-empt my bias under quality assurance in voyage four.

parents. Soon the number of children increased, necessitating the provision of more space. The preschool moved under the mandate of a board of trustees from the private garage in which it was situated to its current location, a former contractor's site offices and residence.

As the number of children has continued to increase, the board of trustees relinquished the school's management to the parents, under a board of governors[22]. The parent-elected board serves for a specified duration, maybe a two-year, three-year, or even four-year term, especially if a parent still has a child in a particular school. Sometimes for a varied number of reasons, but in rare cases, parents may decide to elect a retiring parent who is still willing to continue with board service. Montessori Tumaini preschool has such a school board.

3.3.3.2   A brief context description

The Montessori preschool is yet to expand to have a primary school attached to it. Instead, all the children from it gain entry to one of the only two mainstream primary schools within the vicinity, one private and the other public, through a qualifying interview. It sits on its own compound of about two acres, with assorted outdoor play materials built within the barbed wire perimeter fence. Entry to the school compound is from the eastern side, through an earth road, or the main gate to the west. At the main entrance is a rusty gate, the main part permanently closed, with only a pedestrian gate open for access.

The compound has an open play area, with a neatly kept lawn. Some parts of the lawn expose some bareness in areas, such as just below the swing, an indication of frequent use. At the eastern side of the enclosed school compound is an earth road that dispenses dust directly to the rear of the building block, and it settles behind the main building whose doors are west-facing. Mainly to the southern side of the school is fixed play equipment, comprising one swing, a climbing ladder, a sliding plane and a sand pit at its lower, southeast end of the main gate. All these play equipment have a coat of mixed strips of blue, green, red and yellow paint. The swing's vertical rails, made of metal pipes and fastened to the ground by cemented holes, are about ten-feet high. Above,

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[22] A school board normally constitutes members who are parents themselves, elected by fellow serving parents at the time, usually led by the chairperson, and other management positions, including the treasurer and the secretary, among other ordinary board members.

crossing over horizontally, is another metal bar of equal diameter, on which hang two pairs of hooks. Each pair sits at equal lengths at extreme sides, against which a metal hook suspends two pairs of medium-thick rusting chains. Worn-out car tyres add to the outdoor play equipment.

The school has one long building with a coat of a cream paint on the external brick wall. A maroon coat of paint equally conceals a rather rusting iron-sheet roof whose weather-beaten epoch is only visible from the rear side of the building. From this view, part of the roof shows obvious slits of iron sheeting. Facing the main school gate is the frontage of the building, covered with artistic colourful preschool murals that conceal a rather aging brick wall. Inside the building are several rooms that serve as classrooms, an office, toilets, a makeshift kitchen and a store. Each of these individual classrooms caters for different age-groups of children, from three- to five-year olds. There are six different groups of children, two sets of each, two baby class (average three-year olds), two middle classes (average four-year olds) and two senior class (average five-year olds), the latter being also the pre-formal school class. There are six teachers, each responsible for her own class. The school committee has employed these teachers on a two-year contract on behalf of parents. They all work similar numbers of hours, often between 8.00 hrs and 15.30 hrs. None of them has an assistant teacher.

3.3.3.3   Tumaini Montessori classrooms

At Tumaini, I observed two Montessori classrooms in the study, represented by one top class (average age of five-year-olds) and middle class (average age of four-year-olds). In each of these classes, timber shelves fixed to parts of the perimeter walls displayed Montessori materials. On the walls were numerous handmade literacy-related charts, including a range of both English and Kiswahili pictures and words, ranging from the letters of the alphabet to words and sentences. Number and number-value charts covered parts of the wall. The display area was just above an adult's eye-level. The chalkboard in the baby class displayed additional letters of the alphabet, shapes, and some two-letter words such as 'on', 'ox', or 'is', which the teacher rarely rubbed off during the course of my observation. The chalkboard in the senior class displayed work that was currently in progress, as the teacher rubbed it off as soon as the subject is covered.

In both classes, the children sat on baby-size working chairs and tables that they used throughout the observation period. In the baby class were dark green rubber mats, about 4ft by 2ft in size, which the teacher and the children rarely used during the data generation period. In each class, each teacher had a working table and chair. The teacher's table was at the far-left corner behind the classroom in the senior class, while at the baby class it was at the far right-hand corner at the front, almost adjacent to the chalkboard. Apart from the displayed handmade charts and Montessori materials, there were no other learning materials in either Tumaini Montessori preschool classrooms.

3.3.4   CHEMICHEMI DICECE PRESCHOOL

3.3.4.1   A brief background

Chemichemi preschool started as part of the University's strategic plan to provide preschool learning for children of members of staff. It started at a makeshift prefabricated structure, next to a former University motor vehicle garage, before being moved to its current location. The University, through a representative and school board elected by the parents, provides logistical management support. It has a school management board, like the Montessori preschool. The University pays the salaries of both the teachers and other support staff, although parents still have to pay a subsidized fee for other learning-related expenses. It admits not only children of members of the University staff, but also those from its catchments area.

3.3.4.2   A brief context description

Like the Montessori school, it sits on its own quiet isolated compound of about three acres, annexed off the University land by a cypress fence. The main entrance to the school is from a northern-located rear gate, which opens to a footpath lined with whitewashed stones on either side. The gate to the school is a makeshift wooden structure that does not open out freely, but requires a simultaneous lift-and-push motion to open it.

Chemichemi DICECE preschool has one permanent recently constructed L-shaped building, whose front south-facing veranda imposingly faces the children's outdoor play field. The building is of grey bush-stones, with a maroon corrugated iron roof. At the

front of the school building, opening southwards is an open play area. At the rear of this building were emoticons, letters of the alphabet and various artworks adorning the window glass and the lower wall of the building. The school has piped water but no electricity supply. A separate prefabricated wooden structure serves as a kitchen where the children's snacks are prepared.

Chemichemi has assorted fixed outdoor play equipment, such as one swing, one merry-go-round and one sliding plane, all covered with a fading paint of green, blue and red. All the play equipment is metal fabricated. The lawn at the front of the school is manicured, but further afield, towards the lower side, the grass is overgrown, an indication that this part might be rarely used. Along the averagely trimmed cypress edge stand two rows of impeccably lined medium grown trees that include eucalyptus, nandi flame, wattle and podo.

3.3.4.3   Chemichemi DICECE classrooms

Inside the building are several rooms that serve as classrooms, an office, toilets, and a store. Children sat on baby-size chairs and half-hexagonal tables, put together to form a full hexagon. These tables and chairs were painted red, green, and blue. There were no working mats in any of the classrooms. For their tea-break snack, the cost of which the parents met, children had a slice of bread and a cup of milk. Unlike the Tumaini Montessori School, Chemichemi DICECE preschool does not arrange for a common lunch for the children in top class (five-year-olds) who have an afternoon session in school. Instead, they bring with them a pre-packed lunch.

3.3.5   THE PARTICIPANTS IN THE STUDY

The participants in this study were four teachers holding a certificate course in early childhood education (ECE). Although all four participants were female, this was coincidental because I had used a purposive sampling to target teachers of four and five-year-olds to provide insight to the problem under investigation(Creswell, 2009: 178), i.e. these children's educational experiences and their teachers' beliefs. Whereas three of them had trained as Montessori teachers, the fourth had trained as a DICECE preschool teacher, through an in-service course (training while teaching). They comprised preschool teachers trained in the DICECE and Montessori system, willing to have their

classrooms observed. Chemichemi DICECE preschool had teachers who had a general early childhood certificate course awarded by the NACECE, through its DICECE training centres. Except for one teacher who qualified as a Montessori but was teaching in a DICECE preschool, the rest had DICECE certifications. All of Tumaini teachers had qualified with Montessori certificates.

I chose only those teachers teaching four-year-olds and those teaching five-year-olds, to provide latitude to understand and interpret the data. In my research design I had planned to observe four teachers, two Montessori and two DICECE trained teachers, teaching these classes, respectively. However, due to the presence of a possible information-rich case[23], or what I might consider uncharacteristic of the general sampling decision frame, I thought it appropriate to include her in the study. Therefore, since each school had two classes of each, I focused on those participants who I thought were information-rich (Creswell, 2002:193-194). Consequently, I chose the teachers for actual classroom observations based on initial inconsistency, namely the Montessori-trained teacher teaching in a DICECE preschool, their willingness and especially their availability to participate in the follow-up interviews.

I also determined the sample by teacher qualification, willingness to participate, and age of group of children, for an information-rich 'convenient' sample (Wellington, 2000:62). To the extent possible, all the teachers had similar educational backgrounds and qualifications[24] (all the four teachers had a certificate qualification in child development). To ease my entry into the classes during video observations, I sampled four teachers with whom I had previously associated. Subsequently, I chose only two from each setting. All teachers were willing to participate. Some of those left out, even requested[25] to be included in the research, even though I had completed my sampling decisions. Table 2 (below) is a summary of the characteristics of the participants.

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[23]   Montessori trained teacher teaching in a DICECE preschool.
[24]   The table summarizes the teachers' characteristics
[25]   I explained to these teachers whom I had not chosen about the need to limit my study sample to only those teachers teaching four-year-olds and five-year-olds, since both of the teachers who requested to be included taught three-year-olds.

TABLE 2:   Participant characteristics

PARTICIPANT/ CODE	ENID MONTOP	STELLA MONMID	BELINDA DICMID	LENORA DICTOP
Age	28 years	40 years	25 years	45 years
Gender	Female	Female	Female	Female
Educational background	KCSE certificate	KCSE certificate	KCSE certificate	KCSE certificate
Preschool professional qualification	Two year Montessori Certificate Course	Two year Montessori Certificate Course	Two year Montessori Certificate Course	Two year DICECE Certificate Course
Total teaching experience after training	7 years	10 years	2 years	12 years
Duration in the same school	9 years	8 years	2 years	11 years
Type of curriculum	Montessori	Montessori	DICECE	DICECE
Type of institution	Public private	Public private	Semi-private	Semi-private
Level of children	Top class (five-year-olds)	Baby class (four-year-olds)	Baby class (four- year-olds)	Top Class (five-year-olds)

3.3.6   THE SCOPE AND DELIMITATION OF THE STUDY

I concede that studying preschool educational experiences as a challenging endeavour requires me to delimit the scope (Morse & Richards, 2002:67). I explored how preschool teachers' practical experiences framed their understanding and interpretation of developmentally appropriate educational practices, within both indoor structured and unstructured children's educational experiences. Although the focus is not on the teachers training but rather on children's educational experiences, I chose to focus on DICECE and Montessori preschool teachers and their classrooms, to explore and to understand the educational experiences that they designed for the children. Although an explicit comparative analysis is beyond the scope of the data analysis, it enlarges the scope of interpretation and understanding on a developmental level, as part of rich-data provision (Morse & Richards, 2002:67). In this way, the reader might be empowered to interpret the data in a more diverse way. In addition, to gain an intra-setting and intra-age appreciation, I chose to observe how four-year-olds and five-year-olds educational experience might compare. Hence to delimit the research, I focused on teacher certification, curriculum, age of children and their educational experiences, and emerging teachers' beliefs.

3.4   DATA GENERATING STRATEGIES

This section gives a brief description of the data generating strategies for this study. These include three strategies, observation through video recording, photographs and interviews (Bogdan & Biklen, 2007:91, 103, 113; Creswell, 2007:129; Morse & Richards, 2002:91-92; Rhedding-Jones, 2007:214), in line with recommendations for multiple sources of data in case study research (Creswell, 2007:75). During the first phase, I observed the teachers in their classrooms where I captured the video clips and photographs, to use for video- and photo-elicited one-on-one interviews in the second stage.

3.4.1   CLASSROOM OBSERVATIONS

In this section, I discuss the nature of observations used, some advantages, and how I mitigated the weaknesses inherent in observations. I explain the details of the observations and some of the challenges that I faced during the observation period. In line with case study research, I also provide thick description of the contexts in the subsequent sections. For additional information about the characteristics of the study context (Yin, 2003:93), refer to sections 3.3.4 and 3.3.5.

3.4.1.1   The nature of observations

The use of observation in research has its roots in ethnography. In the past, observed data enjoyed perceived objectivity. However, the current view to which I subscribe embraces some subjectivity in the observation process. Since observation is a complex process involving human participants, objective reality is not feasible due to views rooted in gender, class, ethnicity and positionality, *inter alia*, in the research process (Angrosino, 2005:729-731). Currently, the observation is a process towards insight into issues, and a 'dialogue' or negotiated positions, rather than a 'method' to generate data (Angrosino & de Pérez, 2000; Angrosino, 2005:730-732; Patton, 2002:267).

I did direct observations or non-participant semi-structured naturalistic observations as I recorded the actual children's educational experiences that are considered more accessible through this method (Angrosino, 2005:729; Creswell, 2007:139; Yin, 2003:92). By using 'sensitizing concepts' (Patton, 2002:279), such as 'educational

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experiences', I was able to focus the study in a semi-structured approach, without making the whole process rigid (Cohen *et al.*, 2007:397).

I chose the observation method because of the advantages linked to it, which include the opportunity to understand the context of behaviour, discovery of things taken for granted, and the ability to learn things that people would be unwilling to talk about, in addition to being reflexive in data presentation and interpretation (Patton, 2002:262-4). Through sensual experiences, I gathered a range of data that included the physical setting, human setting, interaction contexts, and programme setting, all of which are pertinent in understanding the research focus (Cohen *et al.*, 2007:397; Patton, 2002:264). Besides, I describe the setting details to give the reader a 'vicarious experience' of children's educational experiences (Patton, 2002:260).

In each of these classes, except among the DICECE five-year-olds, where I spent only three days, I spent six days of between three-to-four hours per day, observing educational practices on an intermittent basis, capturing them on video. In three-out-of-four classes I observed, I spent an average of eighteen hours per class, with an average of nine hours among the DICECE five-year olds, for logistical reasons I could not overcome. In each of the three classes, out of the average eighteen hours of observation, I recorded six hours on video, while in the latter class I recorded three hours on video in line with my plan. Although the video data from the DICECE five-year-olds class might be much less, it was sufficient to get a general sense of children's educational experiences, as it was also sufficient for video- and photo-elicitation.

3.4.1.2   The structure of coverage

As part of systematic sampling of targeted units (Cohen *et al.*, 2007:259; Creswell, 2007:139) of children's educational experiences, I had envisioned dividing the class into four zones - north, south, east and west - with the assumption that a range of activities took place at any given time in a class. I had structured the target behaviours on three premised random levels; a teacher-child, child-child, and child- object-interaction, or 'molar behaviours', as evidence of study constructs (Cohen *et al.*, 2007:407) on a time sampling runs of one minute per target event as part of targeting specific behaviour (Angrosino, 2005:732-3). I assumed that within one minute it would be possible for a child to have engaged meaningfully with other children and with materials. I thought this

period would be sufficient for me to record target behaviour (Cohen *et al.*, 2007:259). Within intervals of one minute for target behaviours, I would pay attention, alternately shifting focus from the child to the teacher and to the objects, recording the level of engagement for the particular activity-taking place in class.

However, in most cases during the actual observations, I realized that I had assumed an ideal interactive set-up. In reality, what existed were mostly group activities, which did not involve the three interactive levels that I had presumed prior to the study. Moreover, poor lighting in the Tumaini Montessori four-year-old class made it problematic to capture clear video data in this class. This was because all the time the camera focus was directly opposite a window, thereby inhibiting clarity of focus. Nonetheless, this zoning worked for some sessions, while it was not practical in other sessions. Where possible, I applied this zoning strategy to ensure coverage. In the event of a significant event occurring in any other zone in class, not currently in focus, I remained as flexible as possible during the observation period to capture any such events. Initially, I had planned to cover three observations of one hour in each session spread through morning, mid-morning, and late-morning sessions per class, to capture varying levels of activity. However, due to both logistics and limitations based on the nature of activity, I was able to cover only three sessions of half-an-hour each, while in some classes I covered only two such sessions, as contingent issues arose (Bogdan & Biklen, 2007:68; Creswell, 2007:134).

Despite the variable number of video records per class, I was still present in each of these classes to tale supplementary observation notes; therefore, I did not find such variability a limitation to my study, and I felt I had reached data saturation by the end of the study (Bogdan & Biklen, 2007:69). Consequently, in any one day, although my recorded observations lasted for between one-hour and one-and –half-hours, my actual presence in each classroom spanned between three and four hours. Patton (2002:275) recommends that, "fieldwork should last long enough to get the job done-to answer the research questions being asked and to fulfil the purpose of the study". I knew the data was sufficient to answer the research questions, because I had video-clips and photographs captured over a two-week, average 18 hours per class period. This I thought was sufficient to portray children's educational experiences, upon which I would elicit teachers' beliefs through visual elicitation.

3.4.1.3   Mitigating the weaknesses of observations

I identify some weaknesses associated with observations that might undermine trustworthiness. These include participant reactivity (Shaughnessy *et al.*, in Cohen *et al.*, 2007:410); researcher fatigue (Cohen *et al.*, 2007:410); expectancy effects which predispose the researcher to anticipate events based on hypothesis; the problem of inference which cannot sustain an explanation without interviews; and biased interpretations. As stated above, I subscribe to the current view that subjectivity is inherent to observation (Cohen *et al.*, 2007). Therefore, I suggest the mitigations of the weaknesses.

The group approach to children's educational experiences used by the teachers resolved the problem of selective attention, since I needed not to be consistently selective in the focus. I had a predetermined structured approach for rotational shift coverage. Moreover, I endeavoured to conduct discreet observations where possible, to yield results from approximate naturally occurring children's educational experiences (Cohen *et al.*, 2007:410-411; Creswell, 2002:200-210; Yin, 2003:92-3). However, being reflexive about the impact of my presence in the classrooms, it might have influenced the teachers' interactions with the children, although I tried to be as unobtrusive as possible by remaining at the back of the classroom.

Prolonged engagement in the study context might have helped to reduce social desirability and response set. To reduce the effects of observer presence on the participants, and to habituate the participants to my presence, I made multiple observations. In addition, I also took time to establish rapport and trust before the start of the data collection, by interacting with the teachers freely and playing with the children during their break time in outdoor free play, as a way of systematically desensitizing them to my future presence (Creswell, 2002:201; Rolfe, 2001:230). Finally, I triangulated the data with photographs and video recording to reduce observer bias and fatigue. Visual-elicited interviews ensured that inferences and interpretations of observed behaviours are located in participant perspectives, as discussed in the following section.

3.4.2   VISUAL ELICITATION AS A METHOD

When words become unclear, I shall focus with photographs. When images become inadequate, I shall be content with silence (Anselm Adams).

In this section, I define and discuss visual elicitation as a strategy for data generation, to include both photo-elicitation and video elicitation, before I present a brief discussion of how I used it in my study. I justify the use of visual elicitation in this study, before I end the session with some concluding remarks on photo-elicitation. In the second part, I reflect on the potential meaning of video capture in my data generation.

3.4.2.1   An overview of visual methods

The use of visual methods in research in other fields, which include education, has its origins in ethnography, anthropology and sociology (Harper, 2005:757; 2004:232; 2002:14-15; Pink, 2004:392). Visual research conveys information about a context, process, event or people, beyond which no number of words can describe (Harper, 2005:748; 2002:22-3; Pink, 2004:395; Prosser & Schwartz, 1998:116). The detail in a photo's context brings to life details missed by other modes of communication, making it superior in presenting a vivid experience to anyone who might not have been there. Rose (2001:6) reiterates the prevalence of visual representation in the present society.

Harper defines photo-elicitation as the process of inserting a photograph into a research interview (Harper, 2002:13). In this way, the researcher aims to stimulate and capture the subjective view of the participants in relation to the study topic (Creswell 2007:129; Harper, 2004; 2002). I structured the elicitation process on the assumption that the teachers are more knowledgeable, hence more empowered than I am to discuss the topic, because "the power of the photo is its ability to unlock the subjectivity of those who see the image differently than the researcher" (Harper, 2004:236; Harper in Harper 2002:15). I used the photographs and video of assorted classroom activities captured during the observations, to elicit teachers' interpretation of developmentally appropriate practices through qualitative interviewing. While it is true that photographs and video relay some elements of truth, there are other subjective or technical realities in the construction of the images. These include not only the research paradigm guiding the choices of photographs to capture, the interpretations of the image, but also the camera's technical qualities (Adelman, 1998:148; Harper, 2005; 2004:233-4; 2002:13; 1998).

Photographs used in research should reflect the theoretical framework and assumptions of the study, besides the research questions (Prosser & Schwartz, 1998:116-7). I used the images to confirm and develop an existing theory, in order to enhance the viability of

photo-elicitation in my research (Harper, 2004:236). Photographs become 'intellectually dense' when captured and juxtaposed within a theoretical and methodological framework (Becker, in Harper, 1998:29; Prosser & Schwartz, 1998:115). In conclusion, I used both video and a photo-elicitation to capture the participants' rationale for chosen learning experiences, as well as the teachers' subjective meanings of the experiences, to understand their beliefs of developmentally appropriate educational practices.

3.4.2.2 The meaning of the video camera in data generation

Video photography recording is increasingly gaining popularity in observations and it is possible to use these without undue interruptions (Patton, 2002:308). However, Pink (2004:393) warns that the size and meaning of visual tools can influence the data generated. Some of the considerations for use of video include sensitivity to the cultural context, appropriateness of the equipment and the privacy of the study participants. The feasibility is also another consideration. In my case, I had made a reconnaissance of the possibility of engaging these methods prior to the study in both preschools. At the Montessori preschool, the school had electricity, while the DICECE preschool had no electricity connected to the school. This had implications for the use of video in data generation.

As a University community, I assumed that the video camera was an accepted feature and formed part of the lived experiences of both the children and the teachers in the study context. Some elite parents capture video sessions of their school-going children during their birthday celebration. In addition, video cameras are currently part of weddings and other public ceremonies, most of which children attend in this part of the world. Based on this cultural observation, I assumed that my use of the video camera might not have elicited too much anxiety to either the children or the teachers, and certainly not to a level of disrupting behaviour. This assumption, however, did not negate the possibility of a degree of influence of the presence of the video camera.

I also used a hand-size digital camcorder that captured both video and photographic data, to reduce intrusion (Pink, 2004:298). It was felt this might have elicited less anxiety, with the possibility of capturing naturally occurring situations. It was evident from most of the video observations that my presence as the 'intruder' in their class did not distract the children or the teachers. However, in one of the classes, especially the baby classes,

children were slightly anxious during the first days, but they eventually got accustomed to my presence with time, as the distraction got to 'extinction time' (Bogdan & Biklen, 2007:113).

In the example cited, the video seemed to distract the children from what they were doing. The children would seek attention, if they saw me look their way, as I focused the camera on them, even trying to talk with me, at other times. However, I overcame this by tactfully monitoring the activity using the external LCD screen, so avoiding eye contact with the target child. Finally, the video camcorder also became my tool of rapport with the teacher participants, as I elucidate in the trustworthiness section (Bogdan & Biklen, 2007:114). I was able to play back the video footage on each day, which resulted in a more relaxed, more trusting relationships with my study participants. Overall, in my study site, the use of a video camcorder as a tool of data generation in my view assumes a prestigious role, rather than one of intrusion of privacy among the participants. Therefore, its use in this context did not elicit any mistrust or misgivings, either from the teachers or from the parents.

3.4.3   Unstructured qualitative interviews

In this section, I present my general plan of how I used the qualitative interviewing strategy to carry out the research. In addition, I provide an overview of the detailed plan of the location and nature of the interviewing process and the use of an audiotape. I conclude by wrapping up with qualitative interviews.

3.4.3.1   Planning for the interviews

In applying the interview method, I embrace the guidelines offered for interview research (Bogdan & Biklen, 2007:103; Gubrium & Holstein, 2003:33; Holstein & Gubrium, 2004; Morse & Richards, 2002:93-94; Rapley, 2004:16).

Four female teachers participated in my study, whose willingness to do so I confirmed during the observations. Despite prior consent, before each interview, I confirmed with each of them whether they were still willing to participate (Cohen *et al,* 2004:362; Creswell, 2007:132). None of them declined. I made prior appointments with each teacher for the follow-up interviews (Bogdan & Biklen, 2007:103). Each preferred either an afternoon, break-time during school days or a weekend for convenience purposes,

since they would be working. The convenient venue was a makeshift office that I set up in one of the rarely busy University guesthouses or the teacher's class if we held the interview during a working day. Both venues were convenient for two reasons; firstly, the teachers had themselves suggested the venues for proximity reasons, hence their convenient access. Secondly, the guesthouse offered a serene and quiet location, with minimal interruptions and conducive for audio recording the discussion (Creswell, 2007:133). In addition, I provided them with full information about the nature of the interview and its duration (Cohen *et al.*, 2007:361).

Prior to each interview, I printed out several samples of photographs depicting an array of activities, which we later used as our photo-elicitation tools and set up the laptop for video viewing. In addition, I prepared the mini- tape recorder, hardly the size of my palm. I made sure there was enough battery-life to last the duration of each interview, besides ensuring that the technical details were in place. Moreover, I also watched sample video episodes and selected, based on clarity and variety, for video-elicitation process. For each case, I chose what was both unique and characteristic of the class. Before the onset of each interview, each teacher got a chance to view their own video episodes, earlier recorded in their classrooms, uninterrupted, although I gave them the freedom to operate the laptop video-play process with an external remote control. Each of these episodes lasted 30-minutes on average.

3.4.3.2 The nature of the interviews

I carried out qualitative interviews (Bogdan & Biklen, 2007:103; Bryman, 2004; Fontana & Frey, 2005*:*705-6; Rapley, 2004:16; Gubrium & Holstein, 2003:33), partly photo- and video-elicited (Creswell, 2007:129; Harper, 2004:236; 2002:15), to access and assess teachers' beliefs of developmentally appropriate educational practices. Video clips and images became my 'issues-based' focus to getting interviewees' responses, rather than a scripted outline of questions (Rapley, 2004:17). Each of the interviews reflected the teacher's individual activities in their classrooms, in a more open-ended way in line with case-study interviewing (Yin, 2003:90). Consequently, each interview was specific rather than general. Rubin and Rubin affirm thus:

> unlike in survey research, in which exactly the same questions are asked each individual, in qualitative interviews, each conversation is unique, as researchers match their questions to what each interviewee knows and is willing to share (2005:4).

Although my approach did not elicit the interviewees' knowledge, I relied on how much the teachers were willing to share in the photo- and video- elicitation. Therefore, while retaining this participant-specific interviewing procedure, I used the three levels of questioning, namely: main questions, probes, and follow-ups (Bogdan & Biklen, 104; Rubin & Rubin, 2006:129-130). Initially, I based our discussion on each teacher's observed practices, captured on photo and video clips, before I asked each teacher to talk, first generally about what was going on in the lesson, and the rationale behind each activity (Bogdan & Biklen, 2007:104). The interview proceeded from general to specific. As themes began to emerge, I organized my questioning to include focused questions, moving from general to specific (Bogdan & Biklen, 2007:103; Hesse-Biber & Leavy, 2006:125; Johnson, 2001:112; Rubin & Rubin, 2005:4). In the latter stages of each teacher's individual interview, and as I began to conduct initial data analysis, I focused the comments from the video or photograph elicited, to the themes beginning to emerge. These themes were related to the developmentally appropriate framework which include teaching strategy, use of teaching materials, view of scheduling, providing for individual differences, assessment, pressure for worksheet-based tasks and their perception of free choice.

At this stage, the teacher was an equal partner with me as we co-constructed the data. As a power-sharing strategy, the teacher or I had an opportunity to choose the images to discuss, hence also determining the interview agenda. Gubrium and Holstein (2003:37) consider this a form of power-sharing collaboration to shape the meaning of the interview process, though an active participant and respondent approach. I thus avoided what Barbour and Schostak (2005:43) term 'symbolic violence' by acknowledging that participants had worthwhile views about their experiences to contribute to the study. This way, teachers too contributed by choosing the classroom experiences they wished to discuss (Rapley, 2004:15; Gubrium & Holstein, 2003:23). In any case, it is not possible, nor is it desirable for the interviewer to remain neutral in the interview process (Fontana & Frey, 2005:696). Moreover, by also offering to discuss these experiences with me, they constructively shaped the information they provided because interviews are by nature 'social constructions' (Fontana & Frey, 2005:703; Rapley, 2004:16; Gubrium & Holstein, 2003:32).

I stopped interviewing when I felt I had reached data saturation point at the point when no new information emerged from further discussions (Glaser & Strauss, in Johnson, 2001:113). In conclusion, the qualitative interviews that I used, not only gave me the leeway to explore the topic in detail, but it also gave the teachers, as collaborators, an opportunity to engage and contribute to the study objectives. In this way, they were not only partners in knowledge construction, but also, partly, the determinants of what I report as research findings. Through qualitative interviews as perhaps the only logical alternative, I accessed teachers' beliefs of developmentally appropriate educational practices and the factors determining their choice of these practices. This insight, admittedly, might not have been possible with other methods.

3.4.3.3   The use of an audiotape

In this section, I provide a glimpse of some of the advantages and disadvantages of using an audiotape and the steps that I took to minimize these disadvantages. I discuss permission, rapport and trust as some of the issues unique to the use of an audiotape.

The use of an audiotape was valuable to me, including relief from extensive writing, ability to concentrate more, verbatim record of the interview for a subsequent valid and meaningful analysis (Bogdan & Biklen, 2007:103; Rapley, 2004:18; Johnson, 2001:111-2). Although some authors problematize the use of the audiotape, and suggest that some participants are willing to talk off-tape (Cohen *et al.*, 2007:364; Rapley, 2004:1; Warren, 2001:92), I established sufficient rapport and trust to reduce teachers' anxiety related to tape-recorded interviews (Bogdan and Biklen, 2007:103; Rapley, 2004:19). Before recording, by "forcing [myself] to ask" (Bogdan & Biklen, 2007:112) I received prior permission to record the interview (Creswell, 2007:112). Consequently, the use of an audiotape did not seem to elicit any mistrust, and no participants had a problem going 'on record' (Warren, 2001:92), after I assured them of anonymity in data presentation to use for academic purposes.

On the contrary, the use of an audiotape might have facilitated a degree of trust between the participants and myself because each of the four teachers was so eager to listen to our discussion soon after the interview sessions, that they spent another extra one-hour or more listening to their recorded tapes. Initially though, I found the teachers' interest to listen to their interview sessions time-consuming, especially that I had to travel back

home several kilometres using a taxi (which are scarce late in the evening). However, reflexively, I seized it as an opportunity to reciprocate by giving my time to them. In addition, it presented an occasion for further rapport and trust (Cohen *et al.*, 2007:362; Fontana & Frey, 2005:708; Willis, 2007:83). As teachers listened to these interviews, it might have empowered them to be part of the process more, as it also gave them a sense of ownership of the interview process. Therefore, I waited for my teacher-participant to finish listening to the tape, regardless of how much haste I sensed.

Listening to a replay of the interviews was only possible through an in-built speaker. Because of this, I did not share this session with the participants, all of whom used an earphone facility. All I could see were smiles and nods, an indication to me that they were interested to hear what they had shared with me. This process, to me, was also an occasion for them to clarify any issues that they might have had. After each listening, I could observe a general sense of appreciation for the shared 'conversation'. In this way, I avoided Barbour and Schostak's (2005:43) 'symbolic violence' as well as exposing the taped 'hidden agenda' as might appear (Kvale, in Creswell, 2007:140). Table 3 (below) is a summary of the data generation framework.

TABLE 3: **Summary of the data generating strategies**

RESEARCH DESIGN	COLLECTIVE CASE STUDY		
DATA GENERATION METHODS	OBSERVATIONS	PHOTOGRAPHS	INTERVIEWS One-on one
How?: Data generation instruments	Unstructured video observations	Unstructured observation	Video and audio-elicited interviews
Where from data source	Researcher, children and teachers	Researcher, children and teachers	Researcher and teachers
Who did it	Researcher	Researcher	Researcher
Quality: trustworthiness and authenticity (see voyage 4)	Triangulated with interviews & peer reviews	Triangulate with video	Triangulation with observations & and peer reviews
Ethical considerations	Obtained written consent from teachers and parents on behalf of the children for permission to observe the learning activities	Permission from parents on behalf of their children and from teachers' on their own behalf to be photographed	Obtained written consent from the teachers to participate

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3.5   ETHICAL CONSIDERATIONS

Ethical principles are central to any research (Black, 1999:138; Creswell, 2002:13-14, 217-218; Schostak, 2006:53-54; Silverman, 2005:258-261). In line with the authors' guidelines, I endeavoured to embrace ethical principles that I discuss in the following session. These are: negotiation of access, voluntary participation, informed consent, anonymity through the use of pseudonyms, confidentiality, and, right to discontinue participation, objectivity and fairness in representing divergent views.

3.5.1   NEGOTIATING ACCESS

I had permission from the Ministry of Education to conduct research in the schools (refer to addendum four), but I still had to negotiate access to the schools, through the respective head teachers of each preschool, who were the gatekeepers (Bogdan & Biklen, 2007:50; Maxwell, 2005:82; Merkens, 2004:166; Willis, 2007:241). At this point, I clarified expectations for all participating, including the choice to withdraw from the study without notice (Bogdan & Biklen, 2007:50). Therefore, through direct negotiation with both the parents and teachers participating in the study, obtaining authorization for access and ease of entry to the research site was relatively easy.

3.5.2   VOLUNTARY PARTICIPATION AND INFORMED CONSENT

Voluntary participation and informed consent guided this study (Bogdan & Biklen, 2007:48; Christians, 2005:144; Hopf, 2004:335; Rubin & Rubin, 2005:105-6; Silverman, 2005:258) and ensured that both the teachers and parents (on behalf of their children) participated intentionally. I explained to both the parents and the teachers the nature of my study, which required me to observe and capture video data in the preschool classrooms. I negotiated directly with each individual teacher and with most of the parents, for their participation, wherein they also signed consent forms (Bogdan & Biklen, 2007:48; Hesse-Biber & Leavy, 2006:98; Silverman, 2005:258). From the teachers, I needed additional assurance for their willingness to participate in the second phase during the interviews. They all accepted.

Although I had the option of approaching parents as a group, I did not do so because I wished to avoid what I perceived as group "psychological level coercion" (Bogdan & Biklen, 2007:49). Therefore, if a parent might have declined to participate, consent from

others might easily have introduced psychological pressure also to accept. I approached parents on an individual basis, each time explaining the purpose of my study that required me to observe the children (luckily, most parents were known to me and most of them dropped off their children in the morning, so I met them then). For those parents who I could not meet personally, I left the consent forms with the teacher, explaining to them how to approach the parents and that it was not mandatory for them to consent. None of the parents declined. I assured them that my observations in the classes would not 'interrupt' the normal schedule of the school activities. Retrospectively, by the time I made such a promise, I had not reflected on the meaning of 'interruption'. On reflection however, although there was no physical interruption, I acknowledge that my presence may have interrupted the psychological space of both the children and the teachers, creating some anxiety, especially with my use of the video camera.

3.5.3   CONFIDENTIALITY

I guarantee the confidentiality of the participants by using pseudonyms (Bogdan & Biklen, 2007:50; Christians, 2005:145; Hopf, 2004:337; Rubin & Rubin, 2005:98) for the schools, teachers and children participating in the study. However, the context details might have unavoidably identifying details that I present with photographs. I also obtained consent from teachers, and from parents on behalf of children to use their visual data. Consequently, as I present the video and image data, I seek to do so sensitively[26]. Ethical sensitivity is necessary when presenting visual information.

> Visual data [sic] should be carefully weighed-up alongside the ethical issues they raise and in relation to the discipline-specific ethical codes of conduct… [and yet] visual knowledge cannot be directly or adequately translated into written words (Pink, 2005:4).

3.5.4   SENSITIVITY TO PARTICIPANTS

As part of my sensitivity to my teacher participants, I arranged for the follow-up individual interviews, at a time convenient for each of them (Hesse-Biber, 2006:124). In addition, before the start of each observation, and later interview session, I still had to seek consent to audio record our conversation (Rubin & Rubin, 2005:112). I constantly

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[26]   Even though I have consent from the participants to use video clips and photographs, my level of heightened conscientiousness to participant sensitivity will prevail as I present these visuals.

assured them of anonymity in presenting data. None of the teachers had any objections. On the contrary, one other teacher in one of the participating schools wondered why I did not include her in the study.

3.5.5   REDUCING ANXIETY

Although I did not intend nor anticipate any harm to the participants, as a precautionary measure, I endeavoured to protect all of them from psychological and physical or social harm (Bogdan & Biklen, 2007:48; Hopf, 2004:337). Consequently, I used debriefing to ensure that the teachers were comfortable throughout the research. On an ongoing basis, I carried out debriefing sessions with the participating teachers to ensure that I gauged their feelings about the observations. For the children, I eased into the site about one month before the start of the actual observations. During the data-generation period, I created some time during the children's break-time to play with them as part of establishing rapport and reduce the levels of anxiety they could have experienced during observations. In the report writing, I have ensured that I present issues accurately as a way of embracing ethics governing research (Christians, 2005:145). The following section highlights some of the limitations of this research.

3.6   LIMITATIONS OF THE CURRENT STUDY

Some limitations observed in the current research are highlighted. Firstly, since only four teachers participated, the finding and conclusions might not generalize to preschool teachers in Kenya or elsewhere, although some experiences of the study findings might resonate with certain experiences of some readers. Using more participants might give varied conclusions.

Secondly, the use of video elicitations was a strength that focused on actual lessons observed as per individual teachers. However, the method is limited because teachers perceived the discussion of their lessons as a critique rather than an information eliciting process. Future research could use visual elicitation of observed lessons of teachers other than own lessons. A focus group approach would yield a more consensual understanding of the social context dynamics. Thirdly, by focusing the interviews on particular photographs and videos during elicitation, I might have limited the teachers' contribution

to these particularities, missing other important aspects of the research not captured on photographs or video.

Notwithstanding the limitations identified in this section, the study has contributed to knowledge in general and preschool education in particular identified in voyage 8 (see section 8.8).

3.7 SUMMARY OF RESEARCH DESIGN

I chose the constructivist paradigm as the lens to guide the study because it fitted with my topic and the questions for which I sought answers. I used observations, interviews and video- and photo-elicitation strategies to understand preschool teachers' beliefs of developmentally appropriate educational practices. I have attempted to discuss in detail my reflexivity throughout the research journey to provide a lens through which to provide understanding and interpret the findings. I return to the issue of reflexivity in voyage four, where I discuss quality assurance criteria for this research. Finally, since ethical considerations are pertinent to any research to demonstrate respect for the participants (Bogdan & Biklen, 2007:50), I have presented a section on the ethical adherence procedures embraced for this study. In addition, I have reflected back on the limitations of the study. Figure 6 (below) summarizes how each step in the research design relates to the main research question.
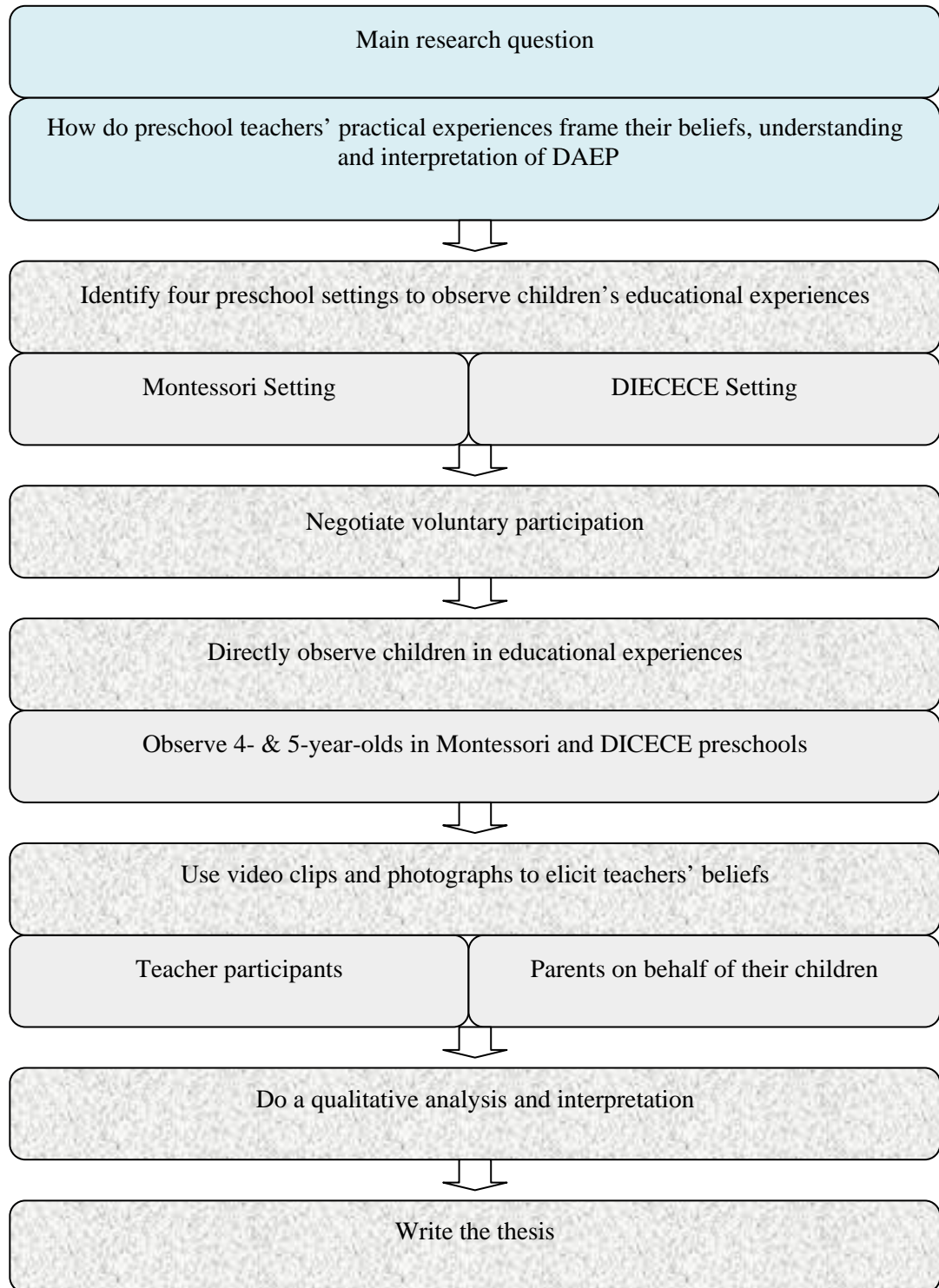
```
┌─────────────────────────────────────────────────────────────┐
│                    Main research question                    │
└─────────────────────────────────────────────────────────────┘
┌─────────────────────────────────────────────────────────────┐
│ How do preschool teachers' practical experiences frame their │
│      beliefs, understanding and interpretation of DAEP       │
└─────────────────────────────────────────────────────────────┘
                              ⇓
┌─────────────────────────────────────────────────────────────┐
│ Identify four preschool settings to observe children's       │
│ educational experiences                                      │
├──────────────────────────────┬──────────────────────────────┤
│      Montessori Setting       │       DIECECE Setting        │
└──────────────────────────────┴──────────────────────────────┘
                              ⇓
┌─────────────────────────────────────────────────────────────┐
│               Negotiate voluntary participation              │
└─────────────────────────────────────────────────────────────┘
                              ⇓
┌─────────────────────────────────────────────────────────────┐
│        Directly observe children in educational experiences  │
├─────────────────────────────────────────────────────────────┤
│ Observe 4- & 5-year-olds in Montessori and DICECE preschools │
└─────────────────────────────────────────────────────────────┘
                              ⇓
┌─────────────────────────────────────────────────────────────┐
│   Use video clips and photographs to elicit teachers' beliefs│
├──────────────────────────────┬──────────────────────────────┤
│      Teacher participants     │ Parents on behalf of their   │
│                               │           children           │
└──────────────────────────────┴──────────────────────────────┘
                              ⇓
┌─────────────────────────────────────────────────────────────┐
│           Do a qualitative analysis and interpretation        │
└─────────────────────────────────────────────────────────────┘
                              ⇓
┌─────────────────────────────────────────────────────────────┐
│                       Write the thesis                       │
└─────────────────────────────────────────────────────────────┘
```

FIGURE 6:   **Summary of the Research design**

Voyage 3: A paradigm search and methodology

The Epilogue to fieldwork

As my fieldwork ended, I had closely interacted with my participants, both emotionally and socially, beyond my researcher's role. In my role as an advisor, I challenged them to consider further studies. Most of them did not seem to belief they can upgrade their certificates to the degree level. Therefore, my second role as a counsellor and motivational speaker emerged. Luckily, at present, many tertiary colleges in town offer early childhood diploma courses, from which they qualify to join a degree course. As we chatted informally, I made them realize that their dreams lay within them, only for them to explore to actualize. They also seemed to think of financial constraints of going back to school; and so entered my financial analyst-quark (I knew their gross salary). I informed and discussed with them about the school-based programs that many Universities in Kenya currently offer during school holidays, which does not require any opportunity cost from employment, except for a few realistic financial sacrifices.

Several months after my fieldwork ended, one teacher sent me this text message: "I have got many friends, but none has ever talked to me like you did to me. Saying what you feel in your heart, which others do not want to talk about [about sacrificing to upgrade to a Diploma and Degree]. You have opened my eye. May God bless you big- good night" (This teacher has since left for further studies abroad). Yet, another teacher confessed that she had always taken for granted all along what she had been teaching children. To her, the interview was like a re-invention in her profession for conscientious teaching. Yet another teacher said she was going to repair her teaching materials.

As I departed from the field, I had a feeling that it was not only the teachers who gave me their time and willingness to participate, but that I might also have given them something in return, by influencing their thinking to view their private as well as their professional future with hope and optimism as evidenced from their comments. Fieldwork was to me a rewarding experience for all of us.

Recap of voyage 3

As we explored the third leg of this very important journey,

I showed you how I got answers to the questions…

I pondered in the beginning…

Through video and audio-elicited interviews

With four teachers in a DICECE and
Montessori preschool in a University location,

I also showed you how I took care of the ethical concerns in the study.

Coming up next in voyage four

We discuss the data analysis and presentation framework:

- Approach to data analysis

- Data Presentation road map

- Integrated presentation approach

- Road signs-teacher Pseudonyms

- Quality assurance of the entire journey

VOYAGE FOUR
DATA ANALYSIS AND PRESENTATION STRUCTURE

Further down the road in voyage number 4

R: Now it is time for an invitation to you, so that you can…

    1.   *Know how I protected the memories of my journey experience (Data processing and storage)*

    2.   *Have a glimpse to my intellectual heart, again… (Reflexivity about qualitative data)*

    3.   *Meet my journey companions in this leg of the journey   (Data presentation roadmap)*

    4.   *Have a look at the entire journey's roadmap (Objectives restated)*

    5.   *Be assured to use the right pointers for an effective journey (Quality criteria)*

            First, have a detailed view of the signposts… ….

4.1   AN OVERVIEW OF VOYAGE NUMBER FOUR

This voyage has six objectives, namely to:

i)   Provide a preview of the data-processing and storage path

ii)   Present a reflexive account through data analysis

iii)   Account for how themes were derived

iv)   Give point markers about how to access the data through the pseudonym participants and their classes

v)   Justify how various types of data are integrated, rather use than a use case-by-case approach; and finally,

vi)   Present the quality assurance details that render credibility to this research. Figure 7 (below) summarizes the outline of the voyage.
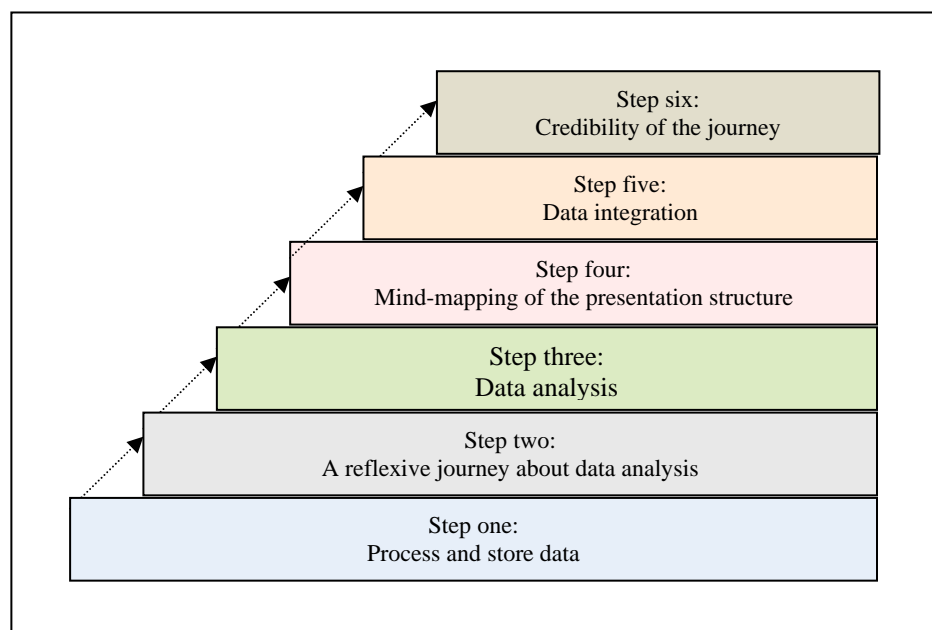
FIGURE 7:   **An outline of voyage four**

4.2   DATA PROCESSING AND STORAGE

4.2.1   INTRODUCTION

In this section, I present the data processing and storage strategy. The data were video-DVD, pictures and audiotapes. A presentation follows on the current stored form of the data, and the challenges faced during the processing of the visual data.

4.2.2 PROTECTING THE MEMORIES: DATA PROCESSING AND STORAGE

Systematic organisation and storage of data for ease of retrieval, is pertinent to data analysis (Bogdan & Biklen, 2007:159; Creswell, 2007:148; Marshall & Rossman, 2006:156; Patton, 2002:440; Schwandt, 2007:6). With the help of research assistant, I transcribed verbatim video and audio data, for storage as case files, according to the individual participants, and for later analysis and interpretation. Consequently, I stored all the data and made copies where possible (because some DVDs could not copy), and labelled each of the DVDs, audio-transcripts, photographic images and field notes according to the four teachers. In addition, I made a thematic classification of video clips from each participant's data (Tesch, 1990:141).

It was relatively easy to process audio data. However, the processing of the video data proved complex, because of the relative novelty of the DVD camcorder that I was using, which presented some technological challenges. For example, I had to learn the new DVD writing software, '*sonic*' that I had to use to write copies of them. Regardless, with time the technical details proved less challenging as I became familiar with the process. I had not conducted much of the data analysis prior to the end of this period, due to the enormity of the DVD video data processing that I had to do during the data generation period. Therefore, I completed the data transcription, storage and partial analysis successfully and was ready to continue with a more detailed data analysis, which I address in more detail in the following section. Figure 8 (below) presents the data storage and analysis process.
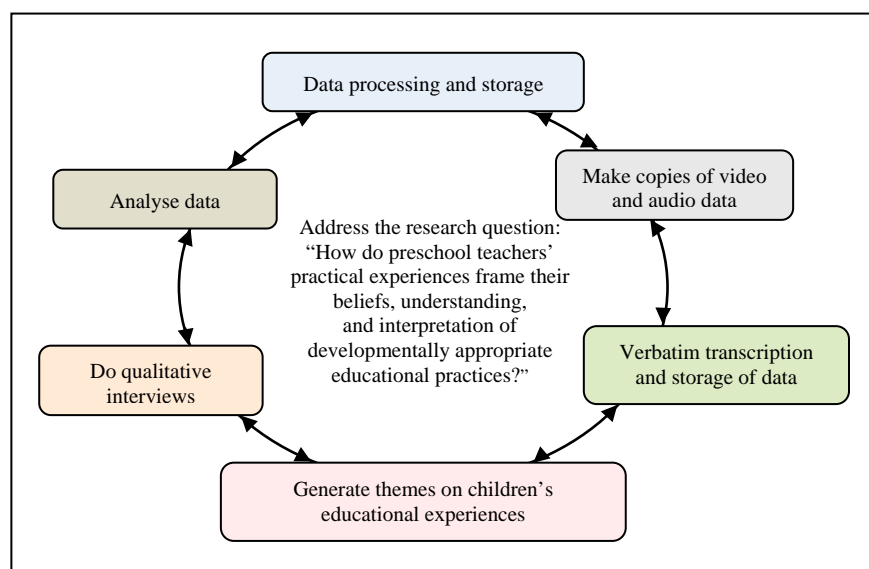

Voyage 4: Data analysis and presentation framework

FIGURE 8: **Data generation and processing design**

4.3 **THE DATA ANALYSIS PROCESS**

4.3.1 **A GENERAL OVERVIEW OF DATA ANALYSIS**

As I settled down to continue analysing audio data, it was relatively quick for me to work through the audiotapes because they were audible. Although I found it relatively easy to analyse the audio files that I had transcribed, I required more time to familiarize myself with the audio files made by the research assistants, to get the essence of the underlying themes. I did this by repeatedly listening to the audiotapes to capture the themes. However, as I immersed myself into the data, I realized that I was not adept with qualitative analysis. In the section following, I present my reflexive journey on data analysis.

4.3.2 **INSIDE THE ROUNDABOUT OF QUALITATIVE DATA; MY REFLEXIVE JOURNEY**

Delay is preferable to error (Thomas Jefferson).

In this part, I use the metaphor of a roundabout to capture my predicament during data analysis. I present my reflexive journey through the data analysis process, by offering the details of the challenges that I faced, in addition to the support and decisions made to overcome these challenges. I explain my reflexive journey through the data analysis for insight into the decisions that followed it. Such reflexivity is pertinent to data interpretation.

As I ended the fieldwork, data transcription and storage processes, I was excited that what seemed to be the most challenging phase of my study was over. However, the amount of both video and audio data processed and stored was overwhelming. What was I to do with it? I remember vividly the heightened level of uncertainty that I experienced. My foremost concern was whether I had generated the "right" data for my research questions. The more I went through the audio transcripts, the more uncertain it became. I remember discussing this with a colleague who assured me that I was on track if I had this uncertainty! Clearly, I could not continue with my analysis journey as fast as I had planned. I was reading a *"road closed"* sign ahead, to emphasize my metaphorical academic journey.

<div style="border: 2px solid black; text-align: center;">
<div style="background: red; color: white;">*CAUTION TO NEXT ROAD USER*</div>

QUALITATIVE DATA ANALYSIS
HIGHWAY TEMPORARILY CLOSED!
</div>

Therefore, for me then, it appeared that I needed a roundabout of more qualitative expertise to get me back on track. I needed some *revolutions* of reading more on qualitative data analysis to clarify my way forward. As I went through this roundabout, I had a choice to follow one of three paths: to change my research question, to go for more interview data, or to continue analyzing the data that I had.

At this stage, while deciding on the data analysis and interpretation approach, my quantitative inclination re-emerged. I had a strong urge to quantify, especially the video data, but this approach did not fit with the qualitative study. In addition, I found it a challenge to apply the suggestions of Creswell and Tesch (as quoted by Creswell, 2002:266), on how to analyze qualitative data. The process was not as straightforward as it seemed, therefore, I had to learn more about qualitative data analysis and consult widely.

In the midst of this reflexivity, consciously, the urge to find a way out led to my reading Creswell's (2007:43) advice, which warns of what happens after all the data is in "…and then we engage in the perplexing and often lonely…exercise of trying to make sense of the data." Further, acknowledging this difficulty, Bogdan and Biklen (2007:172) caution, "there, facing you is all the material you have diligently collected. An empty feeling comes over you as you ask, 'now what do I do?' They recommend that at such times, a researcher should take a break! However, for me, the costs related to such a break were prohibitive. Therefore, I immersed myself into this "forest" of data.

At this stage of my metaphorical research journey, I felt as though I was deeply in a jungle, miles off the main highway, entangled and buttressed by a thicket. It did not help that I was venturing into my major qualitative research for the first time. However, after one-on-one discussions with my supervisors about my predicament at this stage, their suggestions were very instrumental in leading me out of the 'woods'. They urged me to journal my thoughts about all the internal struggles I had, as a way of clarifying my

analysis path. The discussions we had clarified my thoughts. In particular, my concern about what might have appeared to be the teachers' use of developmentally inappropriate strategies, hence their discussion of the same in the video-elicited interviews seemed to have sidetracked my focus. A paraphrased question that Irma posed became my revelation: "Rose, whose developmentally appropriate educational practices do you seek? Is it your perspective, or the teachers' perspective?" Clearly, it was the latter, rather than a *superimposed* definition of DAEP that was the focus. Therefore, even from the *seemingly* developmentally inappropriate educational practice, teachers had their developmentally appropriate beliefs to discern.

In addition to my supervisors' support, I read more on qualitative data analysis. Besides the discussions, Prof. Irma sent me an article on "Using thematic analysis in Psychology," by Braun and Clark, (2006); while Dr. Carien gave me her copy of Morse and Richard's (2002) book; *Read me first*, both of which assisted me through the data maze. Moreover, I also attended a research support session where we had hands-on experience to analyze dummy qualitative data facilitated by Prof. Kamper. In a paraphrased conversation with him (personal talk with Prof Kamper on 25/09/2007), he used the analogy of an effective sieve, encouraging me to be an effective sieve, reiterating that the sieving process lies with the discretion of the researcher to 'mine' only the data that answers the research question. He further cautioned against being sentimental by holding on to data that might be unnecessary. Using a similar analogy, Creswell (2007:153) compares the process of data reduction to that of 'winnowing'. The consultations and wide reading equipped me for the process of conducting a qualitative analysis. I was ready to immerse myself in the data to find codes and themes.

These combined experiences that improved my knowledge of qualitative analysis empowered me to continue with the analysis process. I capture this experience in the following section, in which I present the details of how I analyzed the data and how I derived the themes that I present. In this way, I lead the reader to the sources of my themes in addition to exposing the nuances used in data analysis. Data generation and analysis were concurrent until the point of data saturation, when data analysis and interpretation commenced (Glasser & Strauss in, Johnson, 2001:113; Patton, 2002:275). Interpretation depends on the previous phases (figure 9, below).
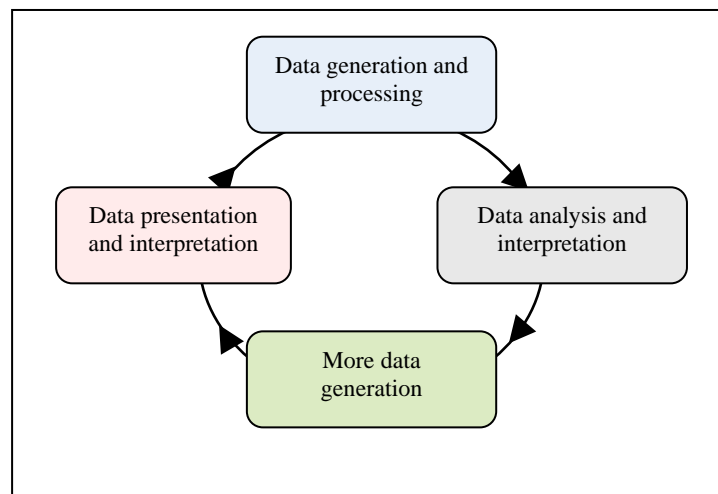
FIGURE 9: **The iterative data processing and analysis**

4.3.3 ON THE DATA ANALYSIS HIGHWAY

> If data would speak for themselves, analysis would not be necessary (Schwandt, 2007:6).

As mentioned, I had organized all the data according to participant categories by type of class, and the learning themes captured as the units of analysis (Bogdan & Biklen, 2007:159). To familiarize myself with all the data, I repeatedly viewed and listened to video and audio data, as suggested by Rapley (2004:27), each time adding any substantive information that I felt could enhance later analysis. I also reviewed each of the video clips that my research assistants had transcribed, adding any non-verbal details they excluded.

Consequently, I carried out data analysis for the video-recorded interactions captured through observations, photographs taken and follow-up interviews. Video data and photographs provided guidance in generating themes related to children's educational experiences, while interview data accessed the teachers' beliefs about developmentally appropriate educational practices in relation to the emerging themes. Using the thematically organized interview transcripts and video clips, I reduced the data into themes and sub-themes, and interpreted it through analytic memos to answer the research questions. Matt (2004:329) concludes that choice of data is already an interpretation.

4.3.4 COMBINED INDUCTIVE AND DEDUCTIVE APPROACH TO DATA ANALYSIS

Data analysis can be deductive, moving from theory to data, or inductive, moving from data to theory. Braun and Clark (2006:83-84) distinguish between the two different approaches of data analysis and the process of generating themes. In the former, a researcher identifies themes in a top-bottom approach *(a priori)*, while in the latter approach, themes emerge through a bottom-up process (*a-posteriori*) or a grounded theory approach.

My study combines two approaches, namely, the principles of DAP (Bredekamp & Copple, 1997:10-15; Kostelnik *et al.*, 2004; Warner & Sower, 2005:22-23), which subsumes the Montessori principles (Braun & Edwards, 1972:111; Gordon & Browne, 2000:15; Montessori, 1920; Torrence & Chattin-McNichols, 2005:363) and the bioecological systems theory (Bronfenbrenner, 1979; 2005). Therefore, this conceptual framework ought to have guided analysis through their *pre-figured* (Creswell, 2007:152) or *a priori* codes (Fontana & Frey, 2005:706).

The DAP framework, which subsumes the Montessori principles fitted with my analysis as a *priori* top-down, deductive theme analysis approach framework. Still using the top-down analysis approach, I would then extrapolate the data into a bioecological systems theory. Using the DAP model of analysis, I had planned to analyze the data to fit a DAP framework synthesized to three combined levels, namely child's characteristic, nature of learning environment, and the nature of school-community relations (see addendum five for my initial model). Therefore, these three broad components of a DAP framework were envisaged to capture both salient and minor factors from the data that influence preschool teachers' beliefs about children's educational experiences. By using *a priori codes*, I needed to seek instances from the data that correspond to the pre-figured codes.

However, I first had to reduce the data into themes (Braun & Clark, 2006:83-84; Cohen *et al.*, 2007*:*467-8; Creswell, 2007:148; Patton, 2002:462). Therefore, as I journeyed further along this deductive road, where I had first to identify the codes and themes from the data that fitted with the three levels of DAP already mentioned, I was concerned that I could be suppressing the data by restricting it to anecdotal instances of theory. Consequently, this approach appeared to be both rigid and anecdotal, as I would super-

impose data into the DAP framework categories (see addendum five for an illustration of my first deductive approach). While this approach has the advantage of relating data to an existing theory, it might have missed out the salient details in the data. Creswell (2007:152), including Fontana and Frey (2005:706), indeed affirm my concern that using *a priori codes*, or what Creswell (2007) terms *pre-figured codes*, could be limiting and might not reflect the views of participants.

Alternatively, the *inductive* path would provide a microanalysis or line-by-line approach (Strauss, 1998:58), rather than an anecdotal data analysis framework. Creswell (2007:152) recommends an inductive approach because it opens up codes, unlike *a priori codes* that could limit the scope of analysis. However, to embrace thematic analysis as part of the broader inductive analysis or grounded theory approach presented a challenge, especially because I was travelling a theoretical road, rather than a grounded theory one. To mitigate the negative effects of each of these two approaches, I combined both approaches. Figure 10 (below) illustrates both the inductive and deductive analyses used in the study.
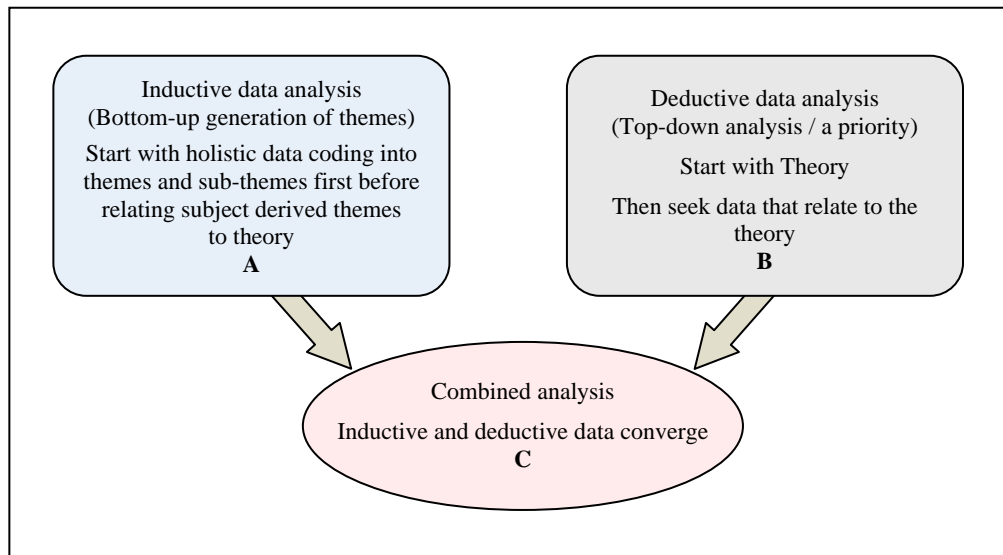
FIGURE 10:   **Inductive and deductive approaches to data analysis**

I preceded deductive analysis with the *inductive* approach that I found more elaborate, as illustrated by section A. Part A in figure 10 illustrates my initial *a priori* approach, but I later thought it could suppress the data. Part B illustrates the inductive or down-up approach while part C illustrates the combined approach.

As I decided on the approach to use, I sought peer review. During such reflexive moments, as I coded data inductively, supervisor guidance and peer reviewers' critical reading improved subsequent coding. One critical reader noted that I was already interpreting data at the first coding (see addendum six). In her view, although this was an advantage to interpretation, it could also limit the holistic view of the raw data later during interpretation. Therefore, I embraced her suggestion to use *in vivo codes* (Creswell, 2007:153) to assist me in further analysis (see addendum seven).

At this point, I found it easier and necessary to use colour highlights for the various themes that I thought were beginning to emerge (see addendum six showing a "messy" part of some of the *in vivo* codes that I identified in the process of looking for themes). The differently coloured segments indicate different constructs that I later grouped together to build themes. For example, I used highlights to segment the different themes; green for content coverage, turquoise for "planning," yellow for "nature of the child" and purple for "pressure to perform in the interview".

Later, as I progressed through the data analysis, I found it useful to follow the codes suggested by Bogdan and Biklen, (2007:174-177). In particular, I used their idea of 'coding families' as my approach to data analysis. These include setting codes, situational codes, perspective codes, process codes, event codes, strategy codes and relationship or social structure codes. This type of coding became my roadmap in many instances, but not exclusively. Apart from using these families of codes as a guideline, I used *in vivo codes* that I later scaled up to themes to correspond to a particular family code, such as strategy, situation or any other family code as appropriate.

Consequently, as I advanced through data analysis, I deciphered the themes on teaching strategy from such statements as: "*We don't go straight to teaching I first make them understand [through choral reading].*" *Scheduling* was another component of teaching that emerged from my earlier theme on planning from such statements as: "*So in the afternoon most of the work is the oral work is because by afternoon they [the children] are tired*" (Refer to addendum eight for the process through which I scaled up codes to themes). Later, as I progressed with other teachers' transcripts, I still coded and generated themes through the same process as the first coded script, but directly without using colours, because I had grasped the themes (see addendum eight). Each of the teachers' interviews was unique because it related directly to video and photographs

captured in their classes about children's educational experiences. Subsequently, I generated themes based on the guiding objective of the use of video data, as a framework to provide a general as well as a detailed nature of how preschool teacher's beliefs related to children's educational experiences. Therefore, the teacher's beliefs emerged from juxtaposing the interview with observation data consisting of photographs and video-clips as illustrated by figure 11 (below).
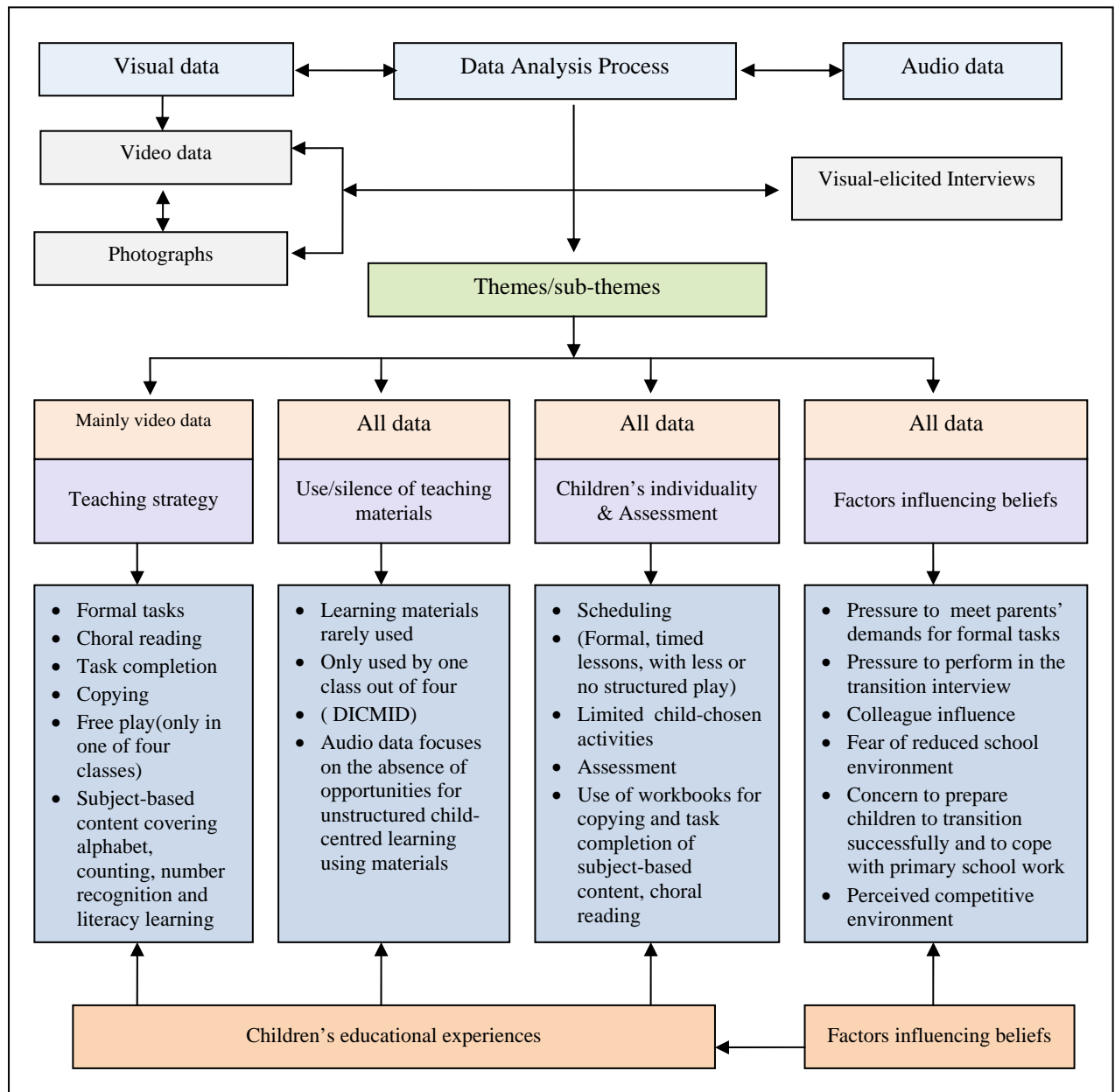

FIGURE 11:   A summary of sources of themes derived from the data

Therefore, after the inductive analysis through mining and winnowing, I extrapolate the themes to *a priori codes* (Creswell, 2007:153; 2002:239; Marshall & Rossman,

2006:158-9). Figure 12 (below) is a summary of the DAP framework and the bioecological systems theory.
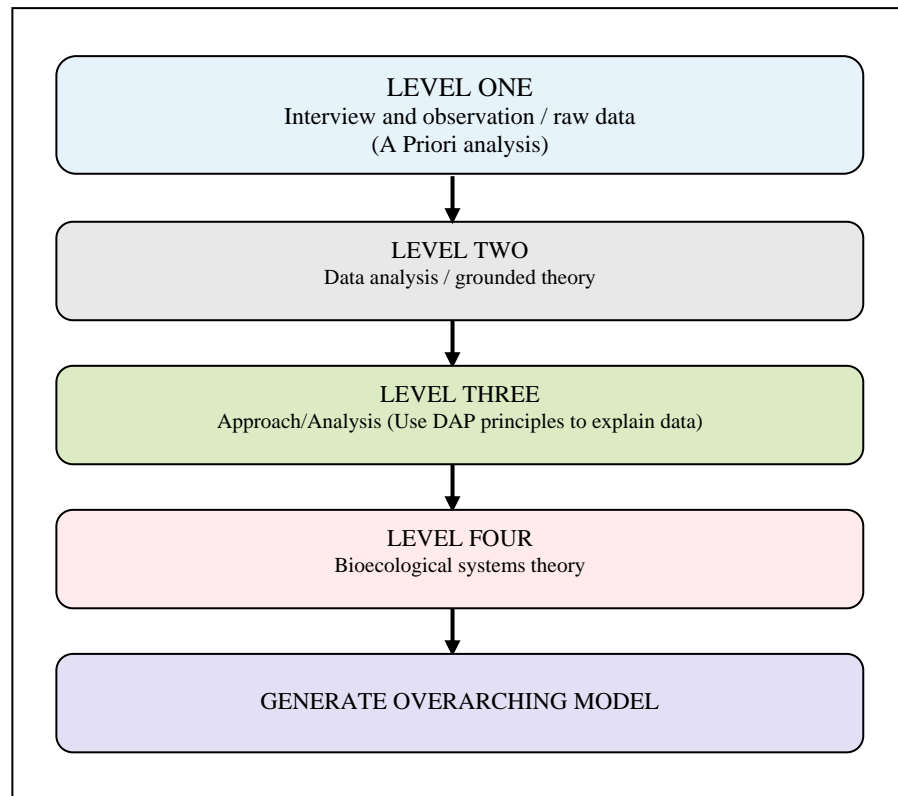
FIGURE 12: **Summary of the data analysis and interpretation framework**

The diagram illustrates the progression of the data analysis process, starting with the observation and interview data at the bottom (level one), using a grounded theory approach, data-led themes emerge at level two (the themes I present in voyage five). I then scale these themes higher to theoretical analysis at level three, as an attempt to relate these themes into existing a priori codes derived from the DAP framework. This way I contextualize the data within a general developmentally appropriate educational practices context. Further up, at level four, a *priori* codes emerging from the two perspectives are subsumed into a bioecological theory so preschool teachers' beliefs of children's educational experiences are understood and interpreted within the children's and teachers' social context.

4.4 DATA PRESENTATION FRAMEWORK

I seek to integrate data presentation strategies by using three main approaches: by instrument (interview or observation), by participant (individual teachers) and by

research questions (guiding the study). Since I had embraced a case study design, I intended to present the data on a case-by-case approach. However, there seemed to be similarities in the themes, so I decided to present the data integrated into the emerging themes. By using the research questions as guideposts, the data also presents thematically. In the following sections, I discuss the data analysis approach and referencing of data in detail. In addition, I justify the shift from a case study approach to a thematic approach, despite having designed my study using a case study design.

4.4.1 AN INTEGRATED APPROACH TO DATA PRESENTATION

Although I retain context details to inform the interpretation of the findings, I do not present the data using a case-by-case design as initially intended, because the emerging themes and nuances from all teachers were similar. Consequently, I present integrated rather than individual cases (Yin, 2003:111-2). Even as I present the data thematically, I seek to contextualise the data within each teacher's experiences. I organize data conceptually around the main themes emerging from the study, as well as using all sets of data as evidence (Yin, 2003:137). In conclusion, this section has presented an overview of the general data presentation strategy. The next section presents details of how to trace the data among the participants. Figure 13 (below) summarizes the integrated presentation design.
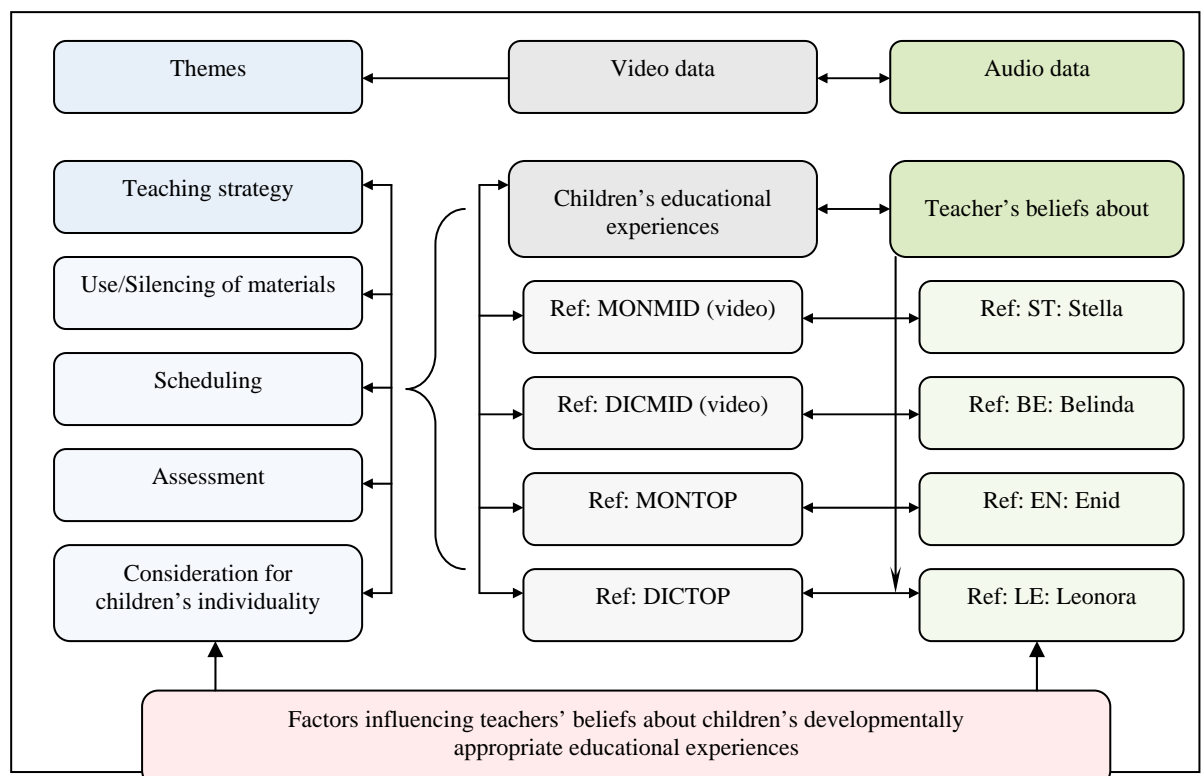

FIGURE 13: **An integrated presentation structure**

Voyage 4: Data analysis and presentation framework

4.4.2   A SYNTHESIS AND PRESENTATION OF VIDEO AND INTERVIEW DATA

This section elucidates the data presentation framework. It gives a summary of how to identify data quotes and how the various pieces of data link together. In addition, the section presents a detailed explanation of identifying both video and audio data. Throughout this section, I attempt to guide the reader towards a specific path to identifying quotes, which are referenced in the next chapter on data presentation and interpretation. Therefore, the general roadmap guides the reader to navigate and locate the referenced video and audio data with ease.

Bogdan and Biklen (2007:208) recommend that data presentation should serve the purpose intended. In my case, I seek to present data on the way preschool teachers' practical experiences frame their beliefs, understanding and interpretation of developmentally appropriate *educational* practices. Morse and Richards (2002:186) recommend two ways of presenting data; firstly a top-down approach, which precedes the interpretation with the supporting quote; and secondly, a bottom-up approach, which precedes the quote with interpretation. According to these authors, the latter approach provides the researcher with a stronger grip on analysis, but one can miss the bigger picture. I seek to integrate both, where appropriate, so that I can "give credence [to my] claims about data and provide enough description to bring the situation [I am] analyzing alive" (Morse & Richards, 2002:186).

In line with the qualitative approach, I use the actual quotes and photographs to enhance a vivid presentation of the lived world of the teachers and children (Bogdan & Biklen, 2007:207-208; Morse & Richards, 2002:186). Therefore, I integrate both video and audio data to answer the research questions. In addition, I refer to video references where relevant, even extracting verbatim video transcripts where appropriate, some of which I present as addenda.

As mentioned above, I integrate data presentation of the teachers whose certifications also varied. In some cases, I provide verbatim video transcripts and related teacher's comment in order to retain context-specificity, while allowing for a systematic presentation, analysis, and interpretation of context specific data. Because of the similarity in the conceptual themes among the four teachers participating, this approach aims at providing a more critical and context-specific approach. Consequently, each of

the particular themes and content of the quotes, in addition to the nuances, even if they appear similar at the conceptual level, might vary as I interpret. Therefore, the discussion for each theme may vary depending on a participant's perception.

4.4.3   REFERENCE TO DATA SOURCES

The verbatim quotes are specific to each teacher participant. I assumed that each of the contexts of the four teachers was unique to the context variables, such as children's ages and teacher certification, management expectations, parental expectations, and children's characteristics. Although I had intended to present the data for Montessori middle (MONMID) and Montessori top class (MONTOP) within the Montessori context, and the DICECE middle class (DICMID) and DICECE top class (DICTOP) within the DICECE context, my first draft of the data chapter had themes that were repetitive because the teachers' nuances were similar. Therefore, as mentioned, I opted for a thematic rather than a case-by-case approach, but one in which retains each teacher and context case.

Consequently, as I present the data, I support the themes with verbatim data from the interviews and reference the video and photo-related support. With reference to specific segments denoted by the symbols […], I quote the specific first two letters of the pseudonyms of the teacher's name, interview appointment number (because I had more than one interview appointment for some teachers), and the specific line where the quote can be located. When referencing interview data, I use the first two initials of the pseudonyms of the participants. The pseudonyms of the participating teachers were as follows:

- Enid (referenced EN.), the Montessori teacher for five-year-olds; teacher
- Stella (ST.), the Montessori teacher for four-year-olds; teacher
- Lenora (LE.), the teacher for DICECE five-year-olds and
- Belinda (BE.) the DICECE teacher for four-year-olds

See figure 13 {above} for a summary of the presentation structure and figure 14 {below} for specific details). This makes it easy for the reader to locate all the data.
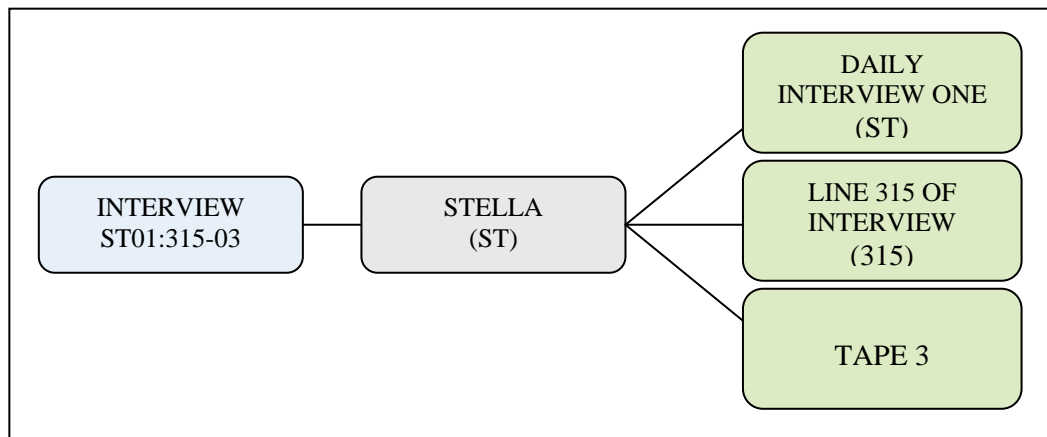
FIGURE 14: **Example of the road map to identifying interview quotes**

With reference to figure 14 (above), if I am quoting line 315 of the first appointment interview with teacher Stella, a reader sees the following [ST01:315]. Where there is more than one quote supporting an idea, one would see the following, [ST01:315; ST02:29], showing that in interview appointment one, line 315 and interview appointment two line 29, teacher Stella talked about a similar idea. On a particular day when I used more than one audiotape, a reader will come across [ST03:315-03], whereby ST03 denotes the third appointment I had with teacher Stella, line 315, denotes the verbatim quote, in tape number three, denoted by the last numbers, 03, if I used more than one tape on the particular day. In one instance, I have organized the verbatim tapes as part A and B. For example, a reader will come across [LE01A:46; 1B: 25], indicating that this quote is located on side A line 46 and side B line 25 of the first day of the interview with teacher Lenora. I generated all the segments using row numbering in a tabular form (as in row numbering in a table) to ease the tracing of quotes. I adopted this type of presentation to facilitate retracing and retrieval of quotes with ease.

Reference to video episodes uses the acronyms of the class involved, e.g. MONMID-CLIP X, represents Montessori middle class (four-year-olds), and the video clip number referenced. MONTOP represents Montessori top class (five-year-olds), followed by the video clip number series referenced. DICMID represents DICECE middle class (four-year-olds), with the reference number of clip, while DICTOP represents the DICECE top class (five-year-olds), including the video clip referenced. Figure 15 clarifies the path to identify clips.
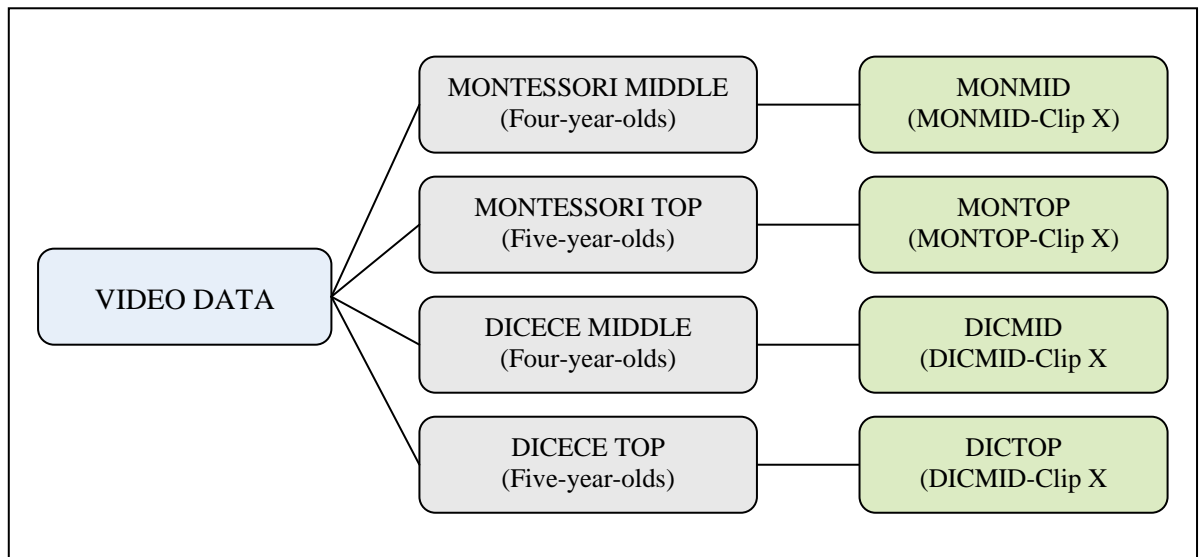
FIGURE 15: **Identifying video data**

4.4.4 **RELATING DATA PRESENTATION TO RESEARCH QUESTION**

To capture responses to the research questions, I organized the data to respond to the overarching research question, rather than to each one of them sequentially, except for question four, which I unpack as a separate chapter. To answer the main research question, I seek to present the belief themes derived from the interview data as I integrate them with the photographs and video clips that I captured during the observations. For each of the pieces of data referenced, I have explained how to trace the quotes. Figure 16 (below) illustrates the relationship between the data and the research questions.
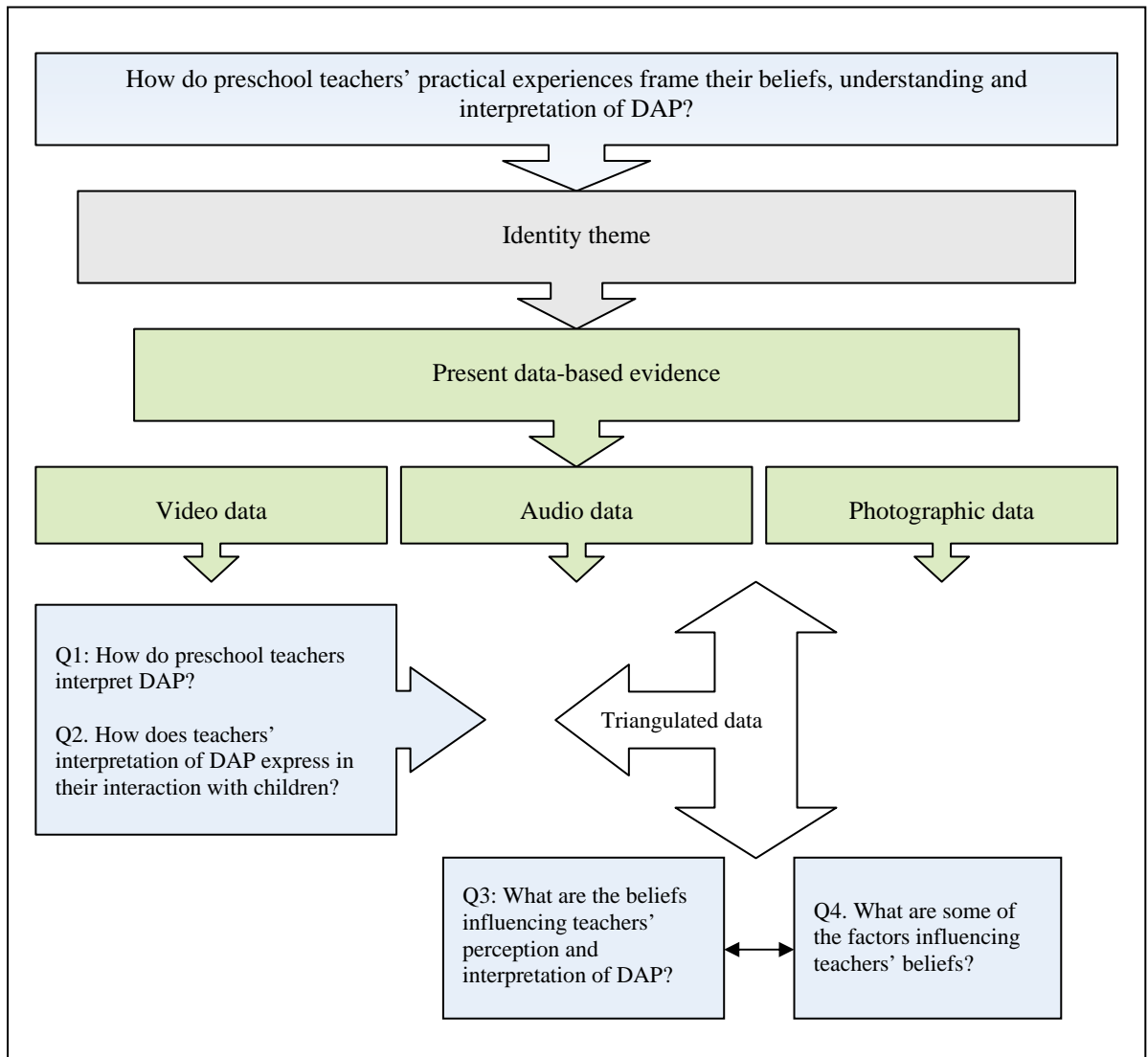
FIGURE 16:   **Question-based data analysis and presentation framework**

4.4.5   **A SUMMARY OF GENERAL PRESENTATION STRUCTURE**

Figure 16 (above) illustrates a summary of the themes that I present in the next chapters. I have discussed the specific process through which I derived the themes. As mentioned, I adopted both an inductive and *a priori* coding to derive the themes, which are related to a DAEP constructs. These themes portray the data conceptually across participants. As discussed, the actual nuances for each sub-theme might vary among the teachers, depending on the children's educational experiences that were the basis for the teacher nuances. Accordingly, I will present the themes on teaching strategy, use or silence of materials, scheduling, assessment and consideration for children's experiences in that

sequence summarized in figure 17 (below). Although Matt (2004:329) warns about subordinating the reality of others to 'theoretically derived categories,' the inductive approach that precedes the deductive analysis ensures multiple representations of the teachers' voices.
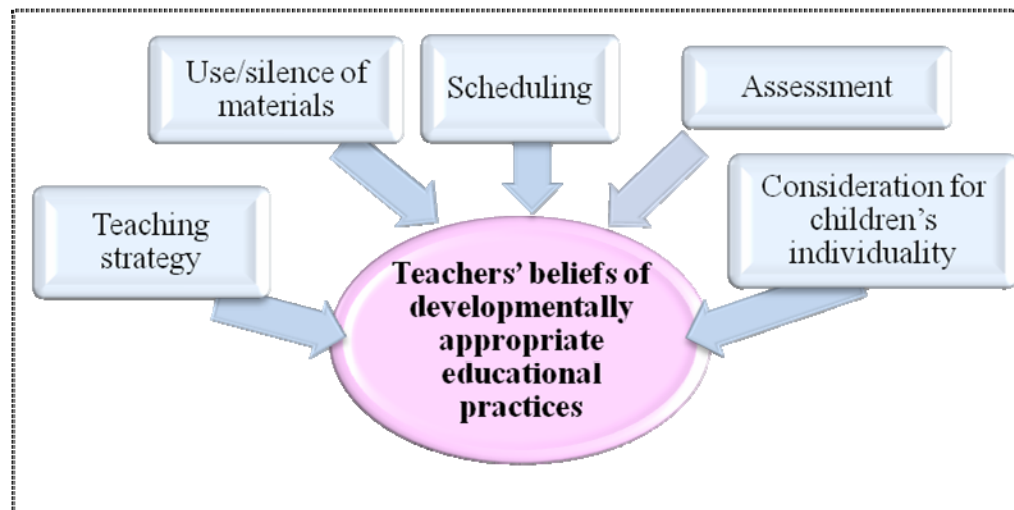

FIGURE 17:   Thematic presentation structure

4.5   A CONCLUSION ON DATA ANALYSIS AND PRESENTATION FRAMEWORK

This voyage has delved into the general and specific approach to data analysis and presentation framework, with an overview of data processing and storage. It started with a reflexive journey of the challenges presented by qualitative analysis, and the decisions taken in the process. Data analysis incorporated both an inductive and deductive approach to capture the advantages offered by a combined approach.

Although case-by-case study design presentation might have been ideal to present that data and to reflect the case study design used, the emergence of similar themes called for an integrated approach. I have also introduced the pseudonyms of the participants and contexts according to the way they will appear in the text throughout the next chapters. The presentation structure empowers the reader to navigate with greater ease the data as sources of evidence. Several addenda illustrating the process through which codes and themes emerged makes the process transparent. Therefore, the detailed data presentation strategy that I have outlined serves to identify the sources of data as an integral part of data interpretation and integrity. In the section following, I address the issue of

credibility of the research findings by addressing the quality criteria embraced in the study.

4.6   QUALITY ASSURANCE CONSIDERATIONS

4.6.1   INTRODUCTION

In this section, I discuss the criteria applicable to judging the validity of this study. Validity, 'another word for truth' in qualitative research gives credence to it (Seale, 1999:7; Silverman, 2005:210; Steinke, 2004:185). I do not claim to capture an absolute truth 'out there', but rather perceive truth as residing within personal experiences. Silverman (2005:213) correctly argues that new information might invalidate truth.

Therefore, four issues related to validity that follow in the section addresses my caution for validating this research; credibility, criticality, authenticity, and integrity (Mandle, in Creswell, 2007:206). Credibility deals with four issues that interrelate: i) the accurate interpretation of participants' meanings; ii) criticality, which addresses the question of the depth of critical appraisal of all aspects of the research; iii) authenticity, which acknowledges the existence and presentation of many voices; and finally iv) integrity that addresses the self-critical level of the investigator. Steinke (2004:186-90) suggests three broad criteria for judging qualitative research; firstly, a description of the research process (declaration of the research process and locating a research in empirical foundation); secondly, interpretation in groups and peer debriefing; and lastly, the use of codified procedures in embracing methodological congruence. I turn to these credibility issues in the subsequent sections.

4.6.2   THE BROAD PERSPECTIVES OF QUALITY

I embrace the quality criteria from three perspectives; methodological *congruence* to topic, which addresses how the method used, is relevant to topic and how it adheres to the qualitative research tradition (Howe & Eisenhardt in Creswell, 2007:211-12; Steinke, 2004:187-8; Guba & Lincoln, 2005:205). The second approach to validation addresses w*hy* I privilege one interpretation over another, in addition to choosing an interpretive study (Guba & Lincoln, 2005:205; Richardson & St. Pierre, in Creswell, 2007:211-12). The third quality criteria relate to the impact of the study on the social

lives of the study participants. My positionality and the way my research experience might resonate with the experiences of the reader provide additional quality criteria.

The strategies that I discuss were only aimed at minimizing subjectivity, since it is not possible, or even desirable to embrace absolute objectivity, and because by so doing some voices are repressed in text (Guba & Lincoln, 2005:209; Seale, 1999:15; 23; Matt, 2004:329). All the above general levels of validation of qualitative research are located in "honesty, depth, richness, and scope of data achieved, participants approached, triangulation and objectivity of the researcher" (Winter, in Cohen *et al.*, 2007:133). In addition to these, Fraenkel and Wallen (2006:462-463) include peer review, documenting sources of remarks, describing context in which questions were asked and observing individuals more than once. I have discussed my positionality and reflexivity at various points during my research, in addition to a systematic approach to data treatment (Creswell, 2007:207-8).

The linear approach to discuss individual quality assurance strategies should not suggest an isolated treatment of these criteria as independent entities. In most instances, the dividing line between any two might not be clear. Rather, I do this to provide a thorough analysis of how each one of them applied to the study.

4.6.3   POSITIONALITY

The Oxford English dictionary (2009) defines 'positionality as 'the occupation or adoption of a particular position in relation to others, usually with reference to issues of culture, ethnicity, or gender". Although I did not adopt a particular fixed position concerning my study, in this section I restrict the use of the term to how my past experiences, prejudices and orientation or 'theoretical assumptions' (Seale, 1999:167), might have influenced my choice of topic, decisions and the interpretations of the findings. In chapter one, I juxtapose the research topic within my own experience of preschool, and that of my son, in addition to my community and professional experience. In chapter three, I indicated the reasons for the choice of constructivist paradigm (see section 3.2.4), as well as the way in which the epiphanies of reflexivity throughout the data generation and analysis stages shaped the decisions made subsequent to such reflexivity. In this way, I clarify my 'researcher position' and the possible impacts, on my research decisions (Creswell,

2007:208; Howe & Eisenhardt, in Creswell, 2007:211-2; Maxwell, 2005:108; Seale, 1999:167).

4.6.4 REFLEXIVITY

Reflexivity is "the process of reflecting critically on the self as a researcher and the human as instrument" (Guba & Lincoln, in Guba & Lincoln, 2005:210). Throughout the study, I attempt a reflexive account of how the different selves that emerged for me as a researcher influenced the research process. These selves include: research-based self, brought self (a socially and historically created self) and the 'created-self' in the field (Guba & Lincoln, 2005:210). I look at how each had an impact on the decisions I made, and the relationships in the field, which led to more introspection. An "educated awareness of the consequences of particular methodological decisions during the research study, whether they relate to production of data or the choice of writing style" is requisite in qualitative research (Seale, 1999:33). In sections 4.6.4.1 and 4.6.4.2 of this chapter, I provide a reflexive account of video capturing and interviewing sessions, as moments of heightened self-awareness, not only because of the research-self, but also because of the selves arising from my 'brought selves' and 'created selves'. In section 3.2, I discussed my paradigmatic stance in the 'paradigm search journey'.

4.6.4.1 Reflexivity on capturing photo images during observations

Patton (2002:261) asserts that becoming a skilled observer requires learning to pay attention to perceptual experiences, and heightened sensitivity to being reflexive, since critical reflexivity is a resource to enter into the 'self,' to see how personal agenda and cultural bias might contribute to perceptions of what is observed (Patton, 2002:299). Relating cultural framing to visual images, Pink (2004:401) asserts that visual interpretation resides within a person's cultural repertoire of experiences. Therefore, the meanings conveyed by visual images vary according to culture (Prosser & Schwartz, 1998:115; Rose, 2001:26). In this study, the interpretations of photographs and video images that I captured are limited to the context of preschool children's indoor educational experiences. For contextual relevance and interpretation, I link the images and the video clips to the interviews, as I analyse, interpret and present data. Moreover, I also provide the educational activity relayed by the image. Consequently, the reader

ought to interpret these images within the context of the study, unless they deem fit to extrapolate meaning to other contexts.

As I captured the photographs and video, I was reflexive about my position as a researcher in order to guard against bias inherent in my own history: "Cameras do not take pictures, people do" (Paul Byers, in Prosser & Schwartz, 1998:122). Image-based researchers problematize the use of images in research, arguing that researchers might bias the construction of the image by focusing the camera lens using a particular mind (Adelman, 1998:150; Banks, 1998:10; Harper, 1998; 2002; 2005; Marshall & Rossman, 2006:120; Pink, 2004; Van Leeuwen & Jewitt, 2001).

Some authors argue that the use of electronic devices can sometimes be destructive to the attention of both the researcher and the participants (Bogdan & Biklen, 2007:113-114; Rubin & Rubin, 2005:110). However, by using discrete video or audio devices a researcher can overcome these weaknesses (Rubin & Rubin, 2005:111). Although I did not use a discrete device, I chose a small camcorder that could capture both video clips and photographic images, because having a conspicuous device might have distracted the participants more. Adelman advices:

> The internal validity of the photo document entails informed selections of what to document, being systematic through reflection in the taking of photographs, whether one approves of the action being recorded, justified sampling, low reactivity of the subjects to the presence of the photographer, 'normal printing', no editing, argued inclusion as evidence in a research report,…whether …photo, slide, film, video (Adelman, 1998:151).

Therefore, since I was aware of this possibility of biased focusing, I structured a more systematic, rotational and continuous coverage, rather than focusing on selected activities. I was also careful to capture an array of photographic as well as video episodes to provide the context for discussion, as well as interpretation of teacher beliefs of developmentally appropriate educational practices.

As I reflected on the different roles that we had, I sensed that the teachers might have perceived me as an authoritative figure based on my teaching profession at the University and my previous role in the management, as well as a former parent in one of the schools. Although it had been more than five years since I was a parent in the

Montessori preschool, I thought it might have created an impression of 'insider' in that institution, and 'outsider' in the DICECE preschool. In my interactions, subsequently, I was self-critical throughout the study to limit my bias towards the data generated.

4.6.4.2   Reflexivity on the interviews

In this section, I explore the possible biases arising from interviews. I also reflect on the challenges and reflexive moments that accompanied my interviewing. My reflections of the interviews and my own role in the interview process heightened my sensitivity and prepared me to conduct the subsequent one better.

One of the inevitable challenges that I faced during my first interview with the first participant was the open, rather than pre-determined structure of my interviews with the teacher. This openness presented a challenge, especially when a teacher was talking about the photograph from a hypothetical view, rather than what she actually did during the lesson. Since we were not focusing on the ideal but rather on the actual practice, I found it a challenge to stay focused on the research goal and purpose, However, I overcame this shortcoming in the subsequent interviews with other participants and in later interviews because I had gained a structure from preceding interviews. By organizing some questions related to the episodes chosen, or images selected from preceding interviews as follow-up questions, focusing subsequent interviews was possible.

The interview is a co-constructed process, replete with linguistic as well as cultural relevance that shape meaning in discussions (Gubrium & Holstein, 2001:4). After my first interview with the first participant, as I listened to the first tape that evening, I was "missing" in the audiotape verbally, although in reality I had used nods and other non-verbal cues, to urge on the participant. Mishler (in Gubrium and Holstein, 2003:34) confirms that 'even tokens' such as "hm" are important in the continuity of conversations, without which discourse between the participants ceases. However, Patton (2002:352,372-373) warns that the participant might mistakenly construe such tokens as approval and relevance to the topic. Therefore, in my enthusiasm to be an active interviewer in the subsequent interview, I could have overused these "even" token responses. Although I was aware of my idiosyncratic behaviour, I continued to do so t because I thought these tokens reinforced participation. In one instance, I tried to use

head nodding, but it seemed counteractive, resulting in long pauses as the participant waited for my 'mmh approval' before continuing with the conversation. Therefore, my attempt to eliminate these 'even tokens' resulted in longer than necessary pauses.

My 'guarded' approach to interviews might have originated from my quantitative training about interviews. Initially, overly conscious of the location of self in the interview process, I suppressed my "presence", inhibiting my deeper exploration of the interview responses. Consequently, because of being overly conscious not to 'contaminate' the data (Gubrium & Holstein, 2001:13-14; Johnson, 2001:107), I might have attempted to approach the first interview with a sense of neutrality, or to see the participant as "the passive vessels of answers", rather than use an open approach (Holstein & Gubrium, 2004:144).

Therefore, due to heightened reflexivity, in later interviews I positioned myself to co-construct meaning with the participant by asking questions without being overly conscious of how I was "contaminating the data" (Gubrium & Holstein, 2001:13-14). Holstein and Gubrium (2004:155) advise that "it is virtually impossible to free any interaction from those factors that could be construed as contaminants… participants… are involved in meaning construction, not contamination". I have discussed my approach to reflexivity to reveal the research decisions relevant to quality assessment so that the readers can use these to make their own value judgment.

4.6.5   THICK DESCRIPTION

I describe in detail the ever-changing research context and the assumptions guiding the study (Creswell, 2007:209; Johnson & Christensen, 2004:362). In the research study area and participants' section (refer to section 3.3.2-3.3.5), I describe the study setting to empower the reader to extrapolate the study findings to similar settings, to fulfil either 'internal generalizability' (to same setting) or 'external generalizability'(generalization beyond the setting) (Maxwell, 2005:115). Further, I present a detailed description of the methods and the decisions during the process of data generation (see 3.4.1 on classroom observations; 3.4.2 on visual-elicitation, and 3.4.3 on unstructured qualitative interviews), rather than focusing on outcomes. Therefore, I provide the reader with an opportunity to judge the credibility of the *process* and to appraise the *conclusions* based on the *reported findings* (Mehan, in Silverman, 2005:210). Creswell (2007:207)

proposes the use of term 'validation', rather than 'verification' to underscore the process over results, to judge accuracy of research findings. According to Maxwell (2005:106), it is desirable to "identify threats and to look for ways to rule them out". Therefore, the detailed description of the strategies used to collect the data, the decisions made during this phase and that of the data analysis serves as a lens to judge quality in this study (Steinke, 2004:187), especially that of method-topic harmony (Creswell, 2007:211; Guba & Lincoln, 2005:205; Steinke, 2004:188).

4.6.6   PROLONGED ENGAGEMENT

As I observed children's educational experiences, I was aware of bias inherent in observation in general (Cohen *et al*., 2007:158-9) and photography in particular (Goldstein, 2007a, b; Banks, 1998; 2001; Harper, 1998; 2002; Van Leeuwen & Jewitt, 2001; Adelman, 1998:150). Consequently, to minimize bias on the data generated, I stayed long enough in the field to build sufficient trust and to capture characteristic behaviour (Creswell, 2007:207; Maxwell, 2005:110; Steinke, 2004:188). I undertook systematic coverage in addition to other bias-reduction strategies (see section 3.4.1.3). For further trustworthiness, the video camcorder came in handy in the process. Through a mini-LCD screen, I replayed video-footage, and the still pictures to the teacher participants. Apart from confirming to me the availability of the clips, the playback of video clips also gave the teachers a review of their lessons. By seeing their interactions with the children, I noted that the teachers relaxed in the subsequent sessions. Moreover, these video-watching sessions became my moments for debriefing, allowing the teachers to ascertain their ongoing interest and to continue participating in the study. All of them participated to the end of the study.

4.6.7   TRIANGULATION

Triangulation may be defined as "the use of two or more methods of data collection, in the study of some aspect of human behaviour" (Cohen *et al.*, 2007:141), as opposed to a single method approach, replete with limitations (Guba & Lincoln, 2005:205). Yin (2003:97) posits that more than in any other design, case studies call for multiple sources of evidence to corroborate the study conclusions (Yin, 2003:98). Therefore, I embraced methodological triangulation by using audio-recorded interviews and video-recorded observations to present a more holistic picture of the preschool teachers'

beliefs and interpretations. The availability of video, photographs records and audiotapes mitigates the weaknesses inherent in both observations and interviews (inability to remember and record everything for later analysis), but also provide analytic representations of the participants' experiences. In particular, I captured an array of activities to represent 'typicality' of children's educational experiences (Mehan, in Silverman, 2005:210). Although capturing typicality may not eliminate bias according to image-based researchers (Harper, 1998:29; Banks, 1998:16), a reflexive approach to photography might reduce it. In addition to triangulation, I embrace polyvocality and multiple representations of data under themes (see voyage 5) to justify the presence of each participant in text. In this way, I avoid what Silverman (2005:21) terms *anecdotalism*, by which the researcher selectively presents the data without justification for so doing. Further, I preserved these records as testimony to data collected, subject to an inquiry audit of how raw data transformed into themes and interpretations to ease "tracing back the steps" (see appendix 8, 9, 10) to the raw data. By so doing, I minimized, even though not completely, the problem of privatizing qualitative analysis of data (Bogdan & Biklen, 2007:173).

Finally, accuracy in report writing is my responsibility when presenting factual data. As part of my self-development and preparation to do the research, I continued to acquire observation as well as video- and audio-recording skills, requisite for quality research. Creswell (2007:209, 219) suggests that in a study, any two criteria might be deemed sufficient to judge its quality. In addition to these general criteria, I define my case, indicating its values and social significance. Moreover, I present a clear description of the case as I identified themes from the case. I locate my case-derived assumptions, possibilities of generalizations, and my own positioning in the research. All these criteria are basis for Creswell's 'good case study'. However, this being my first qualitative major project, I faced all the challenges for which I provide a reflexive account. In summary, I have discussed steps I embraced towards quality assurance during the research process. By presenting a detailed account of these, I leave it to the reader to judge the quality of such efforts in this research.

4.6.8   DEALING WITH GENERALIZABILITY

I do not seek to justify my study as generalizable to other contexts. Rather, I want to provide alternative thinking to the problem of generalizability, which I hope will extend

my case study and empower the readers to construct their own opinion. Therefore, I embrace suggestions by Stake (2005:446) and Yin (2003:53), that although generalization might not be the goal of case study research, analytic conclusions from more than a single case with varied context variable, if found to be common, might provide a firm basis for generalization.

The problem of generisability is not limited to the case-study design, but is an issue to all qualitative research (Silverman, 2005:127). Hence, since my case study has demonstrated theoretical sampling, I may generalize its findings, if the study findings resonate with examples from other studies. Besides, a typological structuring (Stake, 2000:446-447) of the preschools into *Montessori* and *DICECE* provided further basis to view this study as theoretically sampled, since preschool curriculum philosophy sanctions a certain approach to the use of developmentally appropriate curriculum. Theoretical assumptions guide *curriculum* choice for four-year-olds and five-year-olds (Gordon & Browne, 2000:162). Silverman (2005:132) argues that "in focusing your research, you necessarily are making a theoretically guided choice". In addition to the theoretical sampling guided by presumptions on the research questions, I included a possible data-rich case (Montessori teacher in a DICECE preschool) as testing ground for assumptions of the study (Mason, in Silverman, 2005:132-133).

4.6.9   SUMMARY OF THE CREDIBILITY OF THE STUDY

This section has attempted to address the credibility criteria embraced in this study. Overall, these criteria embraced the suggestions for quality criteria as recommended in qualitative research. These include positionality, reflexivity, thick description, prolonged engagement, and triangulation. The section also addressed the issue of generalizability. In the next voyage, I present the data in two voyages; voyage five covers data on children's educational experiences and emerging teachers' beliefs while voyage six presents the factors that influence teachers' beliefs.

A brief sojourn after voyage four

In the past voyage, we discussed the data processing, storage, analysis and presentation framework

Had a glimpse of my reflexivity to qualitative data analysis and the challenges posed

We also discussed a brief of how an inductive and deductive approach became the data analysis frameworks

As we journeyed further down the road, we came across an integrated approach to data presentation that combines both video and audio data

And as we came to the close of this voyage, we further got a road map on how to access the details of data through a participant's road map (teacher and school pseudonyms) and sources of evidence of what we saw (video and photographs) and what we heard (audio data)

As the end of the road signs, we saw how using the right map [credibility] ensured that we went to the right directions in our journey…

We are now ready for the next voyage, which takes us to the classrooms to hear and observe, and further down the road, we can 'hear' the teachers' minds to clarify what we 'saw'…