

TABLE OF CONTENTS

	Declaration	i
	Abstract	ii
	Key Terms	iii
	Acknowledgements	iv
	Dedication	v
	Acronyms used in this study	xiii
	CHAPTER 1: INTRODUCTION AND BACKGROUND	
1.1	Introduction	1
1.2	The background to the study	1
1.3	The problem statement	3
1.4	The aims and objectives of the study	4
1.5	Research design and methodology	5
1.6	Concepts clarification	5
1.7	Limitations of the study	8
1.8	Significance and contribution of the study	8
1.9	Structure of the thesis	9
1.10	Summary	11
	CHAPTER 2: PEDAGOGY FOR PHILOSOPHICAL SKILLS	
2.1	Introduction	12
2.2	Importance of P4C	13
2.3	P4C as a democratic process for democracy	19
2.4	P4C as a pedagogic approach	23
2.4.1	Philosophical questions	23
2.4.2	Philosophical answers	26
2.4.3	Philosophical dialogue	26
2.5	Community of inquiry	29

2.6	Philosophical inquiry across curriculum	32
2.7	Prerequisite for teaching philosophical skills	35
2.8	Challenges to teaching children philosophical skills	39
2.8.1	Education in the Zimbabwean context	40
2.9	Conclusion	43
	CHAPTER 3: PHILOSOPHICAL INQUIRY IN THE HISTORY OF PHILOSOPHY	
3.1	Introduction	44
3.2	Conceptions of teacher learning	45
3.3	Critical pedagogy	48
3.3.1	Becoming a critical teacher	53
3.4	Critical rationalism	53
3.5	Critical thinking through logic	57
3.6	Philosophical inquiry and moral reasoning	60
3.7	Philosophical inquiry for social reconstructionism	64
3.8	Conclusion	69
	CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY	
4.1	Introduction	70
4.2	Interpretive paradigm	70
4.2.1	Philosophical underpinnings	71
4.2.1.1	Ontological assumptions	72
4.2.1.2	Epistemological perspective	72
4.2.1.3	Axiological assumptions	75
4.3	Qualitative approach	76
4.4	Case study strategy	76
4.5	Research methods	79
4.5.1	Data collection methods	79
4.5.1.1	Interviews	79

4.5.1.2	Focus group discussions	82
4.5.1.3	Non-participant observation	86
4.5.1.3.1	Field notes	89
4.5.1.4	Document analysis	89
4.5.2	Sampling	95
4.5.3	Participants	97
4.5.4	Data analysis	97
4.5.5	Findings and discussions	100
4.5.6	Trustworthiness	101
4.5.6.1	Credibility	101
4.5.6.2	Dependability	102
4.5.6.3	Conformability	103
4.5.6.4	Transferability	104
4.5.7	Ethical considerations	105
4.6	Conclusion	108
	CHAPTER 5: RESEARCH FINDINGS AND DISCUSSIONS ON AWARENESS, PERCEPTIONS ON ENGAGING PUPILS, IMPORTANCE OF CRITICAL THINKING AND FEASIBILITY OF INQUIRY ACROSS CURRICULUM	
5.1	Introduction	109
5.2	Research process	110
5.2.1	Biographical data	110
5.3	Findings on awareness to engage pupils in philosophical inquiry and how	111
5.3.1	Discussion on awareness to engage pupils in philosophical inquiry and how	113
5.3.2	Summary	115
5.4	Findings on the NTC student teachers' perceptions of philosophising	115
5.4.1	Discussion on the student teachers' perceptions of philosophising	117
5.4.2	Summary	121

5.5	Findings on the importance of critical thinking to learners	121
5.5.1	Findings on the importance of critical thinking to student teachers	121
5.5.1.1	Discussion on the importance of critical thinking to student teachers	125
5.5.2	Findings on the importance of critical thinking to primary school pupils	127
5.5.2.1	Discussion on the importance of critical thinking to primary school pupils	129
5.5.3	Summary	133
5.6	Findings on the effectiveness of NTC teacher education before TP	133
5.6.1	Discussion on the effectiveness of NTC teacher education before TP	135
5.6.2	Summary	140
5.7	Findings on the feasibility of employing philosophical inquiry across curriculum	140
5.7.1	Discussion on the feasibility of employing philosophical inquiry across curriculum	144
5.7.2	Summary	149
5.8	Conclusion	149
	CHAPTER 6: RESEARCH FINDINGS AND DISCUSSIONS ON CHALLENGES AND PROMOTION OF PUPILS' ENGAGEMENT IN PHILOSOPHICAL INQUIRY	
6.1	Introduction	150
6.2	Findings on the NTC student teachers' challenges in engaging student pupils in philosophical inquiry	150
6.2.1.	Findings on the NTC teacher education based challenges	150
6.2.1.1	Discussion on the NTC teacher education based challenges	154
6.2.2	Findings on the challenges in the NTC practicing schools	158
6.2.2.1	Discussion on the challenges in the NTC practicing schools	163
6.2.3	Findings on the NTC student teachers' competency based challenges	168
6.2.3.1	Discussion on the NTC student teachers' competency based	172

	challenges	
6.2.3.2	Summary	174
6.3	Findings on feasible ways of overcoming challenges and promoting engagement of pupils in philosophical inquiry	175
6.3.1	Findings on the ways of overcoming challenges and promoting philosophical inquiry in teacher education	175
6.3.1.1	Discussion on the ways of overcoming challenges and promoting philosophical inquiry in teacher education	180
6.3.2	Findings on the ways of overcoming challenges in NTC practicing schools	184
6.3.2.1	Discussion on the ways of overcoming challenges in NTC practicing schools	188
6.3.3	Findings on the ways of overcoming the NTC student teacher competency based challenges	193
6.3.3.1	Discussion on the ways of overcoming the NTC the student teacher competency based challenges	195
6.3.4	Summary	197
6.4	Conclusion	197
	CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS OF THE STUDY	
7.1	Introduction	199
7.2	Summary of the findings	199
7.3	Conclusions	205
7.3.1	Tensions and dilemmas for consideration	213
7.4	Recommendations	215
7.5	Avenues for further research	218
7.6	Concluding remarks	219
8.0	REFERENCES	221

	LIST OF FIGURES	
4.1	Research design	78
4.2	Document analysis framework	96
5.1	Summary of responses on the importance of critical thinking student teachers and pupils	124
5.2	Summary of the findings on the feasibility of employing philosophical inquiry across curriculum	144
6.1	Summary of challenges in the NTC teacher education before TP	154
6.2	Summary of the findings on the challenges in the NTC practicing schools	163
6.3	Summary of the findings on the NTC student teacher based challenges	171
6.4	Summary of the suggested ways of overcoming challenges and promoting philosophical inquiry in teacher education	179
6.5	Summary of the suggested ways of overcoming challenges and promoting philosophical inquiry in NTC practicing schools	188
6.6	The suggested ways of overcoming the student teachers' competency based challenges	194
	LIST OF TABLES	
4.1	Documents analysed	94
4.2	An example of how data was analysed using the grounded theory model	99
5.1	Approaches employed by the NTC student teachers as philosophical inquiry	116
5.2	The NTC curriculum structure before TP	135
	APPENDICES	
A	Research ethics clearance certificate	257
B	Letter of permission to do studies from the Ministry of Higher and Tertiary Education, Science and Technology Development	259
C	Permission letter from the Principal of Nyadire Teachers' College	260

D	Letter of permission from the Ministry of Primary and Secondary Education	261
E	Letter of permission from the Provincial Education Director (PED)	262
F	Letter from PED endorsed by Murewa District Education Officer (DEO) and School heads	263
G	Letter from PED endorsed by UMP District Education Officer (DEO) and School heads	264
H	Letter from PED endorsed by Mutoko District Education Officer (DEO) and School heads	265
I	Letter from PED endorsed by Mudzi District Education Officer (DEO) and School heads	266
J	A letter requesting permission from the Ministry of Higher and Tertiary Education, Science and Technology Development	267
K	A letter requesting permission from the principal of NTC	269
L	A letter requesting permission from the Ministry of Primary and Secondary Education	271
M	A letter requesting permission from Provincial Education Director	274
N	A letter requesting permission from District Education Officer	276
O	A letter requesting permission from a school head	278
P	A letter requesting parental consent	280
Q	A letter requesting assent from a primary school pupil	282
R	A letter requesting a lecturer's consent to participate	284
S	A letter requesting a student teachers' consent to be interviewed and observed teaching	287
T	A letter requesting a lecturer to moderate focus discussions	290
U	A letter requesting a student teachers' consent to participate in a focus group discussion	294
V	Interview guide for student teachers on TP	298
W	Interview schedule for lecturers	300
X	Focus group discussion guide	302
Y	Non-participant observation guide	304

ACRONYMS

BERA	British Educational Research Association
ERN	Educational Research Newsletter
HATP	Home Area Teaching Practice
HLS	Health and Life Skills
ICT	Information and Communication Technology
MCEEDYA	Ministerial Council on Education, Employment, Development and Youth Affairs
NASS	National and Strategic Studies
NTC	Nyadire Teachers' College
P4C	Philosophy for Children
PE	Physical Education
PSA	Professional Studies Syllabus 'A'
PSB	Professional Studies Syllabus 'B'
PSC	Professional Studies Syllabus 'C'
PSD	Professional Studies Syllabus 'D'
RME	Religious and Moral Education
RSA	Royal Society for the Encouragement of the Arts
UNESCO	United Nations Educational, Scientific and Cultural Organisation
SAPERE	Society for the Advancement of Philosophical Enquiry and Reflection in Education
TOE	Theory of Education
TP	Teaching Practice

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Introduction

The focus of this Chapter is to give the foundation and framework of the research. It focuses on the background and motivation for carrying out the study on Nyadire Teachers' College (NTC) student teachers' challenges in engaging pupils in philosophical inquiry and feasible solutions. This Chapter provides the statement of the problem, aims of the study, and its significance. It also focuses on the research design employed. This Chapter gives clarification of key concepts of the research and the structure of the study.

1.2 The background to the study

Children are capable of thinking from lower order through to higher order levels. According to Fisher (2005:127), Matthew Lipman (2003) believed that "children are capable of developing higher order thinking skills such as critical thinking, questioning and reasoning". These skills are central concerns in philosophy; hence, the programme that is meant to promote the development of an inquiry mind is being referred to as philosophy for children. Given today's world, where people face challenges daily at individual, societal, national and global levels, the need for people to have philosophical skills is more important now than before, hence lack of philosophical training in primary schools becomes an issue of concern. Although the Zimbabwean primary school curriculum does not have philosophy as a subject, student teachers are expected to develop thinking skills in pupils through employing philosophical inquiry in teaching other subjects in the curriculum.

Much has been written on philosophy for children in the Western countries (Wartenberg, 2009; Worley, 2011; Lone, 2012; Fisher, 2008). A significant number of scholars have focused on philosophy for children (P4C) as a subject on its own (Wartenberg, 2009:56; Lipman, Sharp & Oscanyan, 1980:108; Trickey, 2007). This study focused on engaging pupils in philosophical inquiry within the Zimbabwean context. This study generated knowledge based on research on teaching philosophical skills through other subjects in

the curriculum. The researcher viewed philosophy for children as a pedagogical approach that can be used to develop philosophical skills in children.

Trickey (2007) carried out a study on P4C. According to *The P4C Co-operative* (2013), it was carried out on a sample or class size of 10 to 12 pupils. The applicability of the findings to classes of 35 to 40 pupils that are found in Zimbabwe is questionable, hence the need to find possible ways of teaching thinking skills in a class size that is found in Zimbabwe. The study is also significant to the researcher who is a teacher educator in Philosophy of education with a responsibility of educating student teachers. It was important to find out why philosophical skills were not being taught and pupils were not being encouraged to inquire. A deeper understanding of this problem will go a long way in improving the way teacher educators at NTC prepare student teachers for Teaching Practice (TP).

When the researcher was supervising the student teachers of NTC on teaching practice, she observed that all those she was observing were asking low order questions that required pupils to recall information. The type of questions they were asking (list..., state..., name, what...? who...? and when...?) did not require pupils to reason or think critically. They promoted simple thinking skills that included activities like learning facts and learning how to remember these facts. Forehand (2014) describes this level of thinking as the lower level of Bloom's taxonomy of thinking (knowledge and comprehension level). Higher order thinking skills are important because they prepare pupils for the challenges they face in life, learning and advanced academic work. It is therefore imperative that higher order skills are developed at an early stage of education.

The student teachers in question are deployed for TP after undergoing a course in Philosophy of Education offered by the Theory of Education Department. Philosophy of Education exposes student teachers to philosophical skills and how to teach these skills through studying the philosophies of Socrates, Plato, Aristotle, Dewey, Rousseau, Montessori and Lipman, among others. Emphasis is on developing thinking skills in children. They also undergo studies on how to teach subject areas that are taught at primary school level. If such a preparation was being done, then the question to be

answered was why they were not teaching pupils to think critically. As a result, there was a need to carry out research in order to answer this question.

1.3 The problem statement

The challenge to improve children's thinking or reasoning skills lies at the centre of education. The teaching of reasoning skills to primary school pupils is very important. As Fisher (2008:2) writes, "The philosophy for children is not only a way to develop reasoning skills, but it also provides a context for moral thinking and social education". This study, therefore, sought to find out why student teachers on TP were not employing philosophical inquiry, a pedagogy that improves children's thinking. In addition, it also aimed at unearthing feasible solutions to the problem. The researcher intended to find out the feasibility of teaching philosophical skills through other subjects in the curriculum. This is in line with Atkinson's ([sa]:89) suggestion that "there should be a debate as to whether philosophy should be taught as a subject or should it be presented through other subjects".

This study also explored feasible strategies that can promote the engagement of a whole class (of about 35 to 40 pupils) in a philosophical inquiry. According to the P4C Co-operative, this is different from what other researchers such as Trickey (2007) have done. They focused on a small number of pupils, which is almost a quarter of classes that are normally found in a number of schools in Zimbabwe. However, before exploring feasible solutions the researcher investigated the perceptions of the student teachers and teacher educators of NTC on the importance of teaching pupils philosophical skills. Lone (2012) as cited in Lone and Israeloff, (2012:15) suggests: "Teachers need philosophical education in order to facilitate philosophical sessions with their pupils". The perceptions of teacher educators are important because they are the ones responsible for equipping student teachers with the necessary skills for TP. The researcher wanted to find out if the student teachers were aware of what they were supposed to do in order to promote critical thinking in pupils. This would indicate the knowledge and skills they have on how to teach critical thinking as a skill.

This research focused on critical thinking in the Freire's critical pedagogy model. Critical pedagogy that has the power not only to develop critical thinking skills but to link knowledge and thinking skills to action. It enables pupils to reflect critically upon their

world and be able to transform it for the better. This, he refers to as praxis (Freire,1993:107). This research explored the challenges faced by the NTC student teachers in engaging pupils in reflective critical pedagogy which empowers the learner. The effectiveness of available documents in facilitating the teaching of philosophical skills was evaluated. These documents included primary school syllabuses/syllabi, student teachers' schemes of work, daily lesson plans, test records and teacher educators' supervision reports. An investigation of all these aspects enabled the researcher to find feasible solutions to the challenges faced by student teachers in teaching philosophical skills such as critical thinking, reasoning, speaking, questioning, and problem solving.

In the light of the above, the main research questions that is posed in this study is:

- *What are the challenges faced by Nyadire Teachers' College students in engaging their pupils in philosophical inquiry?*
- *What are the feasible ways of overcoming them?*

In order to answer the main research question, a number of aspects related to philosophical inquiry would be explored and examined. The following sub-questions guided the researcher to focus on the main research questions:

- What are the student teachers' perceptions on philosophizing?
- What is the importance of critical thinking skills to primary school pupils in Zimbabwe?
- Are the student teachers of Nyadire Teachers College aware that they are supposed to engage pupils in philosophical inquiry and how?
- Is it feasible to teach philosophical skills through other subject areas in the curriculum?
- How effective is NTC teacher education in producing primary school teachers who are philosophically oriented?
- What are the challenges faced by student teachers of NTC in engaging their pupils in philosophical inquiry?
- What should be done to promote the engagement of primary school pupils in philosophical inquiry?

1.4 The aims of the study

The aims of this research is to investigate the challenges faced by Nyadire Teachers' College (NTC) students on teaching practice in engaging pupils in philosophical inquiry and feasible ways of overcoming them.

In line with the research sub questions, the objectives of the study are to:

- Investigate the perceptions of NTC student teachers on philosophising;
- Find out the importance of teaching critical thinking skills to primary school pupils in Zimbabwe;
- Find out if NTC student teachers on teaching practice are aware that they are supposed to engage pupils in an inquiry and how;
- Establish whether the teacher educators at NTC are doing enough or not to produce teachers who are philosophically oriented;
- To explore the feasibility of teaching philosophical skills through other subject areas in the curriculum;
- To find out why NTC student teachers are not engaging pupils in philosophical inquiry; and
- Establish ways of overcoming challenges in engaging pupils in philosophical inquiry.

1.5 Research design and methodology

The researcher employed the qualitative design. Merriam (2009:2) describes qualitative design as a research technique based on the phenomenological paradigm, which uses a variety of interpretive research methodologies. The research was conducted within a phenomenological framework. According to Smith, Flowers and Larkin (2009:12), phenomenology is variously characterized as “a method, philosophy and a theory that originated from the earliest writings of Edmund Husserl”. The researcher employed a phenomenological case study design because she wanted to study the research participants in the schools they teach. The selected student teachers were studied while teaching and pupils were studied while learning. This research explored the challenges faced in teaching pupils philosophical skills from the student teachers' frame of reference. A detailed account of the research methodology employed in this study appears in Chapter 4.

1.6 Concepts clarification

The concepts clarified below are critical to the understanding of the discourse in this study.

1.6.1 Philosophy

Philosophy is the systematic, rational and critical study of everyday fundamental questions. It asks questions such as, what is knowledge? Do we know things the same way? How do we know that we know something? Does God exist?. According to Velasquez (2011:4) the aim of examining beliefs is “not to reject them but to learn why we hold them and to establish whether there are good reasons to continue holding them”. It is different from other disciplines in that it is critical and systematic in approach and it is based on reason. Unlike other subjects, philosophy does not consist of a lot of information or theories (Velasquez, 2011:6). Theories and ideas developed by philosophers such as Plato, Aristotle and Hegel among others are not philosophy per-se but are an outcome or product of philosophy.. In this study, philosophy is therefore a mental activity that utilises skills such as reasoning and critical thinking to arrive at truth. The reason for this distinction in this study is that, if philosophy is viewed as a product then it's no longer an approach to learning.

1.6.2 Philosophy for Children

Philosophy for children is an educational programme that engages children in critical inquiry. As Fisher (2003:26) writes, “the programme was developed by Matthew Lipman in the 1970s”. Philosophy was believed to be too abstract and difficult for children to study. In this study, philosophy is a mental activity not a body of knowledge to be given to pupils. Philosophy for Children promotes the development of critical thinking and reasoning skills through philosophical inquiry (Johnson 2013:61). It engages children in philosophical discussion, which is critical, systematic and rational, with the aim of developing critical thinking skills.

1.6.3 Critical Thinking

Critical thinking is a cognitive or mental activity. According to Barnet and Bedau (2011:3), the word critical comes from a Greek word '*krinein*', meaning to separate or to choose. Critical thinking is a complex process of reflection and thought which engages a number of skills and attitudes such as conceptualizing, relating, analyzing, creating and

assessing (Cottrell, 2011:2). Critical thinking enables learners to recognize a wide range of biased analysis of otherwise unbiased data. Tittle (2011:4) describes it as “a multi-dimensional skill”. It involves a number of thinking skills. Critical thinking therefore, is a higher order mental practice that engages multi-cognitive skills such as independent thinking, reasoning dialogically and dialectically, drawing conclusions, exploring implications and consequences, evaluation of evidence and using reasoning to solve problems among others.

1.6.4 Inquiry

An inquiry is an investigation of a problem, issue, topic, subject, cause and relation among others. Inquiry requires higher-order thinking skills because learners cannot raise and answer essential questions with a simple yes or no. According to Knodt (2008:3), an inquiry focuses on building children, critical and creative skills and dispositions. This implies that an inquiry-based approach to teaching and learning increases intellectual engagement and fosters understanding of issues. Inquiry involves learners in questioning, tackling raised questions, solving problems and developing deep understanding of issues from different perspectives.

1.6.5 Pedagogy

Pedagogy is how the teaching and learning occurs. It is the process of teaching, referring to strategies and styles of instruction as well as knowledge and comfort with subject materials (Wallace & Husid, 2011:121). In this study, pedagogy is the art and science of how a skill, discipline, subject or topic is taught and how pupils learn it.

1.6.6 Reasoning

Reasoning is a process of thinking and making inferences from a body of information. Landauer and Rowlands (2001) define reasoning as “the method of thinking in an organized and clear way to achieve knowledge and understanding”. In other words, reasoning is a process of thinking which is logical, systematic and clear. A reason is a drive or cause for something or a validation for thoughts, behaviour or views (Learning Express Editors, 2010:16). In this study, reasoning is the process of thinking to find answers to higher-order questions, justify an answer, claim, position, solution and assumption and to evaluate the credibility of answers given. Reasoning enables learners to go beyond the given information.

1.7 Limitations of the study

Although the research objectives were achieved, the study had some limitations. Firstly, the researcher did not videotape the focus group discussions, individual interviews and lesson observations. These were audio-taped. The reason for choosing audio recording was to maintain confidentiality as indicated in Chapter 4. The challenge was that the researcher was not able to capture all gestures as she had to write whilst the focus group discussion was going on. Audio recordings excluded gestures, which could have been expressions of certain ideas or feelings. The interviewees focus group discussants' and pupils' gestures could have conveyed information not found in their words or written documents. In other words, gestures could have served as a source of information for the study.

Another limitation pertains to the composition of the sample. This study did not include mentors. Mentors are also involved in the process of assisting and supervising student teachers during teaching practice. These could have shed more light on challenges that are school based, since they have the responsibility of guiding student teachers.

1.8 Significance and contribution of the study

The link between research and policy is of paramount importance in education. In most cases, educational development is guided by studies carried out in education. An important factor in educational development is teacher education as it affects greatly on the teaching and learning in schools. Burton, Brundrett and Jones (2008:3) encourage educational practitioners to "utilise research skills for their own personal professional development and organisational improvement". Therefore, the teaching of primary school teachers in philosophical methods of instruction deserves attention by teacher educators and policy makers. As a teacher educator, this study is of significance to the researcher as well in that it could enhance personal and organisational reflective practice.

This study could contribute significantly to theory and practice of teacher education at NTC. The research findings could provide a deeper understanding of the level of

knowledge in the practice of NTC student teachers. It could also bring to light the student teachers' important experiences which could have been taken for granted, thereby providing a completeness of the understanding of why some of the NTC student teachers are not engaging pupils in philosophical inquiry. The issues or challenges significant to improvement of instruction could be identified. This study could give research-based knowledge on how best to prepare student teachers to be philosophically oriented. The knowledge generated would be aimed primarily at understanding and improving practice within a local context. It is through a critical approach to theory and practice of teacher education that philosophically oriented teachers are produced.

The function of research in policy issues is a significant breakthrough in educational planning and implementation. This study could provide policy makers with research-based insight on improving educational instruction and education in general. It could also demonstrate if the teaching of philosophical skills to children that has been successful in most American states can also be a success with NTC student teachers in Zimbabwe. This study explored the engagement of pupils in philosophical inquiry without necessarily following the Lipman model of having philosophy as a subject with defined content (Fisher (2005: 127). This study could clarify the real challenges faced by NTC student teachers. This research findings could contribute immensely to Zimbabwe education policy on issues to do with critical pedagogy. This study could also compel policy makers not only to address the situation but also to employ a policy-based approach to the problem.

1.9 Structure of the thesis

The study has six Chapters as indicated below.

Chapter 1: This Chapter is an overview of the study. This Chapter gave a framework of the study. It discussed the background, research problem statement, research questions and objectives, significance, contributions and limitations of the study as well as the structure of the thesis.

Chapter 2: This Chapter is a scholarship review. It focused on putting the research problem into a larger context. This Chapter identified the researches that were carried

out on the topic area. It also analysed current information related to philosophical inquiry and teaching critical thinking skills. This was done under the following themes: (1) Importance of P4C (2) P4C as a democratic process for democracy (3) P4C as a pedagogic approach (4) Community of inquiry (5) Philosophical inquiry across curriculum (6) Pre-requisite for teaching philosophical skills (7) Challenges in teaching philosophical skills.

Chapter 3: This Chapter presented a theoretical framework of philosophical inquiry. It discussed the theory and practice of philosophical inquiry from a historical and philosophical perspectives under the following themes; conceptions of teacher learning, critical pedagogy, critical rationalism, critical thinking through logic, philosophical inquiry and moral reasoning, philosophical inquiry for social reconstructionism.

Chapter 4: This Chapter discussed the research methodology. This Chapter presented the research paradigm, philosophical underpinnings, design, data collection methods and instruments. The sample and sampling procedures are provided. This Chapter also provided a model of data analysis, presentation procedures and how data was interpreted. It also gave a synopsis of steps and strategies employed to ensure trustworthiness of the findings. This Chapter ended with a discussion on ethical considerations.

Chapter 5: The findings on themes awareness, perceptions on engaging pupils in philosophical inquiry, importance of philosophical inquiry and feasibility of philosophical inquiry across curriculum are presented and discussed in this Chapter. Some of the experiences of the participants are presented accurately through direct quotations from the transcripts. It presented the '*emic*' and '*etic*' perspectives that is the participant's and the researcher's interpretation of the data presented.

Chapter 6: This Chapter presented and discussed findings on the challenges faced by NTC student teachers in engaging pupils in philosophical inquiry and feasible ways of promoting engagement of pupils in philosophical inquiry. The challenges and feasible ways of promoting engagement of learners are presented and discussed in three sub-sections, student teacher based, practicing schools and teacher education based.

Chapter 7: This is the concluding Chapter of this study. It focused on the summary of the findings, conclusions, existing tensions, recommendations and suggested areas for further research based on the research questions and findings.

1.10 Summary

This Chapter has given an introductory overview of the study. It articulated the problem, background and the context of the problem. The aims of this study were to find the challenges faced by NTC student teachers in engaging pupils in philosophical inquiry and ways of overcoming them. The significance of the research is its contribution to theory and practice of teacher education and improvement of NTC student teachers' instructional methods. In addition, the research methodology was highlighted and the key concepts used in this study were clarified. The Chapter has given a synopsis of related literature and theoretical framework which would be discussed in detail in Chapters 2 and 3 respectively. The next Chapter reviewed relevant literature showing how it shed more light on the study. Related researches are also reviewed.

CHAPTER 2

PEDAGOGY FOR PHILOSOPHICAL SKILLS

2.1 Introduction

The previous Chapter gave a general overview of the study. This Chapter focuses on contextualising this research's problem. It shall concentrate on reviewing related literature. This literature review presents philosophical inquiry as a cognitive process that tries to understand phenomena beyond the given. Among the existing literature on P4C is a philosophical genre, which focused on importance of P4C, P4C as a democratic process for democracy, P4C as a pedagogic approach, philosophical questions, dialogue and answers. It also focuses on the use of community of inquiry as an approach to teaching philosophical skills across curriculum, prerequisite for teaching P4C as well as challenges to teaching philosophical skills. This Chapter focuses on these themes. The leading authorities in the area include Lipman (2003), Lone and Israeloff, (2012), Wartenberg, (2009), Fisher, (2013), Millet and Tapper, (2012), Camhy [sa] and Vansieleghem and Kennedy, 2011).

These scholars focuses on P4C as a reflective paradigm of education, which promotes higher order thinking, social democracy, moral and aesthetic judgement. P4C plays a significant role in assuring quality in education. No matter one's area of specialization, the ability to reason and think logically should be central in any field of study. It therefore means that, teacher education should give more room for critical thinking (Ok & Toy, 2011:46; Camhy ([sa]:33; Millet & Tapper, 2011:15). Scholars concur that P4C, whether as a subject or pedagogic approach develops learners' ability to be responsible and accountable for their actions, which are informed by reasoning. Findings of a number of studies indicate that pupils who were exposed to P4C, developed cognitively, emotionally and socially (Benade, 2011:144; Gaut & Gaut, 2012:3). It has been noted that P4C does not only benefit the learner but the society as well. This literature review has focused on putting the research problem into a larger context on issues such as pedagogy, relevance, approach and application to the curriculum. These issues are discussed in the framework of Freire's critical pedagogy. This critical pedagogy empowers learners through critical thinking and awareness to transform their conditions

for the better. It therefore means that the engagement of pupils is not only for development of thinking skills but for societal transformation as well.

2.2 Importance of P4C

The engagement of children in philosophical inquiry is important for development. Globalisation has not only necessitated change in terms of technology, it has also demonstrated the need to develop thinking skills, which are necessary for research and development. Globalisation is a process by which countries are linked through trade, investments, technology and education. Research is indispensable if a nation is to develop. It is high time African countries, especially Zimbabwe, consider a paradigm shift in education. It is no longer prudent for education to produce people who know many facts in different disciplines without critical thinking skills. Global change is gradually making them irrelevant to the national development. Today's education should mould children to be future researchers who are independent, creative, and critical thinkers who will become knowledge creators rather than knowledge consumers only. Only philosophical education can be instrumental to the success of individuals and of society. Gaut and Gaut (2012:2) stress that "there are numerous benefits to children who engage in philosophical inquiry". The researcher views philosophy for children as an educational approach with cognitive and social benefits not as an end in itself but also as a means to an end.

The theory and practice of engaging primary school pupils in philosophical inquiry was widely developed by Matthew Lipman, at the beginning of the 1970s as philosophy for children. Philosophy for children is an educational programme, which is meant to develop philosophical skills in children. According to Fisher (2005:127), Lipman became aware of the low level of thinking skills that students were bringing to the College. He decided that if the problem was to be dealt with successfully, it had to be dealt with early before thinking behaviour is ingrained (Fisher, 2005:127). The main focus is the improvement of thinking skills. Lipman draws attention to the fact that children are capable of philosophizing.

The main aim of P4C is to promote the development of critical thinking in children. The programme is a philosophical pedagogy for promoting the development of intellectual skills in the learners. Critical thinking can be developed through active engagement in

philosophical inquiry. According to Daniel and Auriac (2011:415), the main objective of the P4C approach proposed by Lipman is the development of critical thinking. In an interview with Brandt (1988:34), Lipman viewed philosophy as “the most effective discipline that promotes critical thinking”. Critical thinking is a cognitive process, which includes a complex combination of intellectual skills such as interpreting, analyzing and inferring among others. Critical thinking is one of the major outcomes of philosophy for children.

A lot of research on philosophy for children has built up, amounting to thousands of academic books, articles and doctoral thesis and dissertations in different countries (The P4C Co-operative, 2013; Hannu, 2007; Barrow 2010; O’Riordan, 2013; Gorard, Siddiqui & See, 2015. *The P4C co-operative* (2013) carried out a research project on philosophy for children, ‘The Village Community School Philosophy for Children project’. The aim of his project was to improve the reasoning abilities, confidence and argument skills of two groups of year 7 pupils. The members of the English department who went for two day training taught the course. The class size was between ten to twelve pupils. According to The P4C Co-operative (2013), the results indicate “an improvement in reading and reasoning skills in pupils who did philosophy”.

Although the results of the research indicated that pupils’ reasoning improved, many things are questionable. Firstly, a class size of ten to twelve pupils is not what one normally finds in schools especially in Zimbabwe where the teacher - pupil ratio ranges from 1 is to 35 to 1 is to 45 pupils. There was a need to find out how philosophical skills can be taught in classes with 35- 45 pupils, which was also the focus of this study. If philosophy can only be taught to a very small class, it means that there is a need for at least three teachers per class, which is not practical in Zimbabwe. If researchers are generating knowledge, it is imperative that the methodology, processes and criteria are applicable to normal situations. That is why this study employed the phenomenological paradigm. Secondly, Steve, in *The P4C Co-operative* (2013) used a questionnaire to assess the pupils’ intellectual confidence, which is a different approach from what this study intends to employ. This study explained and interpreted rather than measure the evidence revealed by the study. For these two reasons, Steve’s research is not of much significance to this study.

Important to this study is a research project carried out by the Clackmannanshire Council in Finland, which was presented by Trickey (2007) at The 13th International Conference on Critical Thinking in Sweden. The project is entitled 'Promoting Social and Cognitive Development in Schools: An evaluation of thinking through philosophy'. According to Trickey (2007), the study investigated "the effects of collaborative philosophical inquiry on children's cognitive abilities and critical thinking and socio-emotional perceptions of pupils, teachers and head-teachers on outcomes arising from the thinking through the philosophy programme". From the perceptions of the NTC student teachers, the researcher was able to find out the real reason student teachers were not teaching critical thinking in primary schools. Trickey (2007) indicates that questionnaires were used to collect data for the study. It is not easy to have people's views or perceptions using questionnaires. One teacher might favour a community of inquiry for one reason and the other may favour it for a different reason. Hence, this study used interviews to collect data on the challenges faced by NTC student teachers in teaching thinking skills.

Trickey's (2007) study provided evidence that there were gains in cognitive ability, development in critical reasoning skills as well as emotional and social development. Trickey (2007) indicates that "collaborative philosophical inquiry yielded positive results. Perceptions or views and performance differ with context or environment". However, the results are relevant and true of teachers and pupils studied in Finland. What is true of teachers and pupils in Finland may not necessarily be true of teachers and pupils in other countries, hence the need to study student teachers in their context which are their practicing schools.

The importance of critical thinking cannot be overemphasized. Paul, Elder and Bartell (2013) as cited in an article titled: *A brief History of the Idea of Critical Thinking* (2013), point out that "critical thinking of the Renaissance and post-Renaissance scholars led to the emergence of science and the development of democracy, human rights and freedom of thought". Since critical thinking is central to philosophy, it therefore means that P4C can enable learners to change the order of the day for the better. Freire (1996: 68-69) rightly argues that "critical thinkers seek to transform the world through the creative power, thought and work". The teaching of such skills is of great significance; hence, this study views the teaching of philosophy as valuable for the future of a

genuine democratic Zimbabwe. In light of this, the absence of engaging pupils in philosophical inquiry by NTC student teachers becomes an issue of concern to teacher educators, policy makers in education and the nation in general.

Important to this study is a research carried out by Benade (2011) in New Zealand in 2011. This research sheds further light on the importance of P4C. Benade's research, *Philosophy for Children (P4C): A New Zealand School based Action Research Case Study*'s objective was to find out if P4C could encourage and develop students' ability to think critically (Benade, 2011:144). Benade's (2011) methodology was mainly qualitative, which is also a design employed by this study. This paradigm is suitable for a study that seeks to interpret more than analyse data. The findings of Benade's research indicate that "there was improvement in the areas of inference, deep thinking and thinking critically". This suggest that P4C improves thinking skills.

Critical thinkers do not just take things for granted. They are sceptical by nature. Benade (2011:145) describes a critical thinker as "an individual who takes nothing for granted and constantly questions and inquires". If P4C develops sceptical skills, then it is imperative that NTC student teachers engage their pupils in philosophical inquiry. In some cases, people regret having done or trusted certain things not due to wrong choice but because they took things for granted. Scepticism can mean a philosophical attitude. Through the practice of P4C, learners are able to challenge one to make a commitment to a worldview. P4C enables individuals to question as well as to justify their views, by asking whether they have adequate reasons for their assertions, beliefs, assumptions, actions and positions they adopt. Through scepticism, there is an assurance that systems are free of contradictions and absurdity. It is very important to make sure that all the information given is supported by evidence.

One's ability to learn can be explained in terms of competencies or competency gaps in the learner. Effective learning is one of the benefits of engaging in philosophical inquiry. Lipman, Sharp and Oscanyan (1980) cited in Fisher, (2013:182) point out that research evidence from a wide range of small-scale studies in countries across the world indicate that philosophy for children can improve a child's academic performance. For effective learning to take place, learners should be competent in communication, concentration, participation and cognitive ability. All these competencies can be developed through

philosophical inquiry. The findings of a study carried out by Topping and Trickey (2007:285) on collaborative philosophical inquiry indicates that, “there were significant gains in cognitive ability”. Cognitive ability entails the ability to process information, reasoning, logic, comprehension among others. Without these skills, learning can be difficult because they form the foundation of one’s ability to learn. The absence of philosophical inquiry can lead to competency gaps in learning skills, which can result in poor performance.

Although P4C was developed to promote critical thinking in the learners, research has shown that there are other benefits. According to SAPERE (2013:3), P4C is a powerful educational approach, which has cognitive and social benefits for children and schools. It should be noted that the process of inquiry and cognitive skills as a means to an end develops the social benefits. Gaut and Gaut (2012:3) have it that “P4C builds positive self-esteem and confidence in the children”. Firstly, the atmosphere is completely democratic. Secondly, the process requires the learners to be respectful and tolerant of the ideas of others. Lastly, every learner is free to express his/her opinion. Self-esteem and confidence play a significant role in the general learning process by making the learner active. It is prudent that, when the teacher engages his/her learners in philosophical inquiry he or she knows how to conduct the discussion, hence this study focused on the challenges faced by student teachers in engaging pupils in philosophical inquiry.

P4C is not only a way to develop high self-esteem and confidence, but it also provides a context for moral thinking and development. Mehta and Whitebread (2014) carried out a research project in 2004 in India using Philosophy for Children as “an intervention technique to enhance children’s socio-moral reasoning and behaviour”. One of their findings is that P4C positively influenced the social and emotional domain. Their research is of significance to this study because they used the qualitative paradigm which the researcher employs. Sutcliffe (2002) cited in UNESCO (2007:54) observed that “reasoning ensures that the values are thought through and not simply adopted”. P4C enables learners to make better moral judgments.

The theory of moral development was developed and modified by Jean Piaget (1932) and Lawrence Kohlberg (1981) respectively. According to Kohlberg’s theory, moral

development at an early stage is based on obedience to avoid punishment and actions are judged based on how they serve individual needs (Cherry 2014). This kind of moral development is not informed by reasoning. This was the case with traditional education in Africa. Children were told to observe certain rules without knowing why. Such kind of education is informed by philosophies such as perennialism and essentialism. These philosophies maintain that there are certain fundamental principles and truths which have been tried and tested in the past and proved to be basic truths of life irrespective of time. These truths should be passed on from generation to generation without questioning their credibility. Contrary to these philosophies is progressivism. This school of thought focuses on child-centred education. The aim of education according to this school of thought is to empower the child to be a critical thinker and a problem solver (Ozmon, 2012:140). This philosophy is based on the assumptions that, books are tools rather than authority. Learners are thinking beings; therefore, they should be taught how to think than what to think. Progressive education therefore, promotes critical thinking and reasoning in pupils. P4C promotes the development of good morals based on reasoning.

One's actions should be informed by reason. In the work edited by Kellner (2007:238), Marcuse asserts that "reason, in its philosophical sense, asks 'why' our actions are carried out". It explains ends autonomously in a critical and rational way. P4C develops in the learners the tendency to question one's thoughts before they are put into action. That is why philosophers such as Socrates and Plato believe that evil is due to lack of knowledge (Noddings, 2012:6; Ozmon, 2012:8). They thought that if people discover what is right, they would never act wickedly. P4C can be instrumental in directing the society to what is good through the production of citizens who seek virtue.

It is now common knowledge that critical thinking based pedagogy is the most effective way of educating future citizens. Ok and Toy carried out a significant research to this study in 2011. Their study focused on reflections of prospective teachers towards a critical thinking based pedagogy. According to Ok and Toy (2011:50), the results of the study revealed that:

“...although, some students did not feel competent enough in higher order thinking skills, the students considered the programme activities effective for studying and for the development of thinking skills,

especially in interpreting, comparing, questioning and contrasting among others”.

However, a weakness in this study is that, Ok and Toy (2011:50) used a questionnaire which is not very appropriate for a research on perceptions. Data was analysed statistically instead of being interpreted. The researchers should have employed the qualitative design as well, so that the research could have focused more on data interpretation than data analysis. Qualitative methods should have been employed as appropriate for an investigation of human thoughts and actions. Therefore, the researcher employed the qualitative design in this study which looked at perceptions and actions of NTC student teachers.

2.3 P4C as a democratic process for democracy

Democracy is not only an issue in social, economic and political arena; it is also an issue in education. Democracy is a system of government in which all the people of a state, organisation or group are involved in questioning, discussion and making decision about its affairs. P4C is one of the educational programmes that have the capacity to foster democratic skills and principles in learners. Lipman (2003:209) argues that “democracy does not require the formal content taught in a civic course but also the substantive skills provided by a discipline such as philosophy”. Lipman’s (2003:209) argument shed more light on the relationship between philosophy and democracy. On this basis, it may be inferred that P4C can play a significant role in the development of a democratic society.

The history of the relationship between philosophy and democracy can be traced back to the ancient Athens. Meagher and Feder (2010:1-13) highlight in their article: *‘The Troubled History of Philosophy and Deliberative Democracy’*, that critical thinking was viewed as a threat to democracy by Greeks. Contrary to the Athenians’ belief is the idea that critical thinking promotes processes in a democratic society. Socrates is one of the classical philosophers who linked philosophy and democracy. He questioned democracy that was not guided by reflection (Meagher & Feder, 2010:3). Critical reflection and thinking are philosophical skills. It therefore means that if schools are to produce citizens who are capable of thinking democratically then philosophical inquiry should be necessary.

Dewey (1958) was an American philosopher whose contribution was to systematise pragmatism. Like Peirce (1971), Dewey tried to clarify his ideas in terms of their consequences. Peculiar to Dewey's pragmatism was his belief in the importance of democracy in education. Park (1963:94) describes democratic education as "a philosophy of learning and school governance in which students and staff participate freely and equally in a school". Matthew Lipman's (2003:35) programme on teaching children to think critically has its roots in Dewey's idea of creating education for democracy. Education for democracy is the teaching and learning that develop skills and knowledge for active participation in social and political affairs. This teaching and learning employ methods such as community of inquiry, problem solving and project method among others. Fisher (2005:132) indicates that Lipman (2003) developed the concept of the community of inquiry with a democratic atmosphere. This implies that the teacher discusses with the pupils not as an authority but an equal partner. He is also one of the philosophers who condemned the notion that beliefs by an authority cannot be disputed (Dewey 1938:19). It can be said that Dewey's democracy forms the base of the principles that direct the community of inquiry approach. Such principles include tolerance, respect, fairness, equality and intellectual give and take.

Central to the democratic processes is decision making. Since the time of Socrates, Plato, Aristotle, scholars keep on embarking on the challenges crucial to democracy. According to Meagher and Feber (2010:9), the issue is if democracy entails equality and the right to vote by all, how can there be a guarantee that the majority's view does not just win the day than the best view? Plato distrusted democratic systems by ignorant populace. The reason being that, such citizens can make decisions from an uninformed point of view. Burgh and Yorshansky (2007:7) point out that "one of the things that citizens are required to be able to use is higher order cognitive and social skills such as reasoning, critical, creative and caring thinking, willingness to self-correct opinions and openness to the opinions of others". It can be concluded that if schools are to produce better citizens their pedagogy should promote the development of thinking skills in learners.

The literature under review clearly shows that philosophical skills are a pre-requisite for democracy. Wartenberg (2009:6) has expressed a similar view on the relationship between philosophy and democracy. He correctly argues that "as Plato's social vision

depended upon having rulers who possessed the truth, so a democratic society requires a citizenry of independent critical thinkers that only a philosophical education can produce". Citizens are expected to engage in higher order thinking on social questions to inform their conclusions about what is good and bad in the administration of their society. Fisher (2013:9) rightly points out that "there can be no democratic liberty if citizens lack the skills to differentiate lies from truth". Lack of independent critical thinking has led citizens to vote for ineffective leaders. Such citizens are not able to connect, reflect and infer. The leaders who do not want their rule to be questioned consider these. In light of this thought, Zimbabwe as a democratic state should not produce patriots in this sense. The education in Zimbabwe should produce citizens who love their country, questions, critique, reason and think critically on the affairs of Zimbabwe to solve problems and overcome challenges for national development. This is possible if teachers are empowered to develop philosophical skills in their pupils.

If nations are to uphold democratic principles genuinely, educators should focus on developing not only critical and creative thinking but also caring thinking in children. It is through the community of inquiry that such thinking is fostered. While critical thinking and creative thinking are necessary for intelligent judgments on public issues and solving problems, citizens need to be caring in their thinking. According to Fisher (2013:42-43), philosophical inquiry helps children to develop virtues such as the need to listen and respect others. Fisher (2013:43), further describes caring thinking as a kind of thinking which expresses empathy. In the process of thinking, citizens need to sense and understand the feelings of others.

Citizens in a democratic society need to consider the feelings of the marginal groups of people who have been or are disadvantaged by certain circumstances or conditions. Marginal groups are made up of people who are seen by the wider society as unimportant and in most cases they occupy the lowest ranks on social ladder. Meagher and Feber (2010:9) point out that such groups have epistemological privilege. The opinion of Sotomayor (2002) as cited in Meagher and Feber (2010:9) is that having experienced oppression, members of oppressed groups might have particular insights that are valuable to democracy. Caring thinking can be fostered in children through a community of inquiry, an approach that requires pupils to listen to, tolerate and respect others. The approach calls for inquirers to be responsible for their own thinking.

Community of inquiry promotes an atmosphere of intellectual give and take (Atkinson 1991:86). It must therefore be recognized that the process of inquiry is a practice of democracy.

It is high time society knows that democracy is a concept which entails more than mere participation and deliberation. Meagher and Feber (2010:10) draw attention to the fact that neither deliberation nor participation assures democracy. They further indicate that democracy demands that citizens deliberate well and remain open to new understandings of politics and the political. Contrary to Meagher and Feber's (2010) view, the researcher thinks that deliberation and participation are crucial in the process of democracy. It is through involvement and making contribution that democracy is achieved. If there is neither deliberation nor participation the thoughts and ideas of people cannot be known or influence the order of the day. However, significant to this study is Meagher and Feber's (2010:10) recommendation to incorporate democratic tenets into the classroom practice and to encourage reflection and practice of these tenets out of school as well. Philosophical inquiry as a democratic approach is the most suitable developmental pedagogy to encourage pupils to be reflective, hence the need to make sure that teachers are employing it.

The role of philosophical inquiry in preparing children to be future genuine democratic citizens is indispensable. The work of Hamilton (2010:2-4) shows that philosophy plays a crucial role in the fostering of deliberative democracy. The researcher is in agreement with Hamilton's position because philosophy enable participants to ask fundamental questions on issues and to reflect upon them. Philosophy is very important in fostering deliberative democracy as it promotes a thoughtful discussion among participants. Therefore, P4C does not only benefit the children themselves but the society as well. It can be viewed as education for democracy as well as democratic education. Meagher and Feber (2010:10) provide a point of departure to the study when they recommend that philosophy classes should focus on democratic skills sharply, both by teaching specific texts that provide the foundation of one's understanding of deliberation and democracy and by conducting classes in ways that empower students to be critical thinkers. Meagher and Feber (2010:10) shed more light to the study in that the process of democracy should not be learned theoretically only; it should be complemented by teachers' and pupils' practice of the democratic principles. This is why the research

explored the challenges hindering NTC student teachers in engaging pupils in philosophical inquiry.

The theory and practice of democracy cannot benefit the teacher and pupils only. Wartenberg (2009:6) points out that “society as a whole will reap the benefits of having more critical, sceptical citizens who have learned not to trust authorities simply because of their social positions, but to look for evidence and reasons on their own”. The school as a democratic institution should expose pupils to democratic processes and give them a chance to practice them through questioning their underlying theories and standards (Meagher & Feber, 2010:11). Philosophy for children can play a crucial role in developing democratic skills, principles and values in the children. In light of the foregoing review, it is important that those teaching children to philosophise should bear in mind that exposing children to the theory of democratic principles alone is not enough.

2.4 P4C as a pedagogic approach

What one says about something is determined by the way one conceptualizes it. Kurland (2000) observed that, ‘more often than not, disagreements are not because of differences in reasoning, but in the values, assumptions or information brought to bear’. Philosophers such as Plato viewed philosophy as a discipline of study with a body of truths or knowledge to be understood. Socrates engaged youths in philosophical inquiry, because he saw it as a mental activity. According to Lone (2011:78) philosophy emerged from questions, and the history of philosophy is essentially a history of questions. The focus is not on specific content but on methods. This is why Lone (2011:75) concludes that “the heart of the transformative potential of philosophical inquiry by children is their engagement in an interactive dialogue based on questions”. This study, therefore, presents P4C as a pedagogic approach which focuses on philosophical engagement through questions and answers.

2.4.1 Philosophical questions

What makes a question philosophical is not the content but how it is asked. If the teacher asks questions that require pupils to recall or remember given facts, then that teacher is not teaching thinking. Philosophical questions require learners to give an answer which is more than a ‘yes’ or a ‘no’. Learners should give reasons for their responses. Gaut and Gaut (2012:4) describe giving reasons as a philosophical method.

Higher order questions provoke learners to think deeply. It calls for a justification of one's answer. It discourages guess work, which provides answers or opinions that are not informed by any form of reasoning.

Important to this research is the work edited by Lone and Israeloff (2012:18) which provided a point of departure to this study. In their work, Lone asserts that "what makes a question philosophical is not delineated by subject matter, and there are no limits to the questions that can inspire philosophical exploration". In this landmark work, efforts have been made to explain that the response to a question and not content often determines whether it is philosophical or not. In agreement with Lone, (2012:16) is McPeck (1981) cited in Johnson (1987) who argues that "critical thinking cannot and should not be taught as a separate course". McPeck's (1981) reason is underpinned by the fact that, critical thinking is a vehicle through which content is understood. In light of this position, philosophising will be approached from a pedagogical perspective. This implies that what characterizes philosophical inquiry is not its content but the approach with which the question is being explored.

Good questioning techniques require knowing what to question and how. Camhy ([sa]:31) observes that, "what has always made notable the greatest philosophers is their skill to question what no one else has thought to question". Camhy's observation sheds more light on the problem under study. Probably one of the reasons why NTC student teachers are not engaging their pupils in philosophical inquiry is that they are not critical thinkers who think outside the box. The issue is that student teachers should not ask everyday questions if they are to engage their learners in a philosophical dialogue. There is a need to challenge what the learners believe in, assumptions and prejudices. This can provoke them to think critically, which is central to philosophy.

Some teachers do not want to think, as a result, they give learners fill-in written exercises comprising statements taken from a text. Fisher (2013:20) observes that students are rarely required to use higher order thinking skills such as inference, deduction, and analysis and evaluation. Fisher's (2013) observation is of significance to this study because it clearly states what is happening in some schools. This study therefore, had to find out why NTC student teachers are failing to engage pupils in philosophical inquiry. Maybe, the reason there is acquisition of knowledge at the

expense of developing thinking skills is that, teachers do not ask higher – order and thought provoking questions. Usually higher order questions are open-ended questions which give pupils the opportunity to share their thoughts and ideas. It is imperative that teachers know the effects of using certain pedagogical approaches. One of the aims of education, to prepare the young for the future, cannot be achieved by mere acquisition of knowledge. Learners need both wisdom and knowledge. Acquisition of facts without critical thinking skills cannot make learners problem solvers.

It is important to note that by nature pupils are capable of raising philosophical questions and philosophising. In most cases, they wonder at many things. They ask challenging questions that search for clarification and reasons. Wagner (1983) cited in Lone (2011:78), highlights that “the more accomplished a child becomes at framing questions, the more able he or she will be to think clearly and competently”. One of the researcher’s colleagues was congratulating friends on the 1st of January 2014 for the New Year. His 8-year-old daughter asked him a question which the researcher considered philosophical. She said: “How do you know that you have entered a new year?” To her, the day was just like the previous day. The colleague was surprised and could not answer. To convince such an inquiring mind, there was need to explain the system of numbering days. Therefore, questioning can be an indication of reflection and higher order thinking in the pupils.

Not all educators believe that learners are capable of inquiring. Those who believe in traditional pedagogy which is informed by philosophies such as perennialism and essentialism emphasise the teacher’s authority in the classroom. They also see the teacher as an authority. Lone (2011:79) made a good observation that often “teachers see students’ questions as having the potential to undermine their authority”. Such teachers can even become harsh and authoritative in their approach to teaching and learning. This kind of attitude could be informed by the assumption that, the teacher is the one in charge of learning and the teacher knows essential values (Freire 1996: 54). However, such teachers need to know that it is through asking questions and probing that learners develop critical thinking and skills to inquire.

2.4.2 Philosophical answers

Philosophical questions require the philosophical method to come up with a reasoned answer. The philosophical method is the process of reasoning critically. Gaut and Gaut (2012:4) rightly observe that giving reasons helps to improve the ability to think independently. Gaut and Gaut's (2012) observation sheds more light on the issue of philosophizing because reasons can only be arrived at after one engages in the process of thinking critically. Emphasis should not only be on thinking but thinking critically. The reason for this is that whenever people reason, they are thinking, but it should be noted that not all thinking is reasoning. Further to that, it should be noted that, just giving reasons alone is not enough. The answers and reasons given should be logical, valid and sound.

At times conclusions are arrived at after inferring. Kurland (2000), in his article on critical thinking, highlights that inferring as a way of reaching a conclusion can be misleading. Kurland (2000) further indicates that there can be a slim line differentiating inference from jumping into deduction. For a deduction to be valid there is need to search for purpose, basis and rationale. Important to this study is McCall's (2009) contribution as cited by Benade (2011:144) that "participants in a community of inquiry are expected to present their views logically and to engage in logical analysis". This means that learners should not focus on what is the case only but should also be able to analyse issues so as to know why it is the case.

2.4.3 Philosophical dialogue

Dialogue plays a pivotal role in the learning of philosophy. Dialogue can be defined as an exchange of ideas or thoughts on an issue, problem, crisis or topic in order to reach a conclusion, an understanding, or solve a problem. Philosophical dialogue is not a mere exchange of information. Philosophical dialogue in a classroom situation is an inquiry which engages pupils to take an effective role in their education. Camhy ([sa]:34) rightly postulates that "a philosophical dialogue is not just talking, it is a mental activity, a shared inquiry, a way of thinking critically and reflecting together". It must, therefore, be recognized that a philosophical dialogue involves complex mental processes that focus on inquiring on an issue, topic or question with a view to gain a deeper understanding and to find possible solutions.

Socrates, a Greek philosopher is regarded as the first facilitator of philosophical dialogues. According to Boucher and Kelly (2009; 48-50), "Socrates used a questioning technique, prominently known as the Socratic Method to provoke a deeper thinking and understanding of any subject". Important to this study is Socrates' belief that philosophy and the process of philosophising are open to all (Fisher, 2003:144). It should be noted that Socrates was referring to philosophy as an active process of the mind as compared to a learned body of teachings.. In light of Socrates' belief, children at primary school level are capable of philosophising and philosophy is of benefit to them as well as society.

The reason for engaging in philosophical dialogue was to challenge assumptions through critical and reflective thinking. Philosophical dialogue also entails examining one's own beliefs and assumptions. Freire (1996:73) has faith in transformative dialogue. He observes that only dialogue which requires reflection and higher order thinking is capable of generating critical thinking and changing the world (Freire, 1996:73). It is clear that Freire believes that dialogue is not just exchange of ideas for better understanding. He sees it as a part of making a difference in the society. Critical thinking can only take place if learners are engaging actively and are also responsible for their own learning. A teacher who employs a philosophical dialogic approach, views learners as subjects and not objects in the learning process. It should be noted that the traditional pedagogy regarded learners as objects who had nothing to contribute, resulting in rote learning, which Freire referred to as the banking education (Freire; 1996:54)

The challenges that people face on a day- to- day basis require them to engage in dialogue. Dialogue creates a new way of seeing a situation that needs change. The work of Buber Martin (1937) as cited in Kramer and Gawlick (2003:3) indicates that "engaging in genuine dialogue enhances the possibilities for meaningful community, for the realization of unique wholeness". Dialogue empowers learners to develop confidence, to overcome challenges and solve problems. For nations to develop, problem solvers' critical thinking skills are a prerequisite, hence this study seeks not to equip learners with philosophical skills as an end in itself but as a means to an end which is national development.

Genuine dialogue has the potential to transform the world. The German Jewish philosophical scholar first signalled the transforming possibilities of genuine dialogue (Buber Martin (1937) cited in Kramer & Gawlick, 2003:3). Buber draws attention to the fact that genuine dialogue can be a problem solving process for disputes, misunderstandings and negotiations. The League of Nations and the United Nations charters and conventions signed after the first and the second world wars respectively are a result of dialogue. Internal conflicts and civil wars in countries such as Ethiopia, Liberia, Rwanda, Sudan, Somalia and Uganda have been resolved through dialogue (Taisier & Robert, 1999:1-12, 53-85). Civil wars can be averted as well through dialogue. Zimbabwe's Government of National Unity of 2009 was a result of a dialogue. Philosophical dialogue is instrumental in the transformation of reality. Critical thinkers see beyond the surface. They are important in the process of peace building.

In his doctoral study, Golding (2010) carried out another study on engaging pupils in philosophical inquiry. Golding's (2010) doctoral study describes dialogue as "the primary mode of philosophical inquiry for Philosophy for Children". His study indicates that philosophical progress is possible if children engage in solving philosophical problems through critical dialogue. Whilst it is true that dialogue is central to engaging pupils in philosophical inquiry, his study is of little significance to this study because his ideas and examples that he gave throughout his study are not based on practical research. Conclusion should be drawn after studying teachers and pupils in the teaching-learning context. However, Golding's (2010:168) suggestion for further research on the extent to which teachers use methods which promote thinking provides a point of departure for this study. This study focused on the challenges faced by student teachers in teaching critical thinking. In that process, the researcher wanted to establish the extent to which teachers are employing philosophical inquiry, an approach which promotes critical thinking in pupils.

Philosophical dialogue gives children opportunities to engage more effectively in their learning. According to Fisher (2013:13), dialogue plays a central role in teaching thinking and has been recognized as a guiding principle for effective teaching and learning. The quality of dialogue has the power to enable or hinder cognition and effective learning. On this basis, it may be inferred that good dialogue can develop learners' ability to analyse, speculate, argue, reason and evaluate ideas. Apart from enhancing cognitive skills,

dialogue enables learners to develop skills such as respect, accepting criticism and problem solving.

2.5 Community of inquiry

Community of inquiry is a critical and collaborative approach of teaching and learning. Lipman (2003) came up with a model of learning, the 'Community of inquiry' in line with the Socratic dialogue and Peirce concept of community of inquirers (Atkinson, [sa]:85 & Fisher 2003:39). In this landmark contribution, Lipman (2003) felt that philosophical skills can be developed when children engage in dialectic. It is a strategy for developing higher order thinking skills in pupils (Fisher, 2013: 13-14). This research therefore, focused on finding out if the community of inquiry approach is feasible in classes with forty or more pupils. Lipman (2003) developed the community of inquiry as pedagogy for fostering higher order thinking in the pupils. Turgeon (1998), as cited in Burgh and Yorshanksy (2007:9), defines a community of inquiry as "a group of individuals who use dialogue to find out the problematic borders of a confusing concept". All contributions or ideas are interrogated, questioned, justified, listened to and respected by group members as potential sources of truth in an environment. The environment promotes thinking before speaking.

The community of inquiry approach takes advantage of group dynamism. Benade (2011:144) indicates that the community of inquiry encourages learners to consider different answers to questions raised. Learners who learn as a community of inquiry are able to see things from different perspectives. Apart from promoting the development of intellectual skills, the practice of community of inquiry creates conditions for social and emotional development. According to SAPERE (2010), a community of inquiry is "a group of people who investigate together with a view to increase their understanding and appreciation of the world around them and each other". The community of inquiry theory stresses the significance of thinking together as a group. This is based on the assumption that ideas are, or knowledge is, communally or socially constructed. This study will adopt this community of inquiry theory because when learners inquire as a community or group, there is room to broaden how one understands issues and the pedagogy enables learners to question beliefs and positions given by members of the community. So contributions given are not based on one's interests but on rationality.

The community of inquiry is a pedagogical practice for teachers who are philosophically minded. The concept has a philosophical focus. A proper and effective method of inquiry develops pupils' ability to think with others, search for deeper understanding and think independently. It also develops a sense of community through care, respect and co-operation. The practice of inquiry has its philosophical foundations in the Socratic dialogue. The community of inquiry is a concept coined by a pragmatist, Peirce Charles Saunders (1971), to reference interaction among scientists (Camhy, [sa]:32). Peirce believed that the only way to scientific truth is through the efforts of a community of scientific inquirers and not the method of authority (Parker 2001:2). This implies that the teacher and the pupils should search for truth as partners, not the teacher as possessor of all the knowledge.

Although Peirce (1971) restricted the approach to science, it is the best approach in all the subjects. It must therefore be recognized that truth can also be constructed socially in other subjects. His work offers a theoretical basis for Lipman's (1988) approach to P4C. However, in Lipman's (1988) approach, the teacher should encourage creativity and individuality. In Lipman's (1988) community of inquiry, solidarity does not mean uniformity. It should be noted that pupils do not always share exactly the same opinions, perspectives and ideas. In light of this, student teachers should teach learners to tolerate this difference and respect each other's view. John Dewey (1953) is also one of the philosophers from the pragmatist tradition whose educational ideas emphasised communal and self-corrective inquiry. According to Camhy (2014), Dewey acknowledges that "while it is important to inquire collectively, it is also important to be reasonable in all deliberations". The contributions by these pragmatists is of significance to this study because they focus on what is central to the practice of P4C, which is critical, creative, caring and collaborative thinking.

Teachers always grapple with the challenges of pedagogical shortcomings in their practice. Engagement of pupils in a large class has always been problematic to teachers. According to Fisher (2013:160), scholars recommend a community setting of about twelve to sixteen pupils as an ideal number. The reason for a small number is to ensure that all the community members contribute. Although Fisher (2013:160) indicates that successful discussions can be achieved with group sizes from 2-36 or more, he acknowledges that there are problems associated with the use of large groups. The idea

of sitting in a circle with a small group is to enhance the effectiveness of the approach and affording every member a chance to contribute and hear what others are saying. If the community of inquiry approach is to be employed in Zimbabwe where classes have about 30 to 50 pupils, alternatives have to be found. Fishers' proposal that the problem of large numbers can be overcome by dividing the class into groups or by including work in pairs and small groups during part of the discussion time provides a point of departure to the study. Based on Fishers' proposal, it can be feasible to employ the community of inquiry approach to classes in Zimbabwe with large numbers.

Some of the teachers who follow the traditional methods of teaching see the learners as empty vessels. They impose their views on the learner. This is because of their assumptions which breed what Freire described as "the banking concept of education", (Freire 1996:54). In a community of inquiry, the teacher discusses with pupils not as authority but an equal partner. Both the teachers and the learners engage in a community of inquiry to discover meanings in life. Important to this study is the contribution by Burgh and Yorshansky (2007:7-10) who highlight one of the roles of the teacher as to guide and deal with power and its distribution as a resource. This role is underpinned by the assumption that the success of a community of inquiry depends on the ability to share power and resources fairly. This is the process of affording each other time to listen to others contributing and time to be heard. They make it clear that the distribution time and ideas as resources influence the result of the inquiry process. This can be a challenge to teachers who are not competent. Their contributions shed light to this study, which investigated the challenges faced by NTC student teachers in engaging their pupils in philosophical inquiry.

Related literature indicates the importance of cooperation in the learning process. Lipman, as cited in Millet and Tapper (2011:6), observes that "children work at a different and higher level when doing intellectual work cooperatively". When children learn as a community, they develop intellectually. Vygotsky's (1986) socio-cultural theory expresses a similar view. According to this theory, social interaction is critical in the development of cognition (Gerrig & Zimbardo, 2010:310). Vygotsky's theory is significant to this study which focused on promoting the engagement of pupils in philosophical inquiry. Through the community of inquiry, pupils are exposed to a number of intellectual activities such as reasoning, questioning and justifying one's and other children's

answers and assumptions. Through these communal intellectual activities, children can become critical and reflective thinkers. Dewey (1933:6) in his work, '*How we think*', explains reflective thinking as:

“Active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends...”

In his effort to show the relationship between reflective thinking and the education process, Dewey draws attention to the fact that for thought to qualify as reflective it should be established based on reasons.. Reasoning is necessary in the process of contemplating.

The community of inquiry approach can be used in any discipline. What is necessary is the provision of subject matter which prompts critical thinking in the learners. An article by Teaching Times (2014) sheds further light on the study. It explains that a stimulus can be content from any subject or discipline. The article, Teaching Times (2014), states that “children are asked to generate questions, highlight paradoxes, problems and anything of interest or not clear”. This suggests that the pupils and not the teacher as an authority set tasks for the community of inquiry.

The community of inquiry as a pedagogy has many benefits to the teacher and pupils. It has been argued by UNESCO (2007:8) that “if pupils are not learning as a community of inquiry, they will not learn to ask each other questions, to define their terms or to argue rationally when others disagree with them”. The approach puts inquiry at the centre of the educational process. It should be noted that through a community of inquiry, learners do not only learn about philosophy as a discipline but they also philosophise which is doing philosophy. It is therefore imperative that NTC student teachers employ effective pedagogy to ensure quality in their teaching.

2.6 Philosophical inquiry across the curriculum

The philosophical inquiry approach is more of skills than content oriented. Lipman (1980: 41) proposed that P4C be introduced as a subject on its own. A number of studies done focused on P4C as a subject (Topping & Trickey, 2007:271-275; Benade, 2011:146; Ok & Toy, 2011: 46). However, the fact that most of the studies have taken P4C as a subject does not necessarily mean that critical thinking, reflection and reasoning cannot

be taught through other disciplines. Any kind of subject content or narrative can be used as a mode of philosophical inquiry. Atkinson (1991:89) points out that there should be a debate as to whether philosophy should be a subject in the primary school curriculum or should it be presented through other subjects and areas of knowledge. Lipman (1980: 41) advocates that P4C be taught as a subject.

Hegel ([sa]:34) was against the traditional way of instruction which promoted memorising facts. Whilst Hegel condemned traditional didactic forms of teaching and learning in favour of reflection and reason, he also makes it clear that the subject matter is also important. Hegel ([sa]:34) indicates that the process of inquiry should not be at the expense of the subject matter. Hegel's argument suggests that whilst thinking and reasoning are critical in the learning process, the content of the subject should not be ignored. For example, historical thought cannot be done in isolation of the subject matter; therefore, knowledge of the subject becomes a springboard. The engagement of pupils in critical thinking should not relegate the importance of the knowledge of academic disciplines. If subjects in the curriculum can be used as a springboard for philosophical inquiry, then the question that needed to be answered was why the NTC student teachers were failing to engage pupils in philosophical inquiry. In light of Hegel's ideas, pupils should be engaged in philosophical inquiry so that they become reflective, analytic and critical of what they learn in academic disciplines. Hegel's ideas shed further light on the study which focused on philosophical inquiry across the curriculum.

There is a scholarly debate on whether for children, philosophy, should be taught as a separate subject on its own or should it be taught in combination with other subjects the students are studying. The work of Fisher (2005: 127) indicates that Lipman (1980) proposed that children be offered a course of study in thinking itself. Fisher (2008:18) sheds more light on the problem under study in his book entitled: *Teaching thinking: philosophical inquiry in the classroom*, which is not about teaching children the subject philosophy but focuses on how to engage them in a philosophical discussion. Fisher (2008:18) provides a platform upon which this study is built, by drawing attention to the fact that "philosophy for children is not all about a body of facts but skills that can be applied in any field of knowledge". Fisher's thinking is in line with Atkinson ([sa]:89) who proposes for a holistic approach of teaching children philosophy through other subjects and areas of knowledge.

There are mixed views among scholars on whether P4C should be taught as a subject or through other subjects in the curriculum. On one hand of this intellectual debate are those who follow Lipman's (1980) model. These believe that P4C should be taught as a subject. On the other hand the work of various scholars amongst them, Gaut and Gaut, (2012:2); Fisher, (2013:153); Wartenberg, (2009:7) and Murriss, (2012), indicates that P4C can be taught through other subjects in the curriculum. This study will follow the latter because of the researcher's assumption that any subject requires philosophical skills. The other reason being that the primary curriculum in Zimbabwe is so congested that it is not feasible to have adequate time to develop philosophical skills through P4c as a subject.

Those who concur with Lipman's (1980) tradition of having critical thinking as a subject on its own do not give convincing reasons. The teacher can employ, in any subject, methods which can develop critical thinking in pupils. It therefore means that philosophy for children can be taught through other subjects in the curriculum. Those who believe that philosophy for children should be taught using novels such as Lipman's (1985) Harry Stottlemeier's Discovery are of the idea that it should be taught as a separate subject. If philosophy for children does not mean to master a body of facts then any subject can be used to develop philosophical skills, which is the focus of this study.

Scholars who follow Lipman's (1980) model are of the opinion that, P4C should be taught as a subject because they believe that P4C requires novels as its literature. Murriss (2012) in her work entitled: '*The Philosophy for Children Curriculum, Narrativity and Higher –order Thinking*' indicates that Lipman's reasons for the use of his philosophical novels centre around the need for a particular kind of philosophy textbook that guides non-philosophically trained teachers. Murriss (2012) points out that central philosophical ideas, themes and questions have been injected into the text without the use of technical jargon. Murriss (2012) has drawn attention to the fact that philosophical novels are not just literature. Philosophical ideas and themes injected into them make them philosophical novels.

A weakness in this justification is the assumption that not every literature or discipline can be used as stimulus for critical thinking. Murriss (2012) focuses on "how the choice of

philosophical novels as texts for lessons in philosophy limits the possibility of achieving what it claims to do". Murriss' (2012) criticism provides a platform upon which this study is built. What promotes the development of meta-cognitive inquiry is not the text but the teacher's ability to engage the pupils in higher order thinking. Contrary to Murriss' (2012) position, Fisher (2013:91) points out that one of the chief benefits of using a story as a stimulus for thinking in the classroom is that "a good story arouses the interest and involvement of the child". However, he indicated also that stories are problematic in that they cannot be tested against standards of empirical verification or logical necessity. Murriss (2012) makes it clear that "critical thinking cannot be modelled by a novel but by a teacher who models a critical stance towards the text". On this basis, it may be inferred that Lipman's (1980) justification was based on questionable assumptions. It should be recognized that any literature which requires reflection, critical thinking and exploration can be used as a stimulus for philosophical inquiry.

Significant to this study is Fisher's (2013:153) contribution that philosophical dialogue has no fixed curriculum. Thus, it could be concluded that a teacher can teach P4c without necessarily having P4C as a subject on the timetable which is the focus of this study. In agreement with Fisher is Wartenberg (2009:7) who notes that "elementary school philosophy is a methodology for teaching material that is already part of the curriculum". Wartenberg's definition of P4C shed further light on this study, which focused on finding the feasibility of engaging pupils in philosophical inquiry in all the disciplines across the curriculum. Although Fisher (2013:90; 94) highlights problems associated with the use of stories or novels, he acknowledges that stories are intellectually challenging as they create possible worlds as objects of intellectual inquiry. This study is focusing on philosophical inquiry as a pedagogic approach which can be employed when teaching any subject in the curriculum.

2.7 Prerequisite for teaching philosophical skills

Teachers play a significant role in the process of education. The teacher plays a critical role in the teaching- learning process. A good and effective teacher is more concerned with the process of learning than the product of the learning process (Jacobs, Gawe & Vikalisa, 2000:185). However, the product is also important because learning should not be an end in itself. Teaching learners skills to interpret, evaluate, understand and question information, theories, beliefs and assumptions is more important than giving

them information to recall during examinations. Jacobs, et al. (2000:77) describe a teaching styles as “a combination of teachers’ personalities, their competence and teaching expertise”. Jacobs, et al. (2000:77) shed light on the process of teaching which requires teachers to have gone through training but also to acquire necessary dispositions to teach and expose pupils to critical thinking.

The role of the teacher in teaching children to think is very important. In ‘Teaching Pre-College philosophy: the cultivation of philosophical sensitivity’ in Lone and Israeloff (2012:14), Lone explains the role of the teacher as “to guide students in a dialogue about philosophical issues and concepts generated and explored by the group”. Lone makes it clear that the teacher directs the community of inquiry without attempting to control it but helping children achieve philosophical clarity and depth. This implies that the teacher should not dominate the discussion by imposing his/her ideas. The children are not passive recipients of information, a scenario described by Paulo Freire as the ‘banking’ concept of education (Freire, 1993:53). The children can be capable of deciding on what issues to discuss.

Closely related to the role of the teacher is an important debate by scholars on whether the teacher needs to be trained or not in order to teach children to philosophize. There are some scholars who think that the training of teachers on how to teach children to be philosophical is necessary (Atkinson ([sa]:85); Lone & Israeloff 2012:14). These concur with Lipman that there should be a special training for philosophy teachers. The teacher must have both a clear sense of how to stimulate a philosophical conversation and be capable of recognising the philosophical content of the children’s contributions. This skill has been described by Lone in Lone and Israeloff (2012:15) as ‘philosophical sensitivity’. In the same work, Lone indicates that the teacher should have philosophical skills in order to facilitate philosophical conversations. Such intellectual skills and dispositions can only be developed through teacher education.

Amongst scholars who believe that teachers should not be trained in order to teach children to philosophize is Wartenberg (2009: ix) who says:

“I emphasize the fact that you do not have to have a background in philosophy to become an elementary school philosophy teacher. All you

need is a genuine interest in fostering the independence, creativity and inquisitiveness of your students...”

Wartenberg’s (2009) position lacked rational justification. In particular, it does not state why it is not necessary for an elementary school philosophy teacher to be trained or have a philosophical background. Wartenberg ignored the importance of expertise in education. Many a times people do not succeed not because they lack interest and zeal to do certain things but because they do not have the necessary skills. The teacher cannot develop or teach his or her children skills that he or she does not have. A teacher cannot engage pupils in a philosophical discussion when that teacher does not have philosophical skills. Thus, it can be concluded that if pupils are to be taught critical thinking skills, the training of teachers or a background in philosophy becomes indispensable.

Teaching children and occupying children are not the same. Fisher (2013:126) makes it clear that dialogic teaching is characterized by intellectual challenge. Teaching P4C is not similar to the traditional teaching done by some of the teachers. It is a thoughtful, logical and systematic approach to the study of different disciplines. When the teacher engages pupils in philosophical inquiry, the focus should be on the development of cognitive and social skills. The teaching of philosophical inquiry should not be taken for granted. It requires a critical orientation that would enable teachers to promote higher order reasoning in the pupils (Brown in Groenke & Hatch, 2009:7). Given this framework, the question to be asked is whether it is plausible to teach philosophical inquiry without a philosophical background or being trained to teach philosophy. There are two schools of thought in the debate on whether the teacher should have a philosophical background or not to teach P4C.

On one hand are those who believe that special training in P4C or a background in philosophy is necessary (Lipman, 2003:53; Camhy, [sa]:33; Lone & Isrealoff, [ed.], 2012:14; Gazzard, 2012: 52). On the other hand, there are those who believe that any teacher can teach philosophy, and training or a philosophical background is not necessary (Gaut & Gaut, 2012:2 & Wartenberg, 2009:ix). Their position is based on the assumption that given relevant literature such as novels and teacher’s guides, and if one has interest, it is easy to engage learners in a philosophical inquiry. A weakness in this

position however, is that they overlooked the role of the teacher in determining what is philosophical.

There are certain philosophical skills expected of any teacher who teaches children to philosophise. Lone's article in Lone and Israeloff, (2012:14) entitled: '*Teaching Pre-College Philosophy: The Cultivation of philosophical sensitivity*' provided a point of departure for this study. Lone draws attention to the role of the teacher during philosophical discussion. Lone rightly points out that "a pre-college philosophy teacher must have sufficient training to be able to identify the philosophical substance and assumptions of students' statements", (Lone in Lone & Israeloff [eds.] 2012:14). The role of the teacher is more than just maintaining order and asking questions. The teacher needs to be philosophically oriented. This is in line with the suggestion made by Brameld (1965) cited in the work edited by Groenke and Hatch (2009:7) that "to guide a dialogue, teachers should make explicit their own beliefs and the reasoning process they use to clarify and develop their own views on controversial issues". It seems scholars who believe that training or a background in philosophy is not necessary overlooked a number of things. Firstly, they seem not to realize that the degree of learners' engagement in philosophical inquiry is not determined by the availability of literature only. Secondly, what promotes higher order thinking in learners is the teachers' ability to ask philosophical questions and to educate pupils to do the same.

Teachers should be able to recognise philosophical matter in children's contributions. Lone in Lone and Israeloff (2012:14) described the teacher's ability to lead and facilitate philosophical dialogue as philosophical sensitivity. Lone's philosophical discourse provided a base upon which the study is built. What Lone described as 'philosophical sensitivity' could have been lacking in NTC student teachers who were not engaging their pupils in philosophising.

Philosophical inquiry is a critical pedagogic approach which requires teachers to possess high level cognitive skills. The work of Lipman (2003:53) indicates that philosophy is highly teacher sensitive and not everyone can be sure of teaching it successfully. This goes on to suggest that the teacher's expertise is a vital key to the success of engaging pupils in interactive philosophical inquiry. Research by Topping and Trickey (2007:286) suggests that there is a need to provide more opportunities to

enable teachers to develop relevant skills and dispositions in both initial teacher training and continuing professional development. The idea is to enable teachers to develop higher order thinking skills. They also noted that such training would develop in the teacher, the necessary dispositions and confidence to engage pupils in philosophical inquiry (Topping & Trickey, 2007: 286). In agreement Ok and Toy (2011:46) express a similar view when they rightly point out that if teachers are supposed to use critical thinking skills in their classrooms, initial teacher education should allocate more room for critical thinking. The foregoing discussion suggests that teachers should be exposed to critical thinking before they teach pupils.

2.8 Challenges to teaching children philosophical skills

One of the questions that the study seeks to answer is whether student teachers on teaching practice are aware of what they are supposed to do in order to develop thinking skills in children. Fisher (2008: x) indicates that the problem teachers face is the problem of how to introduce children to thoughtful discussion. Based on Fisher's opinion, it may be inferred that some of the teachers do not know their role as far as developing philosophical skills in children is concerned. However, the fact that some teachers are not teaching thinking skills in schools cannot be explained solely by one factor. Probably there are many factors. It can be because of negative attitudes or they see philosophical inquiry as time consuming.

Some people believe that philosophy is too abstract for primary school pupils to undertake. According to Warnock (2003) as cited by Fisher (2003:144) some professional philosophers argue that philosophy is not an appropriate subject to study at school. This position has its origins in Plato's ideas and Piaget's cognitive theory. Plato was a Greek philosopher and a pupil of Socrates. Plato is in agreement with his mentor that education should foster critical thinking in the learners. Of significance to this study is Plato's idea that the education process should not be to feed the mind.

Although Plato was in agreement with Socrates that education is an activity of the mind, he did not believe that philosophy is open to all. According to Reeve (2004: iv), Plato argues that philosophy is an academic subject to be introduced after many years of training. There is no philosophy for children in the academic world of Plato. Plato defines philosophy as a body of truths that should be learned and understood (Fisher,

2003:143). He believes that the study of philosophy was suitable for philosopher-kings only. It should be made clear that philosophy is more than comprehending a body of teachings. A mere study of philosophers' ideas without being systematic, critical and rational is like studying history for the reason of knowing the past. Akinpelu (1981) explains that the study of philosophy is characterised by logical, consistent and systematic thinking to reach sound and valid conclusions. It must therefore be recognised that there is inconsistency in Plato's academic world. On one hand, he emphasises the need to engage pupils in critical thinking. On the other hand, he points out that children are not capable of doing philosophy. Plato's belief explains why some educators do not engage pupils in philosophical inquiry. However, his idea of engaging learners in dialectic is very important to this study's main thrust, engaging learners in philosophical inquiry.

Plato's conception of philosophising cannot be the only reason why NTC student teachers are not engaging pupils in philosophical inquiry. Some of the challenges are contextual. After all, what authors like Fisher (2008: x) indicates as a barrier cannot be the case in all the schools as well as countries. What is true of teachers in London may not necessarily be true of teachers in Zimbabwe. In this research, the Zimbabwean student teachers were studied in their context. The following sub-section is on Zimbabwean context of education.

2.8.1 Education in the Zimbabwean context

Education in the Zimbabwean context can be understood clearly from a historical perspective. Before attaining independence, the Zimbabweans went through British colonial education. The aims of this education were to promote and sustain the doctrine of white supremacy (Peresuh & Nhundu, 1999:24). This education was characterised by indoctrination and acculturation. This aim entails that the teacher as an authority possesses all the knowledge and learners were objects in the teaching and learning process. The other aim of colonial education was to make the African a mere labourer who was able to understand instructions without thinking or questioning. This aim determined the content taught and methods used. The curriculum offered therefore, focused on academic and practical subjects such as Agriculture since they were to provide cheap labour in farms and mines. The pedagogy was not critical given that the education was not intended to make the Africans think independently or reason. Zvobgo

(1996:149) points out that the colonial education offered by missionaries aimed at making the Africans in Zimbabwe literate enough to read the Bible so that, they could help them expand their ministries. The colonial education was not for creative and independent thinking as this would empower the Africans to revolt against the British colonialists. The British colonialists wanted to maintain the status quo which was characterised by subjugation. Therefore, critical pedagogy and critical thinking in the Freire's tradition had no place in colonial education.

This is the context in which education was inherited by Zimbabwe at its independence in 1980. This education is what Freire refers to as banking education. The teacher deposits information in the learner and retrieve it during a test. This is not the type of education Zimbabweans wanted. They needed education that would have both quantity and quality for reconstructing the society. The Zimbabwean educational reforms were informed by the social reconstruction ideology. Schiro (2012:6) explains social reconstructionism ideology as a philosophy which assumes that "the purpose of education is to facilitate the construction of a new and more just society that offers maximum satisfaction to all its members". This ideology was adopted to correct all the colonial imbalances in the education and society.

However, in as much as the government tried its level best to take on board the social reconstruction ideology, the actual practice of education was informed by the scholar academic ideology. Schiro (2012:4) describes it as a philosophy which views education as a process of learning important accumulated knowledge which is organised into subjects. The tension lies in that some of the teachers who taught in Zimbabwe soon after independence were a product of colonial education system which promoted banking education. While the society needed transformation soon after independence, the classroom practitioners were not equal to the task. They could not employ critical pedagogy effectively.

The society viewed education as an instrument to correct the colonial imbalances in the society. There was inequality in the society and educational system. The British were regarded as superior to the Africans in Zimbabwe in all spheres of life. There exists a tension between what the schools were expected to achieve and what they were doing. Schools focused on giving information instead of developing skills for socio-economic

transformation. Tension also exists between what education was expected to achieve and the curriculum that was implemented. The schools implemented knowledge-centred curriculum which could not empower pupils for societal transformation. Ellis (2013:74) describes knowledge-centred curriculum as a programme of study which focuses on academics and its main objective is the acquisition of content of the academic disciplines. This implies that if education in Zimbabwe is informed by the social transformation ideology then logically it should implement society centred curriculum.

The government of Zimbabwe built many schools and increased enrolments to improve accessibility of education. This move saw the increase in teacher –pupil ratio. This affected the teaching process negatively. It is difficult to engage pupils effectively in a large class. The Ministry of Primary and Secondary Education (2015) reviewed the curriculum to enhance quality education. Some of the aims of this curriculum review are to motivate learners to cherish their Zimbabwean identity and value their heritage, culture and to prepare them for effective citizenship. This entails that the education should impart dialogic and problem solving skills.

The new curriculum aimed to foster life-long learning in line with the emerging opportunities and challenges. Among the skills expected in learner exit profile include critical thinking and problem solving (The Ministry of Primary and Secondary Education, 2015). The schools in Zimbabwe are expected by the society to produce independent critical thinkers who are self reliant. This expectation can be met if teacher educators and teachers are aware and understand ideologies that inform the education in Zimbabwe. This understanding influences the kind of curriculum to be implemented and how. Schiro (2012:3) makes it clear that when educators understand the ideologies that guide their practice they can accomplish their curriculum and instructional goals.

Zimbabwe as a developing country needs citizens who are able to participate in its socio-economic transformation. In light of this research problem, it means education is not doing enough in pedagogy to achieve what it is intended to accomplish. If critical thinking agenda is adopted then education can produce empowered citizens who would transform the nation socially and economically. The implication is that there is need to transform education before transforming society.

2.9 Conclusion

This Chapter has focused on scholarship review of the important aspects in the development of philosophical skills in education. The function of education is to redirect the society to what is better through the production of citizens who are reasonable in all their ways. Most scholars concur that it is high time teachers concentrate more on developing thinking skills than comprehension of facts (Lipman, 2003; Lone in Lone and Israeloff 2012; Camhy [sa]; Benade, 2011; Gazzard, 2012). While it is important to be knowledgeable, it is invaluable to be creative and have wisdom. It is through philosophizing that learners gain wisdom. Although the brain behind P4C presents it as a subject, other scholars believe that it can be taught through other subjects. This study adopted the latter because philosophizing is a mental activity therefore it can be applied to the study of any subject. The role of the teacher is very significant. As such, it is imperative that P4C teachers be competent and display 'philosophical sensitivity'. The researcher is in agreement with scholars who believe that philosophical training should be a pre-requisite for one to teach P4C, hence the study focused on why NTC student teachers who undergo a pre-service teacher education were failing to engage their pupils in philosophical inquiry. Based on the debates and differing views on how to teach philosophical skills, the following Chapter gave an analysis of philosophical and epistemological underpinnings of developing philosophical skills.

CHAPTER 3

3.0 PHILOSOPHICAL INQUIRY IN THE HISTORY OF PHILOSOPHY

3.1 Introduction

Chapter 2 has focused on reviewing literature on the development and teaching of philosophical skills through an inquiry approach. This Chapter focuses on theoretical framework of philosophical inquiry. However, a theoretical framework on engaging learners in philosophical inquiry cannot be complete without an understanding of its epistemological underpinnings. This Chapter gives an understanding of conceptions of teacher learning, critical pedagogy, critical rationalism and critical thinking through logic as ways of promoting philosophising. It has also focused on importance of philosophical inquiry under the sub-headings; philosophical inquiry and moral reasoning and philosophical inquiry for social reconstruction. The issue of pedagogy is crucial in this study because the researcher considers philosophical inquiry as a way of teaching. The importance of philosophical inquiry is one of the themes are going to be explored by this research; hence it is significant to discuss it in this chapter. This Chapter makes reference where necessary to some philosophical schools of thought such as idealism, realism, progressivism and reconstructionism, among others, which have contributed immensely to the development of philosophical inquiry as a critical pedagogy.

The intellectual roots of critical thinking can be traced back to the ideas of such philosophers as Plato (1941), Aristotle (350 B.C.), Hegel (1975), Peirce (1971) and Dewey (1953) among others. Their ideas have provided the basis for the philosophy, policy, educational research, theory and practice of education. Central to learning is the development of cognition. The works of psychologists such as, Kohlberg (1981), Piaget (1932), Bruner (1957) and Vygotsky (1978) on cognitive development need to be examined in the framework of teaching critical thinking skills. Some of the philosophers' and theorists' scholarship have been examined in this chapter in the context of both their times and their contribution to critical educational practice and philosophical inquiry in the contemporary era. Efforts were made to indicate how the study of the challenges faced by NTC student teachers fits into what is already known in the field of theory of education. This connected the research to the existing knowledge on philosophical inquiry. The connection to existing knowledge enabled the researcher to have a better

understanding and explanation of the nature, meaning, advantages and challenges associated with the implementation of P4C.

3.2 Conceptions of teacher learning

Teacher learning can be defined as a process by which teachers and student teachers acquire knowledge, values, skills, competencies, dispositions they need to practice effectively. The nature of student teacher learning determines the quality of their practice. It is important for this study to look at the conception of teacher learning because the knowledge, skills and values they learn can either contribute to their development or impede their professional growth. This means that it is very crucial to analyse the conception of teacher learning at NTC so that challenges facing student teachers can be understood in the framework of that conception of teacher learning.

There are different knowledge conceptions on teacher learning. Teacher learning is discussed in the context of Cochran-Smith and Lytle's (1999) work entitled, 'Relationship of knowledge and practice: teacher learning in communities'. Cochran-Smith and Lytle (1999) identified three conceptions of knowledge on teacher learning, knowledge for practice, knowledge in practice and knowledge of practice. Knowledge of practice and knowledge in practice are gained during practice. According to Cochran-Smith and Lytle (1999) knowledge in practice is the knowledge a practicing teacher gains through reflection and inquiry on teaching experiences. This conception points to the fact that practicing teachers also learn from experts as well as their experiences. Knowledge of practice is also acquired during practice through reflecting in action. The assumption behind the former conception seems to be that there is vast knowledge in the field of practice, which is gained from the teacher's experience and from experts. The latter conception is informed by the premise that teachers improve their practice as they critique their assumptions. The problem with Cochran-Smith and Lytle's (1999) conception of teacher learning through knowledge of and in practice is that, they entirely depend on student teacher's ability to relate his or her experiences to theoretical grounding of professional learning practices.

These two conceptions of teacher learning, knowledge of and in practice make the student teacher an active learner, who is not only a consumer but a creator of

knowledge on practice. This can be the same with the knowledge student teachers get at college or university. Student teachers can be required to inquire and reflect on what they learn at college. The other conception of teacher learning indicated by Cochran-Smith and Lytle (1999) is knowledge for practice. They described this as the knowledge student teachers acquire from their lectures before practice.

The assumption behind knowledge for practice is that the knowledge they gain from teacher educators can make them effective practitioners. This is the conception of teacher learning at NTC. In this research this is referred to as teacher education before TP. The basis of this conception seems to be that teaching has a unique set of knowledge which if learned well can produce an expert or a professional. Whilst it is true that knowledge for practice is important, a number of issues are at stake. These include, how effective is the knowledge transmission process? Is that knowledge relevant to all situations student teachers face in their practicing schools? Is this knowledge adequate to produce an effective teacher? The same questions can be asked about NTC teacher education.

It is critical to note that what is learned and how, can determine the nature of the foundation a teacher has for his or her professional growth. If knowledge for practice is presented in a critical and reflective way it can be a good springboard for student teachers to improve their practice. Knowledge for practice can be presented as a starting point rather than an end in itself. The point here is that it is good to impart knowledge for practice and let student teachers improve with knowledge in and of practice than to rely on the latter only. However, there can be a tension if knowledge for practice is not compatible with practice in schools. Cochran-Smith, Villegas, Abrahams, Chavez-Moreno, Mills and Stern's (5015:111) overview on research on teacher preparation indicates that some of the researches acknowledged tension between teacher education which focuses on progressive approach and how education is organised and delivered traditionally in schools. This means that in such schools knowledge in and of practice may not make meaningful contribution to the teachers professional growth. Rauan, Beijaard and Verloop (2008) in Cochran-Smith, Villegas, Abrahams, Chavez-Moreno, Mills and Stern's (5015:111) suggest the increase of time spent on practice as a solution. This suggestion might not necessarily remove the tension because it can be just a longer period of experiences which are neither critical

nor educative. In other words if education in practicing schools is still following the traditional way then there is very little to learn about critical pedagogy in those schools.

The other issue raised in this discussion is the issue of relevance of knowledge for practice to all situations student teachers face in their practice. If this knowledge is characterised by mere acquisition of facts then, its relevance is questionable. However, if knowledge for practice focuses on the development of skills for critical thinking, reflection and inquiry, then, the knowledge is relevant since it can be applied to any situation a teacher may come across. If knowledge for practice develops inquiry, problem solving and decision making skills in student teachers then it is effective. These skills can enable student teachers to deal with challenges they face in their practice.

This discussion made it clear that knowledge of and in practice is important for professional growth. However, their professional growth depends on their ability to inquire, reflect and construct knowledge from their experiences. The questions to be answered are; does knowledge for practice have a bearing on the teachers' ability to learn from experience? How can they evaluate the worthiness of the knowledge they gain through reflection if they are to rely on knowledge of practice only? Cochran-Smith, Villegas, Abrahams, Chavez-Moreno, Mills and Stern (2015:111) indicate in their analysis of teacher preparation research that some of the researches portrayed learning to teach in the context of practicum as a challenge due to uncertainty. This finding can mean that the student teachers' knowledge for the practice was not sound. The point being made is that, the three conceptions of teacher learning are critical in teacher education. It is important to note that whilst it is true that teachers cannot grow professionally if learning ends at college with knowledge for practice, it is equally true that without knowledge for practice they may find it difficult to reflect effectively. The knowledge for practice can be essential in benchmarking effective practice. This study looked at the effectiveness of this knowledge at NTC in empowering learners to be reflective student teachers who are able to inquire and reflect on their practice.

The position of this research is that teacher education should integrate the three conceptions of teacher learning. It is the knowledge for practice that enables student teachers to start going in practice. Knowledge for practice also guides student teachers

on documenting the practice and the use of documents such as curriculum, syllabii, schemes of work and pupils records among others for effective practice. Cohen, Manion, Morrison and Wyse (2010:441) point out the importance of writing and understanding documents when they indicate that documents in teaching are communicative devices essential to the success of the educational programmes. Although teacher practice is practical, it is informed by specific ideas and theories that are gained through knowledge for practice. In the case of NTC knowledge for practice seems to be ineffective in developing student teachers who can reflect and inquire on their practice. If knowledge for practice is delivered critically it can lay a good foundation for professional growth. This means that the issue of critical pedagogy is very important in knowledge for practice. This is discussed under critical pedagogy.

3.3 Critical pedagogy

The quality and relevance of education is not only determined by the amount of content that is learned by pupils. The way content is delivered can make otherwise relevant content not educative. Teachers should employ sound pedagogical approaches that empower the learner. Critical pedagogy is an approach that empowers both the teacher and the learner to be independent critical thinkers (Freire, 1996:61). This approach focuses on how the teacher and the learner can be critical of practice and critical of what is being learned respectively. On this basis, it can be inferred that pupils who were taught by some of the NTC student teachers were not being afforded the opportunity to be critical of what they learn. This should be a cause for concern to NTC teacher educators; hence, the researcher had to find out the challenges faced by NTC student teachers in employing critical pedagogy.

The process of education involves engaging one's mind. According to Plato and Grube (2002) Socrates believes that education is not a question of transfer of knowledge. This means that mere acquisition of facts should not be an end of education. Schjelderup (2009) indicates that "Socrates underscores the idea of education as an activity of the mind not a curriculum to be delivered". This suggests that Socrates' concept of education repudiates mere reproduction of a body of facts as learning. It is important to note that Socrates is not dismissing the learning of different disciplines, his emphasis is on the need to develop critical thinking. Whilst it is vital that learners have knowledge of different disciplines, it is also fundamental that these learners are reflective and critical of

what they know through critical pedagogy; hence, Socrates' emphasis on education as an activity of the mind is very relevant to this study.

Critical pedagogy is embedded in critical theory. Horkheimer coined the term 'critical theory' in 1937 to describe a politically committed response to the problems in the society, (Berendzen 2013). Critical theory was developed by the Frankfurt school philosophers who include Herbert Marcuse, Jurgen Habermas, Walter Benjamin and Max Horkheimer among others (Crossman, 2015). According to Ward (2013), "the critical theory was based on the assumption that society of the twentieth century constituted under capitalism was basically unjust, unhealthy, wasteful and exploitative". On this basis, critical theory focuses on finding out injustices in the society with the goal of transforming it for the better. As Horkheimer (1982:244) puts it, "critical theory seeks human emancipation to liberate human beings from the circumstances that enslave them". The assumption behind this theory is that society can be transformed or made better if people are able to identify and change conditions that disempower or oppress them. The aim of education, according to critical theory, is to make a significant change to human life; therefore, philosophical inquiry as a critical pedagogic approach should provide critical skills for educational and societal transformation.

One of the French philosophers, Rousseau, observes that a corrupt and oppressive political system is strengthened by an equally corrupt education system. Likewise, education can be instrumental in the emancipation of humanity from corrupt and unjust practices. Freire (1996:60) sees the need to employ a critical pedagogy in education that would "emancipate learners from the negative effect of the banking concept of education". If schools are to be instrumental in the transformation of societies, then their pedagogy should liberate learners from the commands of authoritarian teachers. A pedagogy that is able to emancipate learners from forces that enslave them academically, is equally capable of bringing equity and justice to the society.

Important to this study is Smyth's work on critical pedagogy. Smyth (2011:12) analyzes the work of teachers which he believes "has been reduced to that of being mere machines who implement educational practice decided by others who are not teachers". This kind of practice is authoritarian in nature. Habermas (1991) as cited by Smyth

(2011:74) points out that an authoritarian educational process is curriculum centred than student-centred. An authoritarian type of education is characterized by the telling method. The teacher is believed to possess all the knowledge that pupils should learn. Learners are passive recipients of facts or knowledge. Such kind of education lacks what Freire (1993:107) calls praxis. As long as learners remain passive recipients of knowledge, they cannot be critical learners who are able to engage in independent thinking. Transformation is only possible through a critical dialogical pedagogy. Teachers and learners need to understand classrooms as places where they can liberate themselves, especially their minds. Through a critical pedagogy, teachers are capable of constructing schools and education for societal transformation.

If the society expects teachers to empower learners, they have to be empowered first. While Smyth blames the system of education for relegating teachers to mere technicians, Bercaw and Stooksberry (2004) believe in the empowering of teachers through critical pedagogy in teacher education (Smyth, 2011: 12; Bercaw & Stooksberry, 2004). Smyth sees the possibility of empowering teachers through questioning, conceptualizing and reflecting on their pedagogical practice. Although Smyth (2011) and Bercaw and Stookberry (2004) view teacher empowerment from different angles, they concur that the practice of critical pedagogy in schools is only possible through empowering the teacher. It is clear, therefore, that teacher education and the education system play a significant role in promoting critical pedagogy and reflective practice in schools. Hence, this study has focused on the challenges faced by NTC student teachers in engaging their pupils in philosophical inquiry, which is a critical pedagogy. Bercaw and Stookberry's (2004) exploitation of critical pedagogy in teacher education shed further light on the study. The reason NTC student teachers are not engaging in critical pedagogy may be explained in terms of the nature of teacher education or the education system.

It is prudent that all teachers conceptualize critical pedagogy. Kincheloe (2008:10) views critical pedagogy from a democratic point of view. He sees critical pedagogy as grounded in a social and educational vision of justice and equality. The importance of democratic principles need not be over-emphasized. Important to this study is an encouragement by Kincheloe (2008:10) for teachers to be researchers who produce knowledge and teach students not to consume knowledge and theories but to produce

their own. In today's society, the idea of creating knowledge is now more important than before. The world no longer needs people who are knowledge consumers only. There is a need to bear in mind that in as much as nations want citizens who are critical of other people's ideas that should not be an end in itself. Instead, criticism should be seen as a springboard to being critical and caring knowledge creators who are innovative in the realm of science.

Education can produce knowledge creators through employing interactive pedagogy. Interactive pedagogy is a teaching methodology that stimulates active teacher- pupil and pupil-pupil participation which strengthens philosophical inquiry skills in pupils. Interactive pedagogy is critical in the process of developing philosophical skills in pupils. Habermas (1991) as cited in Smyth (2011:74) believes that good teaching is only through learner centred methodology. This implies that, learning cannot take place if learners are passive recipients of knowledge. Central to critical pedagogy is critical reflection. Learning cannot take place unless the learners become critical thinkers who reflect on what and the way they learn. Experience is viewed as a source of knowledge. While this is true, for Dewey, experience is more than doing things. Having experienced that some trees and grasses wither in summer is not learning unless one begins to think on why vegetation withers in summer and not in the rainy season. In Dewey's philosophy, learning is a result of reflection on experience (Dewey 1933:6). This suggests that 'knowledge what' should not be an end in itself. Learners should expand their thinking horizons to the knowledge how and why. Teachers should engage in reflective teaching and learners should reflect on what they learn and their lives.

Critical pedagogy can transform education to bring equity and justice in the classroom and outside. This implies that critical pedagogy does not only ensure effective engagement of learners, it is also dedicated to the removal of human suffering (Kincheloe 2008:10). Critical pedagogy empowers learners to be critical thinkers who can challenge and change the existing systems that oppress them. Transformation can start in the classroom where pupils question common sense or a widely accepted assumption, weigh evidence, reflect and recognise the distinction between reasoning and opinion.

Critical pedagogy can be viewed as a philosophy of liberation. Freire (1993:60) rightly points out that “liberating education consists in acts of recognition, not transferors of information”. The indications are therefore, that, a liberating pedagogy is the foundation of a sound democratic society. It can be inferred that if Zimbabwe is to be a democratic nation, its schools should be laboratories for freedom. Freedom in this context implies being afforded the opportunity to think critically, caringly and creatively on questions and issues. It also implies doing things not as obedience but because it is right to do so. While it is now common knowledge that philosophical inquiry plays a significant role in building a democratic society, Plato was of the opinion that practicing philosophy with young ones can result in indiscipline. Plato believed that philosophical dialogue corrupts young people (Fisher 2005:130). The problem is that in some cases, authorities do not want critical thinkers who question their interests, assumptions and policies. On this basis, it can be inferred that the real problem of pupils without philosophical skills is not indiscipline or disobedience but ignorant obedience.

Contrary to Plato’s idea that philosophical inquiry causes indiscipline is a supposition by Zinn (1970), that civil disobedience is not a problem. Zinn (1970), as an advocate of civil disobedience, articulates clearly the dangers of ignorant obedience that he terms civil obedience which is a result of not thinking (Zinn, 1970). He perceives civil obedience as the problem. Zinn (1970) believes that “things are upside down because of the numbers of people all over the world who have obeyed the dictates of the leader... and have gone to war, and millions have been killed because of obedience”. In light of Zinn’s (1970) premise, it can be concluded that critical thinking is a prerequisite for a ‘just’ and democratic society. Philosophical inquiry is a critical pedagogy needed to develop in pupils the ability to see things from their own perspective, challenge dictates and refuse to advance selfish interests of those who require obedience. In a classroom situation, the teacher’s assumptions should be open to interrogation. Acceptance of the teacher’s beliefs without questioning can lead to pedantry. It is therefore, important for all classroom practitioners to engage their pupils in philosophical inquiry for critical, caring and creative thinking. This is only feasible if classroom practitioners become critical teachers. This is discussed under the sub-heading of critical pedagogy, becoming a critical teacher.

3.3.1 Becoming a critical teacher

If teachers expect their learners to think critically, their practice should also demonstrate that they are critical thinkers. Important to this study are Kincheloe (2008) and Bercaw and Stooksberry's (2004) works on how to become a critical teacher. Giroux and McLaren (1989) as cited by Bercaw and Stooksberry (2004) correctly point out that classroom practitioners can be transformative intellectuals if they engage in scholarly reflection during the course of teaching learners. One cannot be a critical teacher unless he or she engages in meta-cognition activities. Teachers need to be informed by a critical epistemology to refuse to accept professional dictates, which are only capable of reinforcing oppressive tendencies in the society or factors that disempowered the weak. Smyth (2011:19) believes that one can be a critical teacher through questioning habitual pedagogical practices in order to employ a pedagogy that produces thoughtful active citizens.

It is only through philosophical teacher education that critical teachers are produced; hence, the focus of this study is to find out challenges faced by NTC student teachers in becoming transformative intellectuals. The foregoing discussion indicates that critical teacher education can equally produce a critical teacher who will impart the same skills to his or her learners. Therefore, one of the study's objectives is to find out if teacher educators at NTC are doing enough to produce philosophically oriented teachers. Critical teachers are important in facilitating the child's cognitive development. This is in line with Bruner's view that teachers can speed-up a child's cognitive development (Bruner, 1960).

3.4 Critical rationalism

More often than not, classroom practitioners stick to traditional methods of teaching because they have reasons to justify the methods' place in education. It is easy to improve based on justification than criticism. When one's practice is criticized, reasons against are given, also when justifying an act reasons for are given. When teaching through a community of inquiry approach, children are expected to justify their contributions and are also expected to look for negatives of the positions given or flaws in the reasoning of their classmates. The practice of identifying flaws in ideas and claims is known as rational criticism. It was advanced by Karl Popper (1968). Definitions.net, (2015) defines critical rationalism as "an epistemological philosophy which emphasises

that any claims to knowledge can and should be rationally criticised". It is through the questioning and examination of the given position that better alternatives or perspectives are thought about or arrived at.

How and what philosophers think is usually influenced by their life experiences or situations in the society of the day. According to Fisher (2013:129), Socrates saw an intellectual and moral vacuum in the society of his day. This led him to establish a new moral and intellectual discipline founded on reason and a method of inquiry through questioning. This was a great breakthrough in the history of education. The main purpose of his dialogues with his students was to educate them to engage in higher order thinking and challenge common sense. It is clear therefore that Socrates' philosophy sheds further light on the study. Children should be taught to accept assumptions, claims, beliefs and ideas not because they are from an authority but because they are valid and make sense.

The ability to identify weaknesses leads to the discovery of new knowledge. Karl Popper's (1968) critical rationalism is against the justification theory. Irzik (2010:58-59) indicates that Popper believes that "rationality has nothing to do with justification, but has everything to do with openness to criticism". His critical rationalism differs from the rationalism of philosophers such as Plato (1941), Descartes (1960) and Hegel (1975), among others. The traditional rationalism of Plato (1941) focused on justification through reason. For philosophers like Plato (1941), the truth is arrived at through reasoning. OGB community (2010) points out that contrary to traditional rationalism, Popper believed in rationality without justification. According to Popper (1968), the growth of knowledge can only be through criticism.

Popper's philosophy is closely in line with philosophical skepticism which questions the possibility of certainty in epistemology. Notable figures of modern skepticism include Rene Descartes (1960), David Hume (1975) and Ludwig Wittgenstein (1961), among others. Rafe (2014) believes that criticism has a creative function because effective criticism identifies new problems. If new problems are identified, it means a challenge to come up with new knowledge and theories as solutions. Learners should be critical of their ideas. It is only through philosophical discourse that learners develop critical skills. Educators should note that the banking concept of education cannot produce learners

who are capable of being critical of any form of knowledge or methodology. The practice of education should be critical in nature if learners are to become critical thinkers; hence, the absence of critical practice by NTC student teachers is an issue of concern.

It should be noted that, although Karl Popper (1968) rejected traditional rationalism, its contribution to critical thinking is significant. A theory can be applied because of its justification. Popper overlooked the fact that criticism ignores the positives. A weakness in Popper's rational criticism is that, a philosophical inquiry cannot be characterised by criticism alone, hence his position that neither reason nor experience has any priority in inquiring knowledge is not epistemologically sound. Traditional rationalism has a limitation in that justification can be given for any theory act and thought either good or bad. Popper (1968) was quite aware that even wrong things could be justified. Learners should not only be taught to give reasons for their beliefs and assumptions but also to question the grounds for believing in those assumptions.

The ability to question and justify is not only a major issue in the learning process, learners should be able to apply the same skills in their lives for their own good and for the welfare of the society. Borghini (2014) correctly points out that "the efforts made in fighting the skeptics brought about some of the best philosophical ideas". Borghini's observation is of significance to this study which seeks to find out challenges faced by NTC student teachers in engaging their pupils in philosophical inquiry. If today's learners are to be knowledge creators then philosophical inquiry is indispensable. Philosophy in all its various forms consists of asking questions that compel one to think about and revisit the underpinnings of his or her thinking.

In agreement with Popper (1968) is Kant who believed in a priori knowledge whose justification does not depend on experience (Rohlf, 2014). The indications are, therefore, that through reasoning the human mind can know what is good or bad without necessarily having experienced it. Although philosophers like Kant(1781), Popper (1968), and Plato (1941) believe in the superiority of reasoning and critique, it cannot be denied that experience is a source of knowledge. Learners can construct knowledge or arrive at truth through experience. Kant referred to this knowledge as *posteriori* (Ozmon, 2012:15). Teachers should educate pupils to be critical of their experiences, by examining and inquiring. Inquiry skills should not only be meant for learners to pass their

examinations. These skills should be for life because one needs to examine his or her life; hence Socrates believed that “unexamined life is not worth living” (Longstaff, 2013).

Popper can be credited for drawing attention to the fact that criticism can lead to the search for better ideas, theories and knowledge. This is the reason reputation is indispensable in Socrates’ kind of education (Scott, 2000:40). He rightly points out that criticism has a creative function (Rafe, 2014). Improvement or innovation can come because many shortfalls have been identified. Learners can arrive at the truth through critical rationalism. Criticism can make learners realise their mistakes and weaknesses in their thoughts. Jamie (2009) elucidates that Socrates believed that “what set him apart from other thinkers was his ability to recognize his lack of knowledge”. However, criticism in all its forms should be constructive and not destructive.

Learners should be critical about their ideas. Critical rationalism, therefore, means that learners question their positions, ideas, opinions or beliefs before sharing with other inquirers. It can be concluded that critical rationalism can promote critical thinking as well as critical pedagogy. The work of Scott (2000:40) indicates that “genuine learning begins with a challenge to what one thinks or knows prior to learning”. It should therefore, be recognized that both traditional rationalism and critical rationalism contribute immensely to the development of critical thinking. While justification looks at positives, criticism focuses on the negatives. A critical teacher should consider employing both because they complement each other.

On one hand, the positives identified through justification should be weighed against negatives and be the reasons for continuing with a principle or thought. On the other hand, the negatives identified through criticism give reasons for looking for better options than the given. The reasons for, should outweigh the reasons against to claim that a thought, idea, theory or action is true and if not, other options should be considered. Critical rationalism is formed on the Socratic method of critical inquiry. Stumpf and Fieser (2012:34) make it clear that “becoming aware of one’s ignorance is an essential first step in the process of gaining intellectual clarity”. This implies that when one examines and accepts the weaknesses in his or her thinking, one would think again or accept different ways of seeing things suggested by other inquirers.

3.5 Critical thinking through logic

The use of reason and logic in the process of learning is very important. Lipman's (1988) aim of introducing philosophy for children in schools was to develop the learner's practical capability to make use of reason and logic (Atkinson, 1991:83). Logic is the art and science of how to evaluate arguments and reasoning. It demonstrates rules of correct reasoning. Philosophical inquiry as a mental process of evaluation uses logic to separate reasonable from unreasonable. Logic is relevant to teaching in that an understanding of logic helps the teacher to train learners how to think and reason systematically. It is therefore, imperative to look at the philosophical ideas that inform logic.

Logic is very important in the learning process because it promotes critical thinking. Cline (2014) defines logic as the science of how to evaluate arguments and reasoning. It is a science because it investigates, systematizes and demonstrates rules of correct reasoning. Many a times ideas and thoughts are dismissed as illogical. What makes an idea or a thought logical is the validity of the reasons for that idea. Many of the things done and thought in human life have reasons. Validity of reasoning or reasons is the concern or main thrust of logic. It must therefore, be recognized that the study and practice of logic is very important in the education process.

Many education systems today owe much to the educational ideas of Plato's student, Aristotle, who was also a Greek philosopher and a scientist. Hessong and Weeks (1991:161) state that "Aristotle had an inquiring mind that probed into every facet open to intellectual examination". Aristotle believed that truth could be attained through reasoning and the study of matter. Meyer in Hessong and Weeks (1991:61) credited Aristotle for introducing scientific thinking and organising logic into a technical system of thought. It is important to note that Plato, as an idealist, sees reasoning (ideas) as the only way to acquire knowledge. Stumpf and Feiser (2012:68) indicate that Aristotle, the founder of realism, believed that the world is knowable through sense experience. Realism is a philosophy which holds the view that reality exists independent of the mind or perceptions. This philosophy accepts reality as it is. Although Plato and Aristotle view the process of knowledge acquisition from idealistic and realistic perspectives, they agreed that education should enable learners to use their ability to think or reason. Aristotle indicates that thinking is connected with the way things are. He believed that

the study of matter could lead to better and clear ideas. In his work, *Metaphysics*, Aristotle (350 BC Book1:2) states that the statement of the method in terms of causes, relate analysis to things and reality.

Aristotle views logic as the basic means of reasoning. His logic is based on syllogism. Russell (1961:206) argues that “to think logically, one has to apply syllogism which is a form of thought, comprising of major and minor premises that led to a conclusion”. Syllogism was meant to make learners advance from universal truth to particular truth which is deductive logic. The teacher can use syllogism to make his or her pupils think more accurately by ordering statements about reality in a logical, systematic form. For example, all women are timid (Major premise). Mary is a woman (Minor premise). Therefore, Mary is timid (Conclusion).

However, the problem with this deductive thinking or logical method is that if the major premise is not true then, the conclusion will be false. Stumpf and Feiser (2012:72) stress that, if true scientific knowledge is to be achieved, it is necessary that the premises should not be an opinion but an established truth. True scientific knowledge cannot be based on one’s perception or feelings. A true conclusion can be based on established facts. A weakness in this study is that, it assumes that if the majority possess a certain characteristic, then everyone in the group possess it. Although Aristotle’s logic has a weakness, Knight (2007:4) observes that his scientific knowledge provided a point of departure in the history of theoretical and practical philosophy.

Important to this study is Aristotle’s clarification that the knowledge gained through the senses is not wisdom (Aristotle 350 BC: Book 7). The knowledge gained through senses is common to all. It is therefore clear that, policy makers and curriculum planners need to consider the importance of knowledge from sense experience not as an end in itself but a springboard for attaining higher levels of knowledge based on critical thinking.

Aristotle pioneered the formal study of logic, although logic started before him. Cline (2014) specifies that Aristotle was the first philosopher to create systematic criteria for doing it and his conception of syllogistic logic remains a cornerstone of the study of logic even today. Aristotle’s syllogism gave the principles of reasoning and logical arguments. Aristotle laid the foundation for other logicians such as Hegel and Frege. The modern

syllogism, which is called symbolic or mathematical logic, is the creation of the German mathematician Frege. Klement ([sa]) highlights how Frege linked mathematics to philosophy when he explains that “truths of arithmetic are logical, analytical truths”. This indicates that the ideas of mathematical logic influenced philosophical thinking.

Georg Wilhelm Friedrich Hegel is another philosopher who contributed greatly to the development of logic. In his work on logic, Hegel (1830:32-33) indicates the importance of logic to the philosophical system when he presents logic as an incorporation of thesis and antithesis into synthesis. His system of logic is usually described as dialectic. Hegel (1830:32-33), makes it clear that reason is embodied in the dialectic. Hegel’s dialectic is both negative and positive. It is negative in the sense that a thought is reflected upon with the intention to prove its inadequacy. In the same work, Hegel (1830:32) claims that “dialectic is not only negative but also positive in that it brings forward a new concept which constitutes the truth”. Hegel’s logic is very significant to this study because it focuses on philosophical inquiry as a critical pedagogy to arrive at true knowledge.

Truth can be arrived at by being critical of what is presented. Learners should be able to analyze the nature of a concept, idea or thought given in order to highlight its inadequacies or contradictions. Reflection is very important in the learning process because it leads to creativity and innovativeness. The contemporary world is in dire need of critical citizens who have courage to criticize the existing knowledge, injustices, ideas and authority in order to come up with new or improved things. Rafe, (2014) rightly indicates that “Popper’s criticism has a creative function in the growth of science”. Similarly, criticism can have the same effect in other fields of study. That is the reason the study focused on the feasibility of engaging learners in philosophical inquiry across the curriculum.

In Hegel’s logic, criticism of an idea or a thesis can give rise or lead to an opposing idea, which he referred to as antithesis (Bird in Psillos & Curd, 2010:74). In a community of inquiry, learners are expected to come up with different ideas and perspectives for inquiry. A practice of Hegel’s logic can develop in the learner, skills to engage in critical rationalism. Through the process of finding contradictions in one’s thought, they develop an academic attitude of willingness to correct one’s mistakes and also openness to criticism.

The study of logic in teacher education is very important. Teachers need to have sound knowledge of logic before they teach pupils. Cline (2014) highlights that “logic helps to improve not only the process of thinking, but also the products of the process such as conclusions, assumptions, claims, ideas and beliefs”. The study and practice of logic enables pupils to evaluate the arguments of fellow pupils, as well as raising arguments that are sound and valid. If one’s actions are informed by reasoning, then practising correct reasoning is very important. Since philosophical inquiry is an approach that enables pupils to make use of reason and logic, it is imperative that NTC student teachers engage their pupils in philosophical inquiry.

3.6 Philosophical inquiry and moral reasoning

Education should not only focus on producing labour but professionals with sound ethics. Noddings (2012:168) stresses that the knowledge of the good is the aim of philosophical education. Society needs people who are morally upright and education should produce such individuals. Academic excellence should not only be the focus of learning. Ellis (2013:35) points out that, in education growth is not only determined by one’s academic prowess but emotional, social and moral development as well. There are different theories of moral development. These include social learning or behaviourist theories, psychoanalysis, cognitive development and personality theories among others.

Philosophy can influence the way learners see reality and conduct themselves. Field (1913:22) notes that Socrates believed that one cannot do what is evil when he or she knows what is right or good. It is clear that Socrates’ position seem to be that the reason there is moral decadency in today’s society is lack of critical thinking. Critical thinking enables individuals to evaluate and be responsible for their actions. Socrates’ idea sheds light on the research question on the importance of critical thinking skills. However, it is not always the case that highly educated people produce virtue and moral right unless the educated mind influences the development of a good soul.

In his work, *The Republic*, Plato indicates that the aim of education is to have the knowledge of the good (Dillon 2014). Nowadays the effectiveness of education in producing citizens who are morally upright seems to be questionable. In today’s society,

to be educated means to have higher-level paper qualifications. The learning of ethical issues on its own is not adequate. If nations are to have responsible and ethical citizens, moral reasoning skills should be developed starting from primary school level. Fisher (2013:7) reasons out that “exercising the mind through intellectual challenges is not only a means for enjoyment and for success in a rapidly changing world but can also promote moral qualities and virtues”. Important to this study are the works of Plato, Aristotle, Kant, Piaget and Kohlberg on moral reasoning.

According to Plato, the aim of education should be to lead people to what is good. Jayapalan (1999:37) comments that Plato views education as more than banking information in the learner, he believes that it involves the redirection of the whole personality. The indications are, therefore, that good education should transform a person for the better cognitively, socially and emotionally. Character education can be traced back to Aristotle (Noddings, 2012:168). It is only a thought provoking education that can transform a person because in most cases people’s actions are influenced by their thoughts. It is clear therefore that, rational discourse is very important in the process of education. In agreement with Plato is Socrates, who approaches the problem of personality from a critical perspective. Socrates makes it clear that, unless people reflect on their lives and gain wisdom, they would keep on making mistakes in ignorance (Jamie 2009). Socrates has drawn attention to the fact that people act wickedly because they do not have knowledge.

Knowledge in the context of Socrates and Plato’s philosophy is more than mere acquisition of facts. People use their higher thinking skills and reasoning to make choices on ethical issues. These choices should be informed by reason (Noddings, 2006:6). Socrates believes that those who know the right will do what is right. Dillon (2014) points out that “the main thrust of Plato’s allegory of the cave was that rigorous philosophical education unshackles individuals and leads them out of the cave of ignorance and into the light of knowledge”. On this basis, it may be inferred that not only education is sufficient but also education which is critical in nature with the ability to develop philosophical skills in the learner; hence, it is also the stance of this study that rational discourse is of paramount importance in the education that produces responsible and morally upright citizens.

Immanuel Kant is also one of the philosophers who have looked at moral development from a rational point of view. Kant focuses on the rational aspects of people's behaviour (Stumpf & Fieser, 2012:286). He indicates that we are subject to moral judgment because we are able to deliberate and give reasons for our actions (Spark Notes, 2014). The indications are therefore, that as rational beings, people should be able to refrain from wicked or immoral acts because of their ability to reason. Spark Notes (2014) stresses that Kant believes that rationality is what makes people humans, so by acting irrationally and hence immorally, humanity is also compromised. If rationality characterises humanity, it therefore means acting wickedly or irrationally is a sign of dehumanisation. It was, therefore, the concern of the researcher that the practice of NTC student teachers in education should not be the chief cause of dehumanisation of the pupils.

Another well-known philosopher in the history of educational philosophy is Hegel. According to Ozman (2011:18), Hegel has had considerable influence on the philosophy and theory of education. Education plays a significant role in character development of the learners. Mackenzie (1971:176) points out that "Hegel saw education for liberation as education that requires the young to consult their sense of propriety and their own reason". Thus, it could be concluded that the teaching of thinking skills stems from such philosophies. The aim of developing thinking skills in pupils is to make the young to be guided by reason in their correctitude and whatever they do.

Important to this study is Fisher's contribution on how a community of inquiry contributes to moral education in his book, entitled: *Teaching thinking: philosophical enquiry in the classroom*. Fisher (2013:75) observes that "there is an important link between moral development and intellectual development". Fisher draws attention to learners' ability to give reasons for a moral view of a point in informed, logical and reasonable ways. On this basis, it may be inferred that moral conflicts that learners face cannot be solved by just learning ethical issues. Ethical issues or situations do not represent all the moral dilemmas learners face in life. Stumpf and Fieser (2012:285) explicate that, Kant pointed out that although the study of actual human behaviour gives interesting anthropology information on how people behave, principles of behaviour cannot be discovered by merely studying the actual behaviour of people. Learners should reason to know what is moral and immoral in different situations they face in life.

Moral reasoning is not only an issue in philosophy; theorists such as Piaget and Kohlberg have theories that focus on moral reasoning. Noddings (2012:168) notes that Kohlberg's theory of moral development has its roots in the philosophical ideas of Socrates, Plato and Kant. The main thrust of Kohlberg's theory was on the connection between reasoning and morals. McLeod, (2013) points out that Kohlberg's theory of moral development is divided into six levels. Kohlberg's levels of moral development range from the level of being obedient to avoid punishment to the level where abstract principles are the basis for moral decision-making. Kohlberg seems to underestimate children's ability to make decisions informed by reasoning. If Kohlberg's findings indicate that children's moral decisions at an early age are not informed by reasoning, this might not necessarily mean that they are not capable of doing so. It could be that these children have not been exposed or taught to reason. If these children had been taught to reason before the research, the results would not have been the same. This is based on the premise that everyone is a product of his or her environment. If children are taught to be obedient in order to avoid negative consequences, then the reason to do good is to avoid punishment rather than seeing it as a virtue.

A number of criticisms can be levelled against Kohlberg's theory. Firstly, Gilligan (1977) as cited in Noddings (2012:169) challenges his theory because it was based on a male sample. It means the results of his research are biased and hence cannot be generalized to both girls and boys. According to Gilligan (1977) cited in McLeod (2013), "the stages of Kohlberg's theory reflect a male definition of morality". Secondly, Bee (1994) cited in McLeod (2013) argues that moral behaviour is not wholly determined by moral reasoning but by social factors as well. Bee's (1994) criticism sounds very convincing; however, it should be considered that even in different social circumstances, reasoning is very important. It is not the social factors that determine one's moral choice or behaviour but the reasons one has for his or her moral choices in those social circumstances.

3.7 Philosophical inquiry for social reconstruction

The aim of education is to prepare learners to be future functional members of society and as such, articulating thinking about thinking should not be an end in itself. Such skills should be acquired to enable learners to be critical thinkers who can solve

problems they encounter in life. This view of education is informed by what Schiro (2012:6) refers to as social reconstruction ideology. This ideology views education from a political perspective. It calls for change in society. Education being the chief instrument for the process of changing society for the good of all its members on the need. This means that if education is the chief instrument, then curriculum planning, implementation and evaluation should be informed by this ideology. Ok and Toy (2011:46), rightly point out that “what entails the improvement of student thinking is the ability to cope with the demands of a rapidly changing world and challenging future”. This calls for education that gives learners the opportunity to think critically, analyse situations, make sound decisions, interpret and solve problems. Bruner (1957:234) believes that the outcome of cognitive development should be thinking. Philosophical inquiry should give students cognitive tools and dispositions to overcome challenges in life and to be independent thinkers who avoid manipulation.

It is clear that there is great need for innovative educational strategies to deal with the challenges society is experiencing. In his book, *Pedagogy of the Oppressed*, Freire (1993:52-57), showed how education has been used to exploit poor people when he presents the banking concept of education as an instrument of oppression. In the same work, Freire believes that through critical pedagogy, liberation can be a reality (Freire, 1993:52-57). He views education as a tool for empowering the learners to be agents of societal transformation. Empowerment can only be through an education that develops decision-making and problem solving skills in the learners. Freire (1993) recognises that learners are a key element in bringing social change. Bruner (1960) sees students as active knowledge creators. This then justifies the need to engage learners in philosophical inquiry.

The founder of P4C, Mathew Lipman, was certain that through employing reason and logic, people could have solutions to daily challenges, hence the need to practice using it at school. Paul, Elder and Bartell, (2013) rightly point out that “thinkers of the French enlightenment believed that the human mind is better able to figure out the nature of the social and political world if disciplined by reason”. It is through the command of the intellectual scope of thinking that learners are able to influence the development of their societies hence the teaching of critical thinking through philosophical inquiry becomes invaluable.

An American philosopher Peirce Charles Saunders made a very significant contribution to the improvement of theory and practice of education. Peirce condemns the traditional pedagogy that was grounded on the belief that learners are empty vessels who should receive rather than create knowledge. According to Strand (2005:314), Peirce believed in education that empowers learners to be critical thinkers and be able to deal with challenges in their lives. He came up with his theory of pragmatism whose main thrust was that every idea is a view of conceivable practical effects (Campbell 2011:7). Peirce emphasises the use of scientific method in validating an idea. For example, learners may not only be required to indicate that sunlight is important in the process of photosynthesis but may also be expected to explain how they arrived at it or why it is the case. When learners give reasons for their perspective, attitude, answer or approach, they are philosophising. His philosophy stresses the relationship between theory and practice through thinking and acting upon the world to transform it. Freire (1993:103) calls this philosophical approach, 'praxis' which he describes as a transformation through reflecting and acting upon what needs to be changed.

Critical thinking should enable learners to challenge assumptions as well as overcoming problems they come across in life. Stumpf and Fieser (2012:37) present Peirce's pragmatism as a reaction against rationalist theories of philosophers such as Plato, Kant and Hegel which held that validity is based on consistency between ideas themselves with no reference to outside things. The significance of Peirce's pragmatism to this study is that, reasoning should not be an end in itself. All developments in the world are a result of critical thinking. It can be concluded that education in Zimbabwe can be a chief instrument for development in all sectors if it affords pupils opportunities to think critically. In this case training the mind that can see the deeper realities of life should be a policy issue. Peirce can be credited for laying the foundation of pragmatism, a connection of thought and action. Of interest to this study is Peirce's insistence on the clarification of ideas and his belief that one's mental grasp of any idea depends on the unification of an idea in actual experience (Stumpf & Fieser, 2012:373). Experience can be viewed as a source of knowledge. When learning a concept or theory, learners usually grasp it better when they base their thoughts on experience. For example, pupils can be able to philosophise on the concept 'justice' simply because they have experienced cases where justice was defined, administered, condemned or denied.

Most nations now need not only social conformity but also reconstruction because change is inevitable in a globalized world. Fisher (2013:7) correctly points out that many of the reasons for seeking to develop thinking and learning skills are instrumental and pragmatic, and are to do with the success of individuals and society. Of the same line of thinking is Julius Nyerere (1967) of Tanzania who believed that, the society can be reconstructed through the curriculum which he thinks should produce critical thinkers who will put theory into practice. His educational policy 'Education for Self-Reliance' was an attempt to reconstruct the society (Nyerere, 1967). It is important to note that, it is not every curriculum that results in societal reconstruction. If a nation implements a knowledge-centred curriculum the result can be production of schooled academics who cannot reconstruct their society. The researcher thinks that the type of curriculum should be in line with the adopted ideology. Its implementation should be from a social perspective

According to Hessong and Weeks (1991:250), "pragmatists see the student as an organism capable of solving problems". Dewey's work is an attempt to grapple with real life challenges. In his work '*How we think*,' he indicates that ideas can be used to solve everyday challenges. Dewey (1933:208-209) insisted that philosophy should be concerned with human problems in a changing, uncertain world. Critical thinking should develop decision-making and problem solving skills in the learners. Dewey (1916:171-174) argues that philosophy or thinking and reasoning should be exercised in the tackling of problems. His argument is based on the notion that through philosophy, human beings can generate solutions to everyday problems. Dewey (1933) encourages problem-solving approaches in education. He emphasises that it is very important to examine challenges with the aim of solving them through critical thinking. Thus, one can conclude that critical thinking should not be a mere mental process; instead, it should enable learners to be problem solvers. It is also the assumption of the researcher that by training pupils to be critical thinkers, education is empowering them to be masters of their own destiny. Hence, the ideas of Dewey (1933) address the research question on the importance of philosophical inquiry.

Some of Dewey's thoughts form the theoretical foundation of P4C. Hare (2004) points out that Dewey acknowledged the philosophical nature of children when he says it is

childlike attitude to wonder and interest in new ideas. Dewey focused on significant aspects in teaching thinking which include linking thinking to problem solving, and teaching democracy through employing democratic principles among others. The idea of intellectual freedom during learning proposed by Lipman (1980:84-87) is grounded in Dewey's philosophy.

Philosophy can play a pivotal role in laying a robust foundation for genuine democratic nations. Camhy (2014) believes that "philosophy has an important role in overcoming challenges in society when she makes it clear that philosophy can be the answer to the new challenges of an ever-changing world". Cahmy (2014) draws attention to the fact that "critical and creative thinking through philosophical inquiry can give an academic environment to put democracy at the heart of teaching and learning". In light of Camhy's (2014) idea, it is now imperative to have not only education which is democratic in practice or process but also education which prepares learners to be democratic citizens.

Contrary to this proposition is an idea by Jean-Jacques Rousseau that children should be children before they are adults (Noddings, 2012:14). His argument is that children should not be taught what they are to become when they are still young. Whilst Rousseau's idea appears convincing, it is not sound. Firstly, his argument is based on the assumption that children, before the age of 15, are not capable of engaging in rational activities. He underestimated children's ability to reason. On the contrary, children are capable of engaging in philosophical inquiry with reasoning as the main activity. Secondly, if education is not a preparation for future life, then education is an end in itself. Such kind of education is not capable of producing people who can deal with challenges they face because they have not been equipped with such skills. In line with this challenge, Fisher (2013:27) indicates that Matthew Lipman proposed that reasoning be taught at primary level, because his college students were failing to think critically not due to laziness but because they had not been taught to do so before. In agreement with Lipman is Bruner (1960:33) who believes that children can be taught complex topics and skills at any level because they are capable of thinking and understanding such information. The teaching of critical thinking at primary school level needs not be over-emphasised. Children can philosophise if they are taught to do so.

P4C teaches children not to take things for granted. Change can be impossible if existing political and social structures are not interrogated. Education through P4C should produce citizens who do not only have the guts but also critical minds to challenge the status quo and change society for the better. In this case, Popper's rational criticism can bring change for the better.

Significant to this study is the contribution by Groenke and Hatch (2009) on the importance of critical pedagogy in reconstructing the society. Groenke and Hatch (2009) believe that "critical pedagogy in teacher education curricula can transform teaching and social justice frameworks for the better". This means that if teachers develop critical skills, they are likely to impart the same skills to learners. Reconstructing the society entails moving away from the banking concept of education to problem solving education. A reconstruction of society starts with a reconstruction of education itself. Today's educational practice should expose and be directed by democratic standards if the nations are to be democratic. If learners are exposed to critical thinking at school, they are likely to do the same in the society. The practice of education, therefore, should reflect the qualities of citizens a nation wants to have.

It is important that the classroom resemble a democratic community. The learning environment should encourage analysing, questioning, criticising, justifying, interpreting and researching. The teacher should also expose learners to conflict resolution. This will translate to citizens who do not only love peace but also make and maintain peace as well. It therefore means that, education is a critical element in social change. The absence of critical thinking in the process of education can immensely compromise aspirations of both the citizens and nations, hence the need by the researcher to look into the challenges faced by NTC student teachers in engaging their pupils in critical thinking through philosophical inquiry.

3.8 Conclusion

This Chapter discussed theoretical underpinnings of philosophical inquiry as a critical pedagogy. The main aim of engaging learners in philosophising as proposed by Lipman (1980:82) is the development of critical thinking in learners through philosophical dialogue. Philosophical inquiry is a transformative discourse which empowers learners to

be autonomous thinkers. In light of the history of philosophy, Lipman's (1980) reflective paradigm is a philosophy-based approach to foster in learners thinking which is critical and creative in nature. The history of philosophy greatly focuses on how learners can think critically for themselves and not just accept authoritative opinions. Acceptance of authoritative opinions without questioning because they are from an authority is not a sign of obedience but rather an indication of lack of critical thinking. Liberal education, therefore, calls for reflective, open-minded teachers and learners. Through critical pedagogy, learners can interrogate what they learn from different points of view. The philosophical inquiry approach enables learners to make decisions that are informed by reason. It is imperative, therefore, that NTC student teachers create learning environments which promote analyzing, questioning, justifying, interpreting, criticizing, researching, reasoning and problem solving among others. In light of the theoretical underpinnings of the research problem, the next Chapter describes and discusses the research methodology, focusing on philosophy, paradigm, design, data collection methods and instruments, ethical considerations, trustworthiness, data analysis and presentation.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

The previous Chapter focused on theoretical underpinnings of philosophical inquiry. Based on the theoretical framework in the last Chapter, this Chapter discusses the research paradigm and methodology. The main purpose of carrying out research in social sciences is to have a better understanding of phenomena to have a clear explanation for its causes and effects, and come up with feasible solutions. The challenge that researchers usually face is the choice of design to use which best suits the problem under study. A researcher's choice of a design is greatly informed by his or her paradigm's epistemological, ontological and axiological perspectives, which are an understanding of knowledge, reality and values respectively. This study explores the challenges faced by NTC student teachers in engaging their pupils in philosophical inquiry as well as ways of overcoming these challenges. The challenges were understood from the perspective of the NTC student teachers and teacher educators. Therefore, the researcher employed an interpretive paradigm and a qualitative approach using a case study strategy.

4.2 Interpretive paradigm

The research paradigm is the framework that guides the procedures of a research. A paradigm is defined by a number of scholars as a belief system or a worldview that guides researchers on the choice of research methods and how to employ them (Guba and Lincoln, 1994:105; Cohen & Crabtree, 2006; Michel, 2008). A research paradigm guides the researcher on ontological, epistemological, axiological and methodical assumptions. A research paradigm can also be defined as the lenses through which the researcher sees the rationale of the study, nature of knowledge to be uncovered, sources of knowledge and how it can be gained. Guba and Lincoln (1994:105) comment that "some scholars have a misconception of what a paradigm is as they refer to qualitative and quantitative as paradigms". In supporting this comment, Guba and Lincoln (1994) argue that questions of method are secondary to questions of paradigm. This implies that a paradigm has to do with a worldview whilst qualitative and quantitative approaches have to do more with methods. The essence of Guba and

Lincoln's (1994) argument is that, "it is actually the paradigm that determines which approach the researcher should employ among qualitative, quantitative and mixed methods".

Mertens (2005) as cited in Mackenzie and Knipe (2006) defines a paradigm as a theoretical framework of a research. In light of Mertens' (2005) conceptualisation of a paradigm, the research processes cannot be explained without identifying the frame and lenses through which the research processes are defined. Mackenzie and Knipe (2006) rightly observe that "without a paradigm as the first step there is no basis for subsequent choices regarding methodology, methods or design". The researcher chose the interpretive paradigm. This is an anti-positivist stance to explore, understand and interpret NTC student teachers challenges in engaging pupils in philosophical inquiry. According to Cohen and Manion (1994) as cited in Mackenzie and Knipe (2006), the interpretivists' approaches to research intend to understand human experience. The development of interpretive thought can be traced back to the philosophical ideas of Immanuel Kant and Wilhelm Dilthey who understood knowledge from rational and experiential perspectives respectively.

According to Dawn and Spencer (2003:6), Kant believes that knowledge is not only a result of experiences but it is also based on understanding which arises from thinking. Dilthey (1976) draws attention to the importance of understanding and studying people's lived experiences which occur within a particular social context. The individual student teachers' experiences of the challenges in the study were very important. Interpretivists believe that reality is constructed through interaction and is subjective. The interpretive paradigm was suitable for this research because the challenges faced in teaching pupils critical thinking can be understood from the perspectives of the NTC teacher educators and student teachers. Gray (2014:23) notes five approaches of the interpretivist paradigm which are "symbolic interactionism, phenomenology, hermeneutics, naturalistic inquiry and realism". These approaches are referred to where they apply in this research design. More information on the research paradigm is discussed under the research philosophical underpinnings.

4.2.1 Philosophical underpinnings

The researcher's choice of a design and methods were influenced by philosophical underpinnings of the research paradigm. Her epistemological, ontological and

axiological assumptions are from an interpretive perspective. These were discussed and their link was explored.

4.2.1.1 Ontological assumptions

Ontology is a study of the nature of reality. One's ontological assumptions can influence how one sees reality. Saunders, Lewis and Thornhill (2016:127) point out that "the researcher's ontological assumptions shape the way in which he or she sees and studies research subjects and objects such as individual working lives, organisations and organisational events". The researcher's position on reality determined what and how she studied it. The researcher believes in the existence of reality, implying that this research focused on how student teacher's and teacher educator's experience this reality. This way of seeing reality is informed by realism. Realism is a philosophy which asserts that reality exists independent of the mind or perceptions. The researcher focused on how the NTC student teachers and teacher educators reacted to this reality, which is the challenges they experienced in engaging pupils in philosophical inquiry.

These ontological assumptions informed the researcher to employ individual interviews as data collection methods. The researcher wanted to get information on how the NTC student teachers perceived and experienced the challenges. By interviewing student teachers on teaching practice, the researcher was able to explore the nature of challenges they faced in engaging pupils in philosophical inquiry.

4.2.1.2 Epistemological perspective

Several epistemological perspectives can influence the researcher's choice of a design. Cohen, Manion and Morrison (2007:7) rightly point out that "how one aligns oneself in the debate on conception of social reality greatly affects how one will uncover knowledge of social behaviour". Epistemology is a theory of knowledge. It centres on what makes up true and valid knowledge. According to Saunders, Lewis and Thornhill (2016:127), epistemology concerns assumptions about knowledge, what constitutes acceptable and legitimate knowledge and how it can be communicated to others. These epistemological perspectives include positivism, post-positivism and interpretivism among others. Positivism is a nineteenth century epistemological perspective which was originated by the philosopher, Auguste Comte. Merriam and Tisdell (2015:6) state that the positivists believe that "there is an objective reality independent of the observer

which can be accurately captured given the right design and methods". This perspective of reality is influenced by realism, a philosophy which asserts that reality exist whether there is or no mind to observe it. Saunders, et al. (2016:128) are of the view that epistemologically, objectivists seek to discover the truth about the social world, through the medium of observable, measurable facts.

It is true that reality exists but individuals experience it differently. Objects are what they are like to individuals because they perceive them as such. Experiences can be understood clearly within their contexts. Guba and Lincoln as cited by Scotland (2012:9) note that "epistemology asks the question: what is the nature of the relationship between the would-be knower and what can be known?" An action can be understood better if the doer explains his or her thoughts, emotions and social factors behind his or her action. Cohen, Manion and Morrison (2007:19) make it clear that opponents of positivism "agree that the social world can be understood only from the standpoint of the individuals who are part of the ongoing action being investigated". In this study, challenges in engaging pupils in philosophical inquiry were understood from the perspective of those who experienced them.

Opponents of positivism are quite correct that understanding a problem or situation from an outsider perspective is different from an experiencing point of view. There is a possibility of misconceptions and taking for granted critical issues and incidents because the outsider can fail to construct contextual meanings of issues, actions and activities. Contrary to positivism, post-positivists believe that objective reality cannot be attained. Merriam and Tisdell (2015:7) note that the aim of research according to post-positivists is to "generate a reasonable approximation of reality that is tied closely to what is observed". The implication is that research findings are not what things are on the ground but they are an estimate of what is the case. On the contrary, the researcher believes that research findings can be a reflection of what is the case.

The researcher believes that knowledge and reality should be understood from a realistic point of view. According to Saunders et al (2015:130), interpretivism maintains that social reality is made from perceptions and actions of social actors. From an interpretivist point of view, reality is the same but experiences of that reality is not the same for everyone. Therefore, what should be understood from an individual point of

view is his or her experiences. The researcher employed data collection methods such as individual interviews which enabled her to interact with the participants in order to capture their truth. The researcher tried to understand teacher educators' and student teachers' interpretations of their practicing worlds, which are their realities when she shared their frame of reference. Guba and Lincoln (1994:111) assert that the subjectivist assumption sees knowledge as created in interaction among investigator and respondents. In terms of epistemology, interpretivism and subjectivism are closely linked to constructivism (Gray, 2014:23). Constructivists believe that there are many truths and interpretations because each participant has her or his own experience of reality.

The interpretivism paradigm, was employed to have an understanding of the phenomenon studied. According to Merriam and Tisdell (2015:5), the interpretive approach focuses more on interpreting deeper meaning from participants' narratives of how they experience reality. Apart from interviews, the researcher employed document analysis as a method of data collection. This approach was suitable for a study which sought to understand the challenges faced by NTC student teachers in engaging pupils in philosophical inquiry from the perspective of the former (student teachers). Their practice is guided by the documents and the documents were also a reflection of their experiences. This made their documents a valuable source of data for this research.

The researcher employed the qualitative design as a strategy that focuses on capturing participants' views and perspectives in their context. The challenges faced by NTC student teachers were understood from their perspective. However, the researcher also interpreted participants' narratives. Yin (2011:11) correctly points out that,

“...although the research's desire is to capture the meaning of real world events from the perspective of the participants, their meanings also unavoidably subsume a second set of meanings of the same events from the researcher”.

The research revealed multiple experiences of reality, the experiences of the NTC student teachers and the researcher's interpretation. This is in line with the idealist subjective dimension of social reality. Greenfield (1996), as cited by Cohen, Manion and Morrison (2007:10) points out that although the idealists believe that the world exists but different people perceive it from different perspectives. This is the reason this study in some cases presented different causes of the same challenge.

4.2.1.3 Axiological assumptions

Axiology is a theory of values and ethics. The role of values in research is very important. What the researcher values determines the focus of his or her research and how he or she collects data from participants. Hogue (2011) professes that “the researcher’s values affect how he or she does research and what to value in the results of the research. In other words, the researcher’s values influence his or her perspectives, choices and procedures”. The purpose of this research is twofold. The researcher believes that given an opportunity to reflect on practices, research can help to change it for the better. The researcher focused on understanding the challenges faced by the student teachers of NTC with the aim of finding feasible solutions. In agreement with Hogue (2011) is Klenke (2008:17) who makes clear that “the value system a researcher brings to his or her study informs the research methodology”. The main purpose of the research was realised through exploring the lived experiences of the NTC student teachers who faced the challenges. In doing so the researcher addressed the important research questions such as; what are the challenges faced by NTC student teachers? What are the ways of overcoming the challenges?

Ethics are closely related to values. The researcher’s values influenced her relationship with the participants. The researcher valued people’s experiences no matter their status in life. The researcher regarded participants not only as actors but reflective beings whose practice is informed by their thoughts. It was therefore imperative for the researcher to interview the teacher educators and student teachers to get a deeper meaning of their practice. The fact that they were the researched did not relegate them to the level of objects whose world is named for them. The researcher valued them as people who possess valuable knowledge as they understand better the phenomenon of the study. The researcher was ethical in her process of data collection. She did not impose her ideas on the student teachers and teacher educators nor present her assumptions as their experiences. She bracketed her assumptions and knowledge of the phenomenon so that the challenges are explained from the point of view of those experiencing it. Where she gave her point of view on discussions, she clearly indicated the views as the researcher’s. This researcher’s interpretation of data is referred to as “etic perspective” (Yin, 2011:11).

4.3 Qualitative approach

The researcher employed the qualitative approach. Marshall and Rossman (2011:1) note that “qualitative research methodologies have become increasingly important modes of inquiry for the Social Sciences and applied fields such as education”. The research questions focused on the perception of the student teachers as well as their practice. Qualitative methods were employed as appropriate for an investigation of human thoughts and actions. Bogdan and Biklen (1992:32) rightly point out that those who engage in qualitative research are concerned with participant experiences and perspectives. The research constructed reality from the student teachers’ and teacher educators’ responses.

The researcher employed the qualitative design because she used the existential hermeneutic approach to the study. Willis, Jost and Nilakanta (2007:54) define hermeneutics as “the discipline that seeks to interpret human phenomena such as education within an existential situation”. The approach was appropriate because the researcher studied and interpreted human thought and action. According to Hitchcock and Hughes (1995:12), “when using the hermeneutic approach in school based research, close attention is paid to what ordinarily and routinely happens in schools and classrooms”, which this research focused on. Researchers in qualitative research are concerned with process rather than products. The researcher focused mainly on the process of teaching which should facilitate the development of philosophical skills in pupils, in selected schools and grades. This made the research a case study.

4.4 A case study

Case studies focus on contemporary issues or problems by studying a single instance of the phenomena. A case is a process or situation which requires investigation. In this study the case is the teacher education programme. Yin (2009:4) defines a case study as “a detailed examination of one setting or a single subject, a single depository of documents or one particular event”. The researcher focused on the challenges faced by student teachers in teaching primary school pupils to be philosophical during teaching practice. Teaching practice is part of teacher education. This study focused on contemporary phenomena, teaching philosophical skills and that distinguishes it from a historical research which focuses on past issues. The researcher observed the student teachers teaching and interviewed them in the events.

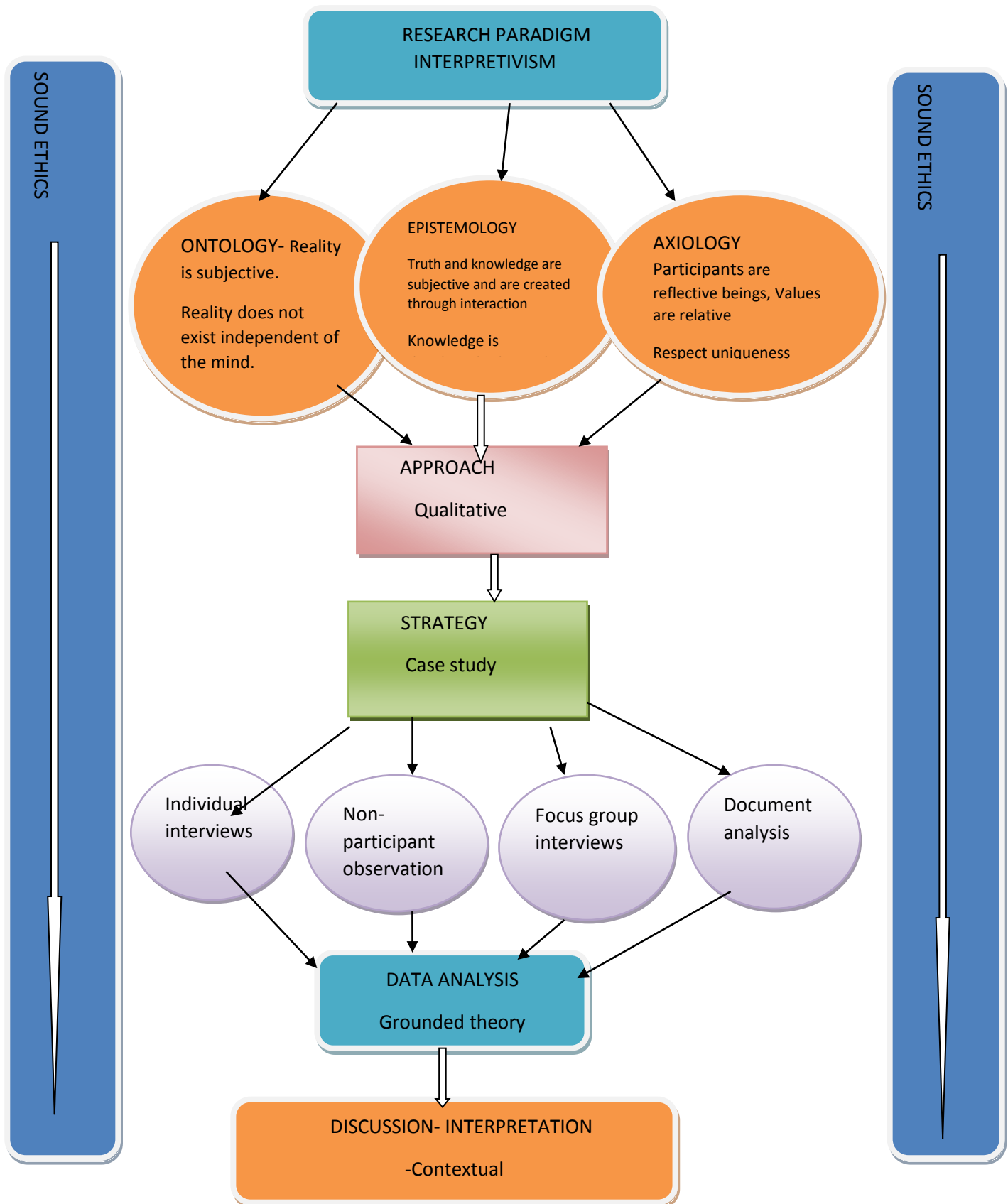
The researcher used a case study design because she wanted to understand challenges faced within classroom settings. Taylor, Sinha and Ghoshal (2006:29) indicate that a case study is most suitable when the researcher is trying to understand a phenomenon within its context. Challenges faced by student teachers of NTC in engaging their pupils in philosophical inquiry could be understood better in the settings they were being experienced. Yin (2003) in Baxter and Jack (2008:545) indicates that “a case study design should be considered when the focus of the study is to answer how and why questions and if the researcher wants to cover contextual conditions because he or she believes that they are relevant to the phenomenon and context”. In light of Yin’s (2003) contribution, the case study design was employed because the challenges could only be understood if studied in the context of NTC where they got their teaching skills from and the schools in which they teach.

The contexts include the conditions under which the student teachers were taught and the schools in which they practiced. Most of their lectures at College were mass lectures. They learned in classes with 60-350 student teachers. The other context in which student teachers on TP were studied includes teaching classes without mentors. Some of the student teachers were attached to school heads who were always engaged in administrative duties than mentoring. Some of the student teachers were teaching large classes with a total number of pupils ranging from 35 to 60. Lack of adequate teaching and learning material was another context. The student teachers were observed teaching classes comprising more slow learners than fast learners.

A true reflection of the case was a result of studying the challenges within the framework of these contexts. If case studies are carried out systematically, they contribute to the development of educational practice. This means that this research can generate valuable knowledge on critical pedagogy.

The diagram on page 78, Figure 4.1 summarises the research design.

Figure 4.1: Research design



4.5 Research methods

The research methods are informed by the research philosophy discussed from page 71 to 75 under sub-section 4.2.1.

4.5.1 Data collection methods

Individual interviews, non-participant observation, document analysis and focus group discussions are the methods of generating data in the qualitative approach. This study employed these data collection methods.

4.5.1.1 Interviews

The researcher understood the challenges faced by the NTC student teachers from student teachers' perspectives and their experiences of reality. The researcher used interview as a method of data collection. According to King and Horrocks (2010:1) the purpose of interviewing is to "find out what is in or on someone else's mind". An interview is a suitable procedure for collecting data for the study that focuses on challenges and perceptions of student teachers on their practice. It therefore assumes that all teacher educators and student teachers have truth on how they experience reality. According to Brenner cited in Yin (2011:135), qualitative interviews aim at "understanding participants on their own terms and how they make meaning of their own lives, experiences and cognitive processes". Truth was looked at from the participant's perspective which is only possible when using an interview as a method for collecting data.

The researcher asked open-ended questions so that the participants shared their teaching practice experiences without being limited by the researcher's bias or assumptions. Yin (2011:136) points out that the researcher or interviewer should be nondirective because the aim is to get reality of the phenomenon as experienced and perceived by participants. All the interview schedules included among others what Berg (2001:75) refers to as essential questions. In every interview session with the student teachers, the researcher asked the interviewee on the challenges they faced in engaging their pupils in philosophical inquiry and ways of overcoming them. Sub-questions related to the focus of the research were asked as well. This enabled the researcher to check reliability of the responses given. The student teachers on teaching practice were asked the following questions:

Interview questions for student teachers on TP

- What is your understanding of engaging learners in philosophical inquiry during learning?
- Are you aware that you should engage your pupils in philosophical inquiry?
- Do you engage your learners in philosophical inquiry when teaching them in various subjects?
- What is the importance of teaching philosophical skills to primary school learners?
- Explain the challenges you are facing in engaging pupils' philosophical inquiry.
- To what extent do these challenges affect the teaching of thinking in all the subjects you teach?
- How effective was your teacher education in preparation for TP?
- How can these challenges be overcome?

The NTC teacher educators were interviewed as well. They gave information on what they are doing in preparing their student teachers to be philosophically oriented.

Interview questions for teacher educators

- What do you understand by philosophical skills?
- How important are philosophical skills to your student teachers?
- What are you doing in your department to make sure that your students are philosophically oriented?
- How effective are your efforts in enabling your student teachers to be reflective teachers?
- To what extent do you employ critical pedagogy in your teaching?
- From your teaching practice supervision experience, what challenges do your student teachers face in engaging their learners in philosophical inquiry?
- What can be done to overcome these challenges?

The researcher started with simple questions in order for the interviewee to be at ease. In cases where the participant was not clear or had not given a complete account or description of the experience, the researcher asked for clarification or probed. Berg (2001:76) says that “probing questions provide interviewers with a way to draw out more

complete stories from participants”. The following are examples of probing questions that were asked depending on the responses:

- What had happened before that?
- What happened after that?
- Why did they do that?
- How did you react to that?
- What was another option?
- What did that mean?
- May you shed more light on that?
- What is your evaluation of that?

The necessary details of the interview were communicated to the participants well before the interviews. The details included that an oral interview would last about 25 to 30 minutes. The responses were audio-taped to capture the responses accurately. Before every interview session, the researcher established rapport and promised confidentiality. During interview sessions, the researcher did not use gestures that could have been interpreted by the interviewee to mean approval or disapproval of the interviewee’s responses. Arksey and Knight (1999:53) as cited by Cohen, Manion and Morrison (2007: 364) note that giving a sign of approval or disapproval of responses received can enable the interviewee to detect bias or the interviewer’s assumptions. The researcher ended each interview session by promising confidentiality and thanking the interviewee.

The problem with interviews is that the truthfulness of information depended on the willingness of the participants. The researcher assured confidentiality as suggested by Israel and Hay (2006:80), and this made the participants comfortable to reveal all the information required. The researcher interviewed NTC teacher educators and student teachers on teaching practice. These provided important information on the teaching of children to be philosophical. Agreement among the student teachers was not taken as proof for truthfulness. Errors and consistencies were detected and explained. The researcher used an audio-tape recorder to record all the information. Hitchcock and Hughes (1995:170) assert that “tape recording of the interview session will produce the most complete record of what was said”. A tape recorder was accompanied by field notes on gestures and facial expressions. However, it was not easy to concentrate and

capture all the non-verbal communications at the same time. Soon after each interview session, the researcher wrote memos. These focused on insights, areas for further discussion, interviewer's impressions about the interviewee's perceptions and experiences.

4.5.1.2 Focus group discussions

Focus group discussions were used to generate dialogues which were not only data generating but also educative encounters for the student teachers. Focus group has been variously defined. A number of scholars define it as "a social science method of data collection (Braun & Clarke, 2013; Hennink, 2014; Liamputtong, 2011; Sensig: 2011). It is an approach of collective discussions to generate data on a specific topic, issue or problem. Grim, Harman and Gromis (2006:517) define focused group interview as "a qualitative method in which researchers interactively question a group of participants". The researcher used focus group discussions because she believes that knowledge of experiences can be socially constructed. Saunders, Lewis and Thornhill (2015:130) point out that social constructionists put forward that reality is "constructed through social interaction in which social actors create partially shared meanings and realities". The researcher do not agree with this position. She believes that what participants can create are meanings of their experiences but not reality. The focus group discussions produced data and insights on challenges faced by NTC student teachers in engaging pupils in philosophical inquiry.

The use of focus group discussions enabled the researcher to collect data from forty student teachers within a short period. Creswell (2012: 218) describes a focus group method as the process of collecting data through interviews with a group of people typically four to six. What makes focus group discussions different from individual interviews is but the way data is generated. Dynamic conversations generate data which cannot be generated in individual interviews. Dialogue amongst group members did not only promote exchange of ideas or thoughts on philosophical inquiry, it also encouraged that student teachers explore and clarify their ideas and teaching experiences. Berg (2001:112) is of the view that "if properly administered, focus groups are extremely dynamic". Through discussions, the researcher gained a deeper understanding of the student teachers' views and the meanings they derive from their teaching experiences. Group dynamics did not only bring out diverse perspectives but also aspects of the topic

which have not been anticipated by the researcher. According to Kitzinger (1995), focus group methods can be used to examine not only what people think but also how they think and why they think that way. A focus group is like a community of inquiry where views are not only presented to participants but are questioned and justified.

All focus group participants were student teachers who had completed their teaching practice and were in their final year at college. These are referred to as student teachers on campus. According to Yin (2011:141), “the group is focused because the participants have some common experience or seemingly share some common views”. All the focus group participants had done teaching practice in different schools where they experienced the phenomenon being studied. It should be noted that, the fact that all the group participants went through teaching practice does not necessarily mean that they have uniform ideas and reasons for the challenges. The more they differ the richer the data. SAGE research methods (2013:7) stresses that if all the participants share virtually identical perspectives on a topic, this can lead to an unproductive discussion. Purposive sampling was employed because the researcher wanted the NTC student teachers who had teaching experience as well as knowledge about the phenomena, teaching thinking. Litosseliti (2003) makes it clear that “a good general rule is to select individuals who are likely to be participative as well as reflective”. The researcher selected participants who were rich informants. The researcher selected student teachers who articulated their TP experiences during a TP review workshop held at NTC by the TP department. The researcher selected student teachers who managed to raise a number of issues relevant to this research during this workshop. The selected student teachers were those who had a lot to share from their TP experience and had taught grades 4, 5 and 6. The researcher interviewed forty NTC student teachers on campus.

Scholars vary on the number of participants per group. Krueger and Casey (2009: 8) rightly point out that “a focus group must be small enough for everyone to have an opportunity to share insights and yet large enough to provide diversity of perceptions”. Each group had eight participants who taught the same grade at different schools. The researcher used five focus group discussions. The participants formed homogeneous groups because they all did teaching practice. Liamputtong (2011:35) states that homogeneous groups create comfort within the group and this enhances more fluid discussion among participants. The fact that all the participants did teaching practice

meant that all the participants had the experience which was of interest to the researcher. Ritchie, Lewis and McNaughton Nicholls (2014:139) emphasise “on the need to have participants who are different enough to stimulate the discussion of diverse perspectives but similar enough to avoid unhealthy conflict”. In as much as the researcher wanted diverse opinions, she also made sure that sessions were interactive. The groups were both homogeneous and heterogeneous in that although they all had teaching practice experience, some taught in rural areas and others in urban areas. This will create comfort and at the same time give diverse perspectives.

The focus group discussions provided data on shared perspective, opinions and assumptions on the challenges faced in engaging pupils in philosophical inquiry. The discussions addressed the following focus group discussion questions:

Focus Group interview questions

- What is your understanding of philosophical inquiry?
- Were you aware that you were expected to engage your pupils in philosophical inquiry?
- What is the importance of teaching philosophical skills at primary school level?
- How did you engage learners in a philosophical inquiry?
- What challenges did you face in engaging your learners in a philosophical inquiry?
- How did you address or try to address these challenges?
- How effective was your pre-TP teacher education in equipping you with skills to engage pupils in philosophical inquiry?
- What do you think should be done to overcome the challenges?

A well-experienced moderator facilitated the focus group discussions. The moderator played a very significant role in the discussion process. Furthermore, a lecturer in the Theory of Education Department who possesses group process skills moderated the group discussions. Liamputtong (2011:42) describes the role of the moderator as exploration of different perspectives. The researcher emphasised to the moderator the need to encourage each focus group participant to give his or her perspective freely. The more the responses were diverse the richer the data. Litosseliti (2003:75) acknowledges the need to have different perspective when he points out that “the

moderator should be skilful to allow for different viewpoints to be explored". The moderator established a free environment for all participants to say out their views without any hesitation of being looked down upon or embarrassed. Krueger and Casey (2009:5) rightly point out that people self-disclose only when they feel comfortable and when the researcher brackets his or her assumptions and bias. During each session, the moderator requested the participants to de-role and informed them that he was facilitating as a participant and not their educator. He encouraged them to share their views, talking to each other and to respect each other's contribution.

The researcher was a complete observer of the focus group discussions. Creswell (2014:191) describes a complete observer as "a researcher who observes without participating". The researcher was observing interactions among group members, non-verbal behaviour, and facial expressions. Sensig (2011:124) notes that the observer can focus on non-verbal communications that will not be picked up on tape. Verbal and non-verbal communications can show the attitudes of the participants towards certain issues, what is being said and what that participant is saying. The observer sat at a strategic place because she was communicating with the moderator through notes on raised points or experiences which she thought needed clarification, follow up, justification and probing. She communicated through notes so that the flow of the discussion was not disturbed.

The moderator used the focus group guide prepared by the researcher. The guide directed the moderator on the group procedures such as establishing rapport, introductions, reminding the participants on the purpose and motivation of the study. It also guided on acknowledging the presence of audio recording equipment, setting ground rules, assuring confidentiality and giving the participants the opportunity to withdraw if they are no longer willing to participate. The preliminary discussion focused on reminding the participants what had been communicated to them before and also meant to put the participants at ease. The moderator started each discussion by asking simple factual questions, a process which Litosseliti (2003: 60) views as ice breaking and putting the participants at ease. In agreement with Litosseliti is Berg (2001:121) who confirms that "introductory activities make the participants understand what is expected of them and become more relaxed". When the participants were at ease, then the moderator asked key questions which were open-ended and they were directly linked to

the main research question. The questions were free of bias and the student teachers were free to give their teaching experiences and perspectives without being led by the moderator's assumptions. The moderator ended the discussions by asking the participants any useful information to the research that might not have been discussed, reminded them on confidentiality and then thank the participants.

The transcription of the data was done by the researcher. Gill, Stewart, Treasure and Chadwick, (2008) point out that the transcription of focus group discussion is complex and time consuming than in one to one interviews. The researcher transcribed each focus group discussion over two to three days to avoid mistakes that could have been caused by fatigue. The discussions were transcribed verbatim in order to have an accurate text of data generated.

4.5.1.3 Non- Participant observation

The researcher employed non-participant observation as one of the data collection methods. Creswell (2012:213) describes a non-participant observer as "a viewer who visits a site and record data as it happens without participating". Non- participant observation is therefore, a research data collection method whereby the researcher watches the participants of his or her study with their knowledge but without taking an active part in the situation under observation. Non-participant observation was used to collect data during lesson delivery and focus group interviews, especially gestures and some actions as well as data which the interviewees were unwilling to give that were of importance to the study. Observations were done in two phases. The researcher observed the student teachers at the beginning and the end of data collection process.

The advantage of using observation as a data collection method was that it gave insight into the challenges faced by student teachers as a bigger picture. Observations can sometimes obtain more reliable information about certain things, for example action or how people behave. Cohen, et al. (2007:396) mention that the researcher's ability "to see things that might otherwise be unconsciously missed to discover and things that participants are not free to talk about in interviews as one of the advantages of observation". Indeed, it is likely that people do not want to disclose information which can portray them negatively; they are free to tell the experiences that portray them

positively. The other reason for using observation as data collection method was that data collected from observed lessons was free of the student teacher's bias. The researcher can go beyond perception data (Cohen, et al., 2007:396). During observation, the researcher was able to see how the NTC student teachers engaged their pupils in philosophical inquiry as well as the challenges they faced during lesson delivery. In addition, the researcher collected data on the feasibility of engaging classes of 30 to 40 pupils in philosophical inquiry. Data from observations addressed the following research questions:

- What are the challenges faced by the NTC students teachers in engaging pupils in philosophical inquiry?
- Is it feasible to teach philosophical skills through other subject areas in the curriculum?
- Are the student teachers of Nyadire Teachers' College aware that they should engage pupils in philosophical inquiry and how?

Best and Kahn (1993:224) cite the problem of the effect the observer has on the behaviour of those being observed. The researcher had to visit the participants for a number of days before the initial data collection so that the participants become accustomed to having the researcher amongst them. The advantage the researcher had was that she used to visit the student teachers for TP supervision. The student teachers and pupils were used to have me sit and observe them teaching and learning respectively.

The NTC student teachers were selected based on the grades they taught and willingness to participate in the study. This study focused on two grade four classes, three grade five classes and three grade six classes from eight selected schools in four districts in Mashonaland East province where most of the NTC student teachers were deployed for teaching practice.

To ensure compliance with the research ethics, the researcher wrote to officers that grant permission and individual student teachers for informed consent. Creswell (2014:188) urges researchers to seek the approval of gatekeepers, and responsible authorities to gain access to the site and permit the research to be done. Permission

was sought in writing from the responsible authorities of schools, the District Education Officers of Murehwa, Mutoko, Mudzi and Uzumba Maramba Pfungwe (UMP) districts, and the heads of eight selected schools.

The researcher sought the NTC student teachers' informed consent to be interviewed and observed teaching. For school pupils, assent was obtained as well as consent from the parents, organization or the person authorized to represent the interests of the minor. Bogdan and Biklen (1992) as cited by Creswell (2014:188) suggested aspects that could be addressed in a letter requesting permission to do research and these included reason for choosing the site, activities that would occur at the site during the research, and the benefits. The participants were assured that data collected was confidential and was not going to be shared with other participants or anyone else. All these aspects were addressed in the letters written to gatekeepers and individuals concerned. The researcher also assured the participants confidentiality. For every visit, the researcher reported to the school head's office before and after observing the student teachers teaching and pupils learning.

The advantages of collecting data at the site were that the researcher had the chance to record information as it occurred at the site, to study the student teacher's practice and to study student teachers who had challenges in verbalising their thoughts (Creswell, 2012:213). The researcher collected first-hand information from the eight selected schools.

The researcher was a non-participant observer during lesson delivery by the NTC student teachers at their schools in their classrooms. The researcher audio-taped lessons observed. Patton (2002:308) makes it clear that "the creative and judicious use of technology greatly increases the quality of field observations". The tape recorder captured the individual and collective actions and emotions that provided richness to the event. The participants were informed of the recording device before the observation commenced. According to Markle, West and Rich (2011), the benefit of using recorded audio and video is increased authenticity. By using a tape recorder, the researcher avoided the problem of omissions in data capturing. The researcher took descriptive and reflective notes when she was observing student teachers and pupils teaching and learning respectively. The taking of notes was necessary because audiotape alone could

not have given rich accounts of the events. Mishler (1986) as cited by Cohen, et al. (2007:365) correctly points out that “audiotape filters out important contextual factors, neglecting the visual and non-verbal aspects of the interview”. The researcher recorded these aspects as field notes. However, it was difficult to capture all gestures during observations and interviews.

The observation guide gave the researcher a framework of what she had to observe. Yin (2011:145) makes it clear that among many items that can be observed are “interactions between and among people, the actions taking place and the physical surroundings”. In this study, some of the aspects that were observed during a lesson delivery included the student teacher’s pedagogy, questioning techniques, pupils’ participation and nature of responses, clarity, learning environment, critical thinking in the learners and ability to engage pupils in a philosophical inquiry among others.

Each student teacher’s real name was systematically changed to a pseudonym to maintain confidentiality. Berg (2001:57) describes confidentiality as an active attempt to remove from research records any elements that might indicate the subjects’ identities” This also applies to names of schools. The observer ended the observation process by assuring confidentiality, showing appreciation through thanking the participants and announcing her departure to the head of the school.

4.5.1.3.1 Field notes

Field notes are written phrases, words or accounts of what the researcher hears, sees, experiences and thinks during fieldwork or in the course of observing, gathering and reflecting on the data (Punch & Oancea, 2014:198; Bogdan & Biklen, 1992:107). After each interview, observation or other research session the researcher wrote what would have happened, including gestures, events and narrative accounts of proceedings. The researcher captured both verbal and non-verbal data. The researcher also recorded any general information that was of use during her supervision of students on teaching practice and also insights that came out from conversations with other lecturers and students at social level.

4.5.1.4 Document analysis

Documents play a significant role in the day-to-day running of learning activities. Atkinson and Coffey (2004:56) have shown great concern over studies that are done

without the analysis of documents in that are used in the settings. Atkinson and Coffey (2004:56) argue that such studies do injustice to the settings they claim to describe. The researcher regarded student teachers' documents as reliable sources of data which provided important insights on the student teachers practice. The student teachers of NTC are extensively involved in the production and consumption of documents such as lesson plans and syllabuses/syllabi respectively. The NTC student teachers produced records such as schemes of work and lesson plans as communicative devices for instructional purposes. It would not have been just to carry out a research on engaging pupils in philosophical inquiry without analysing the documents that guide the NTC student teachers' actions in the instructional process. Flick (2009:261) rightly points out that researchers analyse documents as communicative devices rather than mere containers of information. Lesson plans are the guiding documents in the process of teaching. The researcher analysed documents within the ethno-methodological framework.

Ethno-methodology is a sociological approach that seeks to elucidate individual's daily experience of reality. An American sociologist, Harold Garfinkel, coined this approach. According to Cohen and Crabtree (2006), Garfinkel posits that social reality and social facts are constructed, produced and organised through the ordinary actions and circumstances of everyday life. Data were collected, understood and interpreted in the context of the NTC student teachers and their practicing schools. Blackstone (2015) defines "ethno-methodology as the study of everyday reality". Social facts are created by individuals through certain procedures and interactions. Boundless.com (2015) describes ethno-methodology as a study of procedures people carry out in an organisation. The researcher was interested in the procedures or methods employed by the student teachers of NTC during instructional processes. The documents indicated the procedures that the student teachers followed during teaching. Cohen and Crabtree (2006) point out "observation, interviewing and documentary methods as some of the ethnographic techniques employed in ethno-methodology". The researcher examined the everyday routine and practical activities of the student teachers (Harvey 2015).

Lesson plans and schemes of work gave clear accounts and descriptions of what was done, what was covered, how it was covered and date. The focus was on the instructional processes by which the student teachers were expected to engage pupils in

philosophical inquiry. The methods and procedures in their documents were understood from the perspective of the student teacher who was the author of the documents. The researcher viewed the participants as rational actors whose practice was guided by their rational thoughts. Harvey (2015) makes it clear that in order to understand the actor's conception of reality or events, ethno-methodologists bracket or suspend their assumptions. The researcher bracketed her assumptions of what student teachers should write in their documents and was guided by the data.

The researcher had a number of reasons for choosing document analysis as a method of data collection. Firstly, the student teachers' documents were very informative and provided critical insights on their teaching and the classroom activities. Flick (2009:262) makes it clear that documents can be instructive for understanding social realities in institutional contexts. Flick's point confirms the view that documents are a record of the what, how and why of the organisational processes. In agreement with Flick are Atkinson and Coffey (2004:57) who profess that documents should be viewed as instructive devices of people's daily experiences. In making this comment, they argue that "documents often enshrine a distinctively documentary version of social reality and representations". An analysis of the matter reveals that documents are not mere written papers. They are created for a practical purpose. The documents that were analysed were constructed for instructional purposes.

The documents such as schemes of work and lesson plans symbolise student teachers' actions, interactions and encounters. The documents gave the researcher a clear picture not only of classroom activities but also the student teachers' competencies in relation to engagement of pupils in philosophical inquiry. The other reason why the researcher used teaching practice documents was the provision of unbiased data on the student teachers' competencies and classroom practice. Flick (2009:261) points out that data from documents are free from the researcher's bias or assumptions on the phenomenon being studied..

Data from lesson plans, schemes of work among other documents, was not only used to validate data from lessons observed, focus group discussions and interviews but to complement it. Atkinson and Coffey (2004:59) urge researchers to regard documents as valuable sources of data. The TP documents provided insights that could not be

presented through interviews and lesson observations. Flick (2009:255) acknowledges that documents and their analysis can be used as complementary strategy to other methods like interviews and observations or the researcher can use the analysis of documents as a stand-alone method. The researcher did not use documents as a stand-alone because she had to observe the student teachers teaching and also hear what they thought about the challenges they experienced in engaging pupils in philosophical inquiry, hence the need to conduct interviews.

The researcher used unsolicited documents. The researcher did not request the student teachers to write schemes of work and lesson plans for the purposes of the research. Flick (2009:256) defines unsolicited documents as documents that are written as part of an everyday routine not as per the researcher's request. Schemes of work are written before the term begins and daily lesson plans are written a day before the lesson. The researcher analysed the running documents. The documents analysed were in handwritten form.

The student teachers on teaching practice used a number of documents; these include progress records, social records, attendance registers, remedial and extension records, schemes of work and lesson plans among others. Creswell (2012:223) describes documents as "valuable source of information in qualitative research". The researcher selected only those that helped to explore the challenges in engaging pupils in philosophical inquiry. The permission to use the documents was sought from the heads and the student teachers who were the authors and owners of the documents. No document was taken away from the site unless the participant gave the researcher the permission to photocopy the documents. In such cases, the researcher made sure that no one else had access to the documents and were returned to the participant on the agreed date. Scott (1990) as cited by Flick (2009:257) suggested a criterion that could be used for deciding whether or not to employ a document. The criterion included authenticity which looked at the genuineness and origin of the document.

The researcher used documents which were a primary source. The researcher analysed documents' authorship to establish if the participant wrote them or not except for the syllabuses/syllabi which are official documents not written by student teachers. According to Borg, Gall, and Gall, (1992:203), "documents should be examined for their

authenticity and accuracy before they are used as data sources". In agreement with Borg, Gall and Gall (1992:203) is Creswell (2012:223) who stresses that documents should be examined for accuracy, completeness and usefulness to the study. This was done through external and internal criticism. On external criticism, the researcher looked at the genuineness of the schemes of work, test records and lesson plans. The second criterion suggested by Scott (1990) as cited by Flick (2009: 257) is credibility, which referred to accuracy of the documentation. While it is true that documents to be analysed should be trustworthy, it is not always the case that every trustworthy document has no errors. A document can be reliable but with minor errors that do not change or alter the author's intended meaning. Internal criticism focused on worthiness in teaching practice documents.

The third criterion was representativeness. The researcher focused on checking whether the teaching practice documents contained what they should contain. The researcher used participants' documents because they were typically what they were supposed to be. The researcher established this by focusing on the structure, contents, genre and purpose as indicated by the contents. Flick (2009:259) brings to bear the practicalities of using documents when he professed that "documents should be seen and analysed as methodically created communicative turns". The last criterion proposed by Flick (2009:259) was meaning and in this research the intended meaning for the student teacher, reader who is the researcher and meaning to the pupils. The researcher focused on clarity and comprehension of the author's meaning and the reader's meaning. The pupils were the objects in the student teacher's documents.

The researcher used a purposive sampling procedure. The running documents of each participant on TP were selected to reconstruct the case. The documents that informed the NTC student teachers' instructional process were the lesson plans. However, the researcher will include other documents of the same genre (Atkinson & Coffey, 2004:68). The researcher will analyse the following documents: lesson plans, schemes of work, test records and syllabuses/syllabi. The documents that are used to deliver lessons cannot be analysed in isolation. Atkinson and Coffey (2004:67) were right to argue that documents make sense because "they have relationships with other documents, so they reflect and refer to other documents"(see table 4.1).

Syllabuses, schemes of work, lesson plans and test records were analysed because they were linked to lesson plans. The link among documents is referred to as “intertextuality” (Flick 2009:258, Atkinson & Coffey 2004:68). Lesson plans are derived from schemes of work which are also derived from syllabuses. A test record is a record of tests given, tests to be written and evaluations of pupils’ performance in tests given. The test records gave a clear picture of the kind of questions that the NTC student teachers asked their pupils.

Table 4.1: Documents analysed

Document	Length	Contents and purpose
University of Zimbabwe Handbook for quality assurance in associate Teachers’ Colleges	39 pages	Outlines the teacher education curriculum for teachers’ colleges and quality assurance framework for teacher development as well as guidelines on associateship and quality assurance procedures.
Primary School Syllabuses	Eight syllabuses with 15 to 20 pages each	-Outline and define skills and concepts to be learned for a specific grade. -Guide the teacher on what content and skills to cover and when. -Inform the scheme of work
Scheme of work	Eight schemes of work with 26 pages each per student teacher (eight Student teachers)	-Outlines skills to be learned, content to be covered, sources of matter, weekly aims, methods and activities and weekly evaluations of work covered - Informs daily lesson planning.
Lesson plans	30 lesson plans with two pages each per student teacher (eight Student teachers)	-Outline how the lesson will unfold, lesson objectives, lesson development stages and evaluation of the lesson. -Guide the teacher during lesson delivery.
Test record	1 test record with 10 pages per student teacher (eight student teachers)	A record of written tests that are to be given and the ones that were written by pupils and evaluations on performance.

There are general problems in using documents as sources of data. Flick (2009:259) points out the problem of failing to understand the content of the document because of inability to make sense of the words, abbreviations and codes or references used. The researcher was familiar with the documents she analysed. However, in the event of such a challenge, she would have consulted the author of the documents for clarity. In the same work, Flick (2009:261) reminds researchers to “avoid focusing only on the

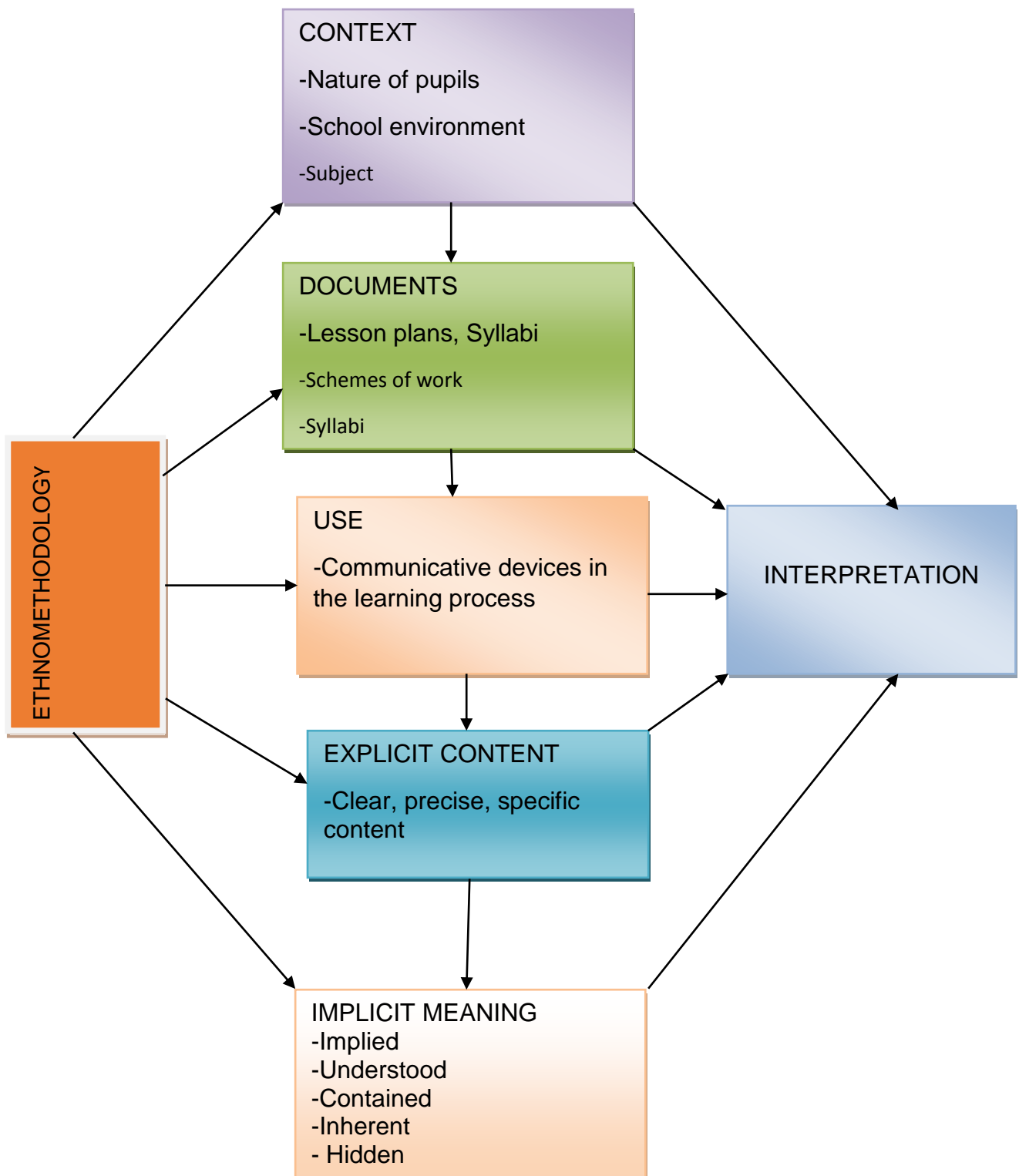
contents of documents without taking their context, use and function into account". The researcher's analysis took into consideration all these aspects suggested by Flick (2009:261). The use and context of the document determines its nature. The analysis of the participants' documents took into consideration the nature of the pupils who were the objects in the documents, the learning environment and the use of the documents.

Flick (2009:261) points out that "the main challenge in analysing documents is how to conceptualise the relations between explicit content and implicit meaning and the context of functions and use of the documents". The major problem lies in interpreting documents in light of the listed aspects. The researcher used the documents with an understanding of the relations of the nature of the pupils, the syllabuses, the school and the student teacher's competencies which is the context that determines the explicit content and the implicit meaning of the documents. The use of the documents was also a determinant factor of the explicit content because they were produced for practical purposes in the classroom. The document analysis framework is given on figure 4.2.

4.5.2 Sampling

The researcher sampled participants with a purpose in mind. The researcher adopted a sampling procedure which is in line with meeting specific criteria, that is purposive sampling. According to Rao (2000:7), purposive sampling is a form of non-probability sampling in which participants can be selected based on set criteria. The NTC student teachers were selected based on the grades they teach. This study focused on grades four, five and six. The teacher educators were selected on the basis of specialist knowledge of the research and willingness to participate. The researcher selected eight schools from four districts, Mudzi, Mutoko, Murehwa and Uzumba Maramba- Pfungwe (UMP) in Mashonaland East province where most of the student teachers of NTC were deployed for teaching practice. The selection of documents for analysis was based on their relevance to the phenomenon investigated. The researcher selected documents of student teachers who had been selected for observations and interviews. The documents selected gave insights into their instructional activities. She also selected the University of Zimbabwe Handbook for quality assurance in associate Teachers' Colleges because it guides instructional processes in teacher education. This document outlined the teacher education curriculum as well. Figure 4.2 on page 96 is a summary of document analysis framework employed in this research.

Figure 4.2: Document analysis framework



4.5.3 Participants

- Eight NTC student teachers on teaching practice. Each student teacher was observed three times teaching different subjects over a period of three months.
- Eight classes of primary school pupils (two grade four, three grade five and three grade six classes each class with an average of 35 to 60 pupils). Each class was observed learning three times over a period of three months.
- Forty student teachers on campus who had completed their TP. These were engaged in focus group discussions. Each group had 8 student teachers who held a discussion once.
- Ten Teacher educators
 - Three from Theory of Education Department
 - One from Social Studies Department
 - One from Science Department
 - One from Languages Department
 - One from Mathematics Department
 - One from Teaching Practice Department
 - One from ICT Department
 - One from Religious and Moral Education Department

Each teacher educator was interviewed twice. There were more teacher educators from Theory of education department than others because of their specialist knowledge of the research area.

4.5.4 Data Analysis

The researcher employed the grounded theory model of analysis. Schutt (2011:341) indicates that “the grounded theory model of analysis involves building up inductively, a systematic theory that is based on the observations made”. The researcher employed this model because of its ability to examine relationships and behaviour within phenomenon without bias. This study examined the behaviour of the NTC student teachers, that is, their instructional processes. Grounded theory model of analysis is best suited for exploratory studies. This study explored the challenges faced by NTC student teachers in engaging in philosophical inquiry and feasible solutions. The model enabled the researcher to validate the research findings by the actual responses and quotations.

Data from interviews, observations and documents were transcribed into text data. All the data collected through individual interviews, group discussions and observations, and documents analysis were in English language. There was no need for translation since this thesis is in English language except for one statement on page 161. However, this was not a problem since the researcher understands the language used very well. After transcribing the data the researcher categorised and coded the texts. Creswell (2012:243) defines coding as “the process of segmenting and labelling text to form descriptions and broad themes in the data”. The researcher explored the data before categorizing it. The exploration of data enabled the researcher to have a general picture or understanding of what the data says about the challenges faced by NTC student teachers in engaging pupils. The researcher then started the process of categorising the data. The researcher’s understanding was not influenced by her presupposed theories or assumptions. The researcher was open to the voices of the participants.

The process of coding entailed giving a code to all the data that seemed to be saying the same idea. The names given to each category were derived from the researcher’s interpretation of what the category was saying. Creswell (2012:243) describes the process of coding as assigning a code or word or phrase that accurately describes the meaning of the category. For example, the researcher coded the challenges faced by the NTC student teachers in teaching philosophical skills, as student teacher competence, pupils’ ability, learning environment and time factor among others. The codes were written on the column adjacent to the text.

After coding, the researcher developed themes from the coded data. Creswell (2012:245) describes themes as ‘similar codes aggregated together to form a major idea in the data base’. The researcher engaged in the inductive process of putting together the same or related categories or codes. The focus was on what the data was saying and what it represented. Particular research questions on engaging learners and concerns generated certain categories of data. The researcher formulated themes in line with the research questions and also themes emerging in the data. The coding process went beyond thematic coding to capture the unique insights which are beyond the main thrust of the questions but are relevant and important. This gave unique insights which the researcher could not have imagined or anticipated. The researcher gave codes to

themes or patterns and constructed ideas as they were suggested by data. The figure below shows how data was analysed.

Table 4.2: An example of how data was analysed using the grounded theory model

Data (raw)	Initial coding	Focused coding	Theoretical coding
Question From your teaching practice supervision experience what challenges do your students face in engaging their learners in philosophical skills Response One of the challenges that is obvious to me is that they <u>themselves, the student teachers have not mastered the skill of critical thinking.</u> Some of them <u>do not even know that they are supposed to be engaging in philosophical inquiry.</u> To me that is the biggest challenge. Surely you cannot be able to cause your learners to be able to ask questions if you yourself, you are not good at asking questions. If you are not good at asking questions, at employing the same skills that you want your learners to develop, <u>there is no way you can cause the learners to develop those skills.</u> <u>So definitely I see a gap. I have a lot of work to do. I must cause my students to employ critical thinking.</u> I do not think by the time students go on teaching practice they would have really developed philosophical skills.	A B C A C C	Skills not mastered and lack of awareness Competence gap Inability to teach the skills Teacher educator not doing enough -Student teacher preparation is not effective	-Student based challenges. Lack of philosophical inquiry skills and awareness by student teachers -Teacher educator based challenges Teacher education is not effective enough in terms of preparing student teachers for TP

Key A- Lack of philosophical inquiry skills
 B- Student teachers' lack awareness
 C- Teacher educator's effort not effective

Field notes/Memo
 The teacher educator interviewed seems to be aware that their student teachers are not engaging their pupils in philosophical inquiry. It is interesting to note that the teacher educator admitted that more needs to be done. So the researchers' question is that, if teacher educators are aware of this challenge why are they not addressing it What is not clear on this account is whether the response "you cannot cause your learners to learn what you are not good at", referred to student teachers only or not. What about teacher educators whose students are not able to philosophise? Can this statement be true of teacher educators as well? I really need to go back and ask the teacher educator to clarify on this aspect.

4.5.5 Findings and Discussions

The research findings are in the form of narratives and descriptions. These descriptions focused on what is the case. The researcher used a phenomenological approach to describe experiences as they were lived by the participants. The challenges faced by student teachers of NTC in teaching philosophical skills are described clearly. The researcher was guided by categories of data. The research findings are reported under each main theme or category. This is accompanied by a discussion on the findings. According to Hitchcock and Hughes (1995:297), interpretation involves “discovering and deriving patterns in the data, looking for general orientations in the data”. The researcher moved from description of what is the case to an explanation of why is the case. Yin (2011:8) indicates that qualitative research is not just a chronicle of everyday life, instead, qualitative research is driven by a desire to explain events through existing or emerging concepts. The data was broken down inductively, exploring the general and particular units of meaning that were displayed within them. Phillimore and Goodson (2004:157) point out that “interpretivism relies on a holistic-inductive approach and theoretical assumptions are generated from the empirical field”. The researcher came up with a theoretical explanation of the challenges faced by the NTC student teachers in engaging pupils in philosophical inquiry by exploring and interpreting data contextually.

The research focused on both *emic* and *etic* perspectives. Yin (2011:11) defines *emic* and *etic* as participants’ and researcher’s meanings respectively. This means that the research had multiple interpretations of the same events. The researcher’s epistemological position is informed by interpretivism. Merriam and Tisdell (2015:6) make it clear that an interpretive perspective is based on the idea that qualitative research efforts should be concerned with revealing multiple experiences of reality. The researcher used the inductive approach since she did not want to test hypothesis or theory but to generate theory out of data collected. According to Hesse-Biber and Leavy (2011:13), an inductive approach is “an approach which begins with specific data out of which more general ideas or theories are generated”.

The researcher did not interpret data to suit her pre-conceived ideas about the student teachers. According to Litchman (2013:58), data should fairly represent what the researcher see and hear. The challenges faced by the NTC student teachers manifested themselves from the data collected. No data was excluded based on the researcher’s

pre-conceived ideas or assumptions. Yin (2011:39) clearly points out that “data should not be excluded because the participant disagrees with the researcher’s beliefs”. He further highlighted that for any data to be excluded, the researcher should have started by setting clear rules to define the circumstances under which any data are later to be excluded. The researcher excluded all data that have nothing to do with the research topic that could have been given because the participant did not understand the question asked. However, in such responses, the researcher rephrased the question or probed in order to get relevant data for the question asked.

4.5.6 Trustworthiness

Trustworthiness in qualitative research means that the research findings are a true reflection of reality. LaBanca (2010) defines trustworthiness as a demonstration that the evidence for the results reported is sound if and when the argument made based on the results is strong. According to Lincoln and Guba (1989) as cited in Lietz, Langer and Furman (2007), trustworthiness is established when findings, as closely as possible, reflect the meanings as described by the participants.. Yin (2011:78) defines a valid study as one that has properly collected and interpreted its data, so that the conclusions accurately reflect and represent the real world that was studied. There are many steps and strategies a researcher can employ to ensure that the research findings are valid. Guba (1990) cited in Shenton, (2004) proposes a criterion that he believes should be considered. The criteria include “credibility, dependability, conformability and transferability”.

4.5.6.1 Credibility

Research findings should be a true reflection of what was investigated and as described by the participants. A research can be credible if its processes indicate proof of accuracy. Brown (2005) makes it clear that “credibility requires demonstrating, in one or more ways, that the research was designed to maximize the accuracy of identifying and describing whatever is being studied”. This means that credibility ensured that the study sought the challenges faced by NTC student teachers in engaging their pupils in philosophical inquiry as what was intended. According to Edmunds and Scudder (2009), “credibility refers to the believability of the data and the confidence one has in the truth of the findings”. It is important to note that the researcher employed appropriate research procedures from the conceptualisation of the problem through data collection

procedures to presentation and discussion of the research findings. Mertens (2005) opines that “credibility asks if there is a correspondence between the way the respondents actually perceive social constructs and the way the researcher portrays their viewpoints”. This was assured by using suitable data collection methods. In this study, the research sought to find out the challenges and perceptions hence the use of interviews and observations.

Research instruments are usually informed by the research questions. For example, where the researcher wanted participants’ perceptions, she used an interview guide. The researcher was aware that perceptions can be presented and understood better when participants verbalise their perspectives and thoughts. Morrow (2005:253) suggests an interpretivist or constructivist criterion when he focuses on “the extent to which participant meanings are understood deeply”. Morrow (2005:253) also draws attention to “mutual construction of meaning between and among researcher and participants”. Prolonged observation and member checks are some of the techniques the researcher used to ensure credibility. Elliot (2011) describes member-check as a process of sharing findings with the participants to check on accuracy of captured data. The researcher shared a summary of the findings with the participants. The participants had the opportunity to evaluate the findings for accuracy and corrected the capturing of the meaning of their experiences. This also gave the researcher the chance to validate the findings, as well as seek clarification of the findings. It enabled the researcher to have a deeper understanding of the problem she was researching on and was able to detect if there was any distortion in the data. The comments made by the teacher educators and student teachers served as a check on the validity of the interpretation (Wallendorf & Belk, 2013).

4.5.6.2 Dependability

Research findings can be credible if there is consistency. Inconsistencies in the research processes can mean that the findings are not dependable. The coverage of the study can determine its reliability. The third criterion by Guba (1990), as cited by Shenton, (2004) is dependability, “the in-depth coverage which allows the reader to assess the extent to which proper research practices have been done”. The researcher was careful to avoid errors in all the research processes such as sampling, collecting data, analysis and interpretation of data and reporting findings. In this study, the researcher returned to

participants after three months to note the changes that had affected the practice of the NTC student teachers previously detected (Wallendorf & Belk, 2013). This gave a deeper understanding of the challenges faced by the NTC student teachers in engaging pupils in philosophical inquiry. The researcher kept an audit trail of the whole research process which included ethical considerations done. The audit trail included, conceptualisation of the research, selection criteria, sampling, ethical considerations, methods and instruments used to collect data, analysis and interpretation, and reporting of the findings.

4.5.6.3 Conformability

The other criterion for establishing trustworthiness is conformability. Conformability of research is the extent to which the research findings are a product of participants' experiences. Shenton (2004:72) defines conformability as "the degree to which the study's findings are a result of the experiences and ideas of the participants rather than the preferences of the researcher". The researcher collected data with an open mind without any bias. Conformability can be established through the process of triangulation. Morrow (2005:251) describes triangulation as consistency of findings across methods and data sources. Inconsistencies across data approaches might not necessarily mean that the data is not trustworthy or valid. Cohen and Crabtree (2008) highlighted that rather than seeing triangulation as a method for validation or verification, qualitative researchers generally use this technique to ensure that an account is rich, robust, comprehensive and well developed". Guion, Diehl and McDonald (2012) concur with Cohen and Crabtree's (2006) view when they pointed out that inconsistency should be viewed as an opportunity to gain important insights. The essence of their argument is that each data approach has strengths in collecting certain types of data. Data collected through interviews might be more of perception data while data collected through observation may reveal life experiences in a natural set up. In line with Guion, et al. (2012), inconsistency was taken as an indicator of the need to do an in-depth investigation of the issue or aspect.

Morrow (2005:254) states that on trustworthiness the focus should be on subjectivity and reflexivity. It therefore means that in every research there is researcher bias. However, it is not ethical to present the researcher's experience with reality, ideas or assumptions as data from participants. The researcher practiced reflexivity which Rennie (2004) as

cited by Morrow (2005: 254) describes as self-reflection. On every text of data, the researcher had a space for her reflections. These reflections were incorporated when she was discussing the findings. The researcher did not present her own reflections as NTC teacher educators' or student teachers' reflections. Where the responses of the participants were not clear the researcher probed or asked for clarification. Member checks were also used to deal with the challenge of subjectivity or bias. DeVault (2015) correctly pointed out that member checks occur when the researcher asks participants to review both the data collected by the interviewer and the researcher's interpretation of that interview. This was done after transcribing all the interviews. The participants were given texts with four columns, one on what they said, the other with their meaning, the third with researcher's reflections and the last was empty for their input.

4.5.6.4 Transferability

Transferability refers to the applicability of research findings to other or similar contexts. The work of Brown (2005) indicates that transferability involves demonstrating the applicability of the results of the study in one context to other contexts. The idea behind this criterion is that if the research is carried out with student teachers of one college, the findings of that research should be applicable to student teachers of another college. According to Wallendorf and Belk (2013), transferability can be established by expanding the type of sites and contexts in which the phenomenon is investigated and giving a detailed description of the research process. The researcher collected data from eight student teachers practicing in different schools. Anney (2014: 277) describes detailed description as "a process that involves the researcher elucidating all the research procedures, starting with data collection, the context of the study to production of the final report". The researcher should describe in detail all the research process so that the reader can know whether the research findings are to be applied to similar contexts.

However, it should be noted that no participants and contexts are exactly the same. The meanings constructed by participants are contextual meanings. DeVault (2015) pointed out that "the context in which qualitative data collection occurs defines the data and contributes to the interpretation of the data". A detailed description of the phenomenon, situation and procedures can provide a general idea of what to expect from a similar setting. The nature of the NTC teacher educators and student teachers may be similar

with those in other colleges in Zimbabwe. Although, there are other factors such as criteria for student teachers' recruitment, student teachers' learning support and the nature of teacher educators which may be peculiar in a certain way to each teachers' college, the curriculum is the same. The teacher education model is the same for all teachers' colleges in Zimbabwe. All the teachers college in Zimbabwe are accredited by and in associateship with the University of Zimbabwe which provide quality assurance framework for teacher education. Therefore, generalisation of this research's findings is not limited to NTC only.

4.5.7 Ethical considerations

When conducting research, one must take into consideration a number of ethical issues. Israel and Hay (2006:5) have drawn attention to the fact that by caring about research ethics and by acting on that concern, researchers promote the integrity of research. The researcher had an obligation to tell participants who she is, what the research was all about and its objectives. This enabled the participants to give a voluntary informed consent (University of Tennessee, 2016). No one was forced to be a participant. Consent of the responsible authorities (of NTC and selected schools) and the participants were solicited before going into the field for data collection. All the participants and gatekeepers were assured of confidentiality. Best and Kahn (1993:46) define participants' confidentiality as holding all the information gathered about the subject in strict confidence. This entails disguising the participant's identity in all records and reports. The researcher used data collection methods which did not cause harm to the participants. The researcher had an obligation to assure that there was no deception of any form, coercion, invasion of participant's privacy or breach of confidentiality.

The researcher's duty was to employ data collection methods that did not harm the teacher educators and the student teachers in any way. Berg (2001:61) clearly points out that although researchers have a professional responsibility to search for knowledge, they also have an ethical responsibility to avoid exposing participants to potential harm. These ethical standards were observed. Litchman (2013:54) stresses that doing no harm is the cornerstone of ethical conduct. The methods used in this research did not cause harm to the participants physically or psychologically. Israel and Hay (2006:78) advised that "from an ethical point of view, research should not only avoid harm but

ensure that its purpose is to do good". The methodology of the research, especially focus group discussions, improved the student teachers' reflection of their practice and pupils' performance. This is described by Adams and Callahan (2014), as beneficence, which refers to the obligation on the part of the researcher to maximise benefits for the participants or society while minimising risk of harm to the participants. The focus group discussions afforded the NTC student teachers on campus the opportunity to reflect on their TP experiences. This reflection enabled them to come up with ways of overcoming the challenges, some of which could be implemented by the NTC student teachers themselves. In the event of adverse effects or harm to the participants attributed to the research, the research would have stopped the research and informed the supervisor.

Ethical standards in research demand that researchers should seek voluntary participation by participants who are aware of what participation entails. The researcher had an obligation to tell participants the truth about the research, its aims, purpose, procedure and the role of the participants. Honesty was an important virtue in this study.

The researcher informed the participants on the issues stated above before they gave their voluntary consent. The consent letters articulated clearly the things that a prospective participant should know and understand in order to make a decision. These were:

- The researcher's identity;
- Research title;
- What her research is all about;
- Her University and supervisor;
- The research objectives;
- Roles of the participants and duration of their participation;
- How confidentiality will be maintained;
- Freedom to withdraw without any penalty;
- Availability of compensation;
- Feedback and benefits; and
- Contact numbers and address.

The participants were not deceived in any way.

It was the researcher's responsibility to protect participants' privacy and confidentiality. Jamison (2007) defines confidentiality as "an explicit or implied guarantee by a researcher to a respondent whereby the respondent is confident that any information provided to the researcher cannot be attributed back to that respondent". Confidentiality is very important in a research which involved human beings. The researcher promised prospective participants confidentiality so that they would not hesitate to participate and provide honest responses. Participants' trust was therefore critical to ensure quality research. The researcher employed a number of ways to protect confidentiality. The letters seeking participants' consent assured that no names or identifying information was to be disclosed to anyone. Those who were to participate in group discussions were requested to sign confidentiality agreement forms. The researcher assigned codes on all data collection instruments and data documents such as non-participation observation guides and interview responses. Each time she collected data, the researcher assured the participants confidentiality. All data documents and tapes were kept in a locked cabinet. The researcher encrypted all the soft copies of data.

The researcher was ethical throughout the whole research process. Watts (2008:441) rightly points out that "integrity within qualitative research is not just an issue at the design stage but a continuing practical concern throughout the entire research process". In light of this recommendation, the researcher engaged in ethical practices from start to finish of the research. Before data collection, the researcher sought permission from responsible authorities. By so doing, the researcher showed respect of the site. Creswell (2012:23) stresses the need to show respect for the site in which the research will take place as well as individuals. The research ethics were also considered during interpreting and reporting data. The researcher reported data honestly without any bias and her interpretation was open for criticism.

Research ethics is not only an important issue when dealing with human beings. Academic professional writing demands that intellectual property rights be respected. The researcher avoided plagiarism by acknowledging the sources of information she wrote. In cases where the exact words of an idea from the author were not used, she still indicated the source of the idea. The researcher cited and referenced all the sources of information she used.

The disclosure of the researcher's personal information related to the research is another way of showing research integrity. According to Yin (2011:42), "the researcher can demonstrate research integrity by revealing personal roles and traits that might affect a study and its outcomes". The researcher is the Head of Department (HOD) for the Theory of Education, so this was likely to affect the responses of teacher educators in the department who were involved in the research. However, the researcher made it clear before collecting data that she was collecting data as a researcher not as HOD. She also guaranteed that their responses were not going to have an effect on the HOD-subordinate relationship. This enables the teacher educators to participate with open minds.

4.6 Conclusion

This Chapter discussed how the research was carried out. The purpose of the research and the research philosophy were the most important determinant factor in the choice of a research paradigm, approach, strategy and methods. The researcher employed the interpretivist paradigm and qualitative approach as the suitable framework for a study that was concerned with people's lived experiences. The research is about exploring the challenges in engaging pupils in philosophical inquiry and feasible solutions from the perspective of those experiencing them. The data collection methods that were used such as document analysis, non-participant observation, individual and focus group discussions were flexible and sensitive to existential circumstances or the context in which data was produced. The knowledge of the phenomenon under study was developed inductively. This means that the researcher bracketed her assumptions and respected the uniqueness of each student teacher's case. The researcher practiced sound ethics throughout the research. The findings from the data collected through this design and methods are presented in the next Chapter.

CHAPTER 5

RESEARCH FINDINGS AND DISCUSSIONS ON AWARENESS, PERCEPTIONS ON ENGAGING PUPILS, IMPORTANCE OF CRITICAL THINKING AND FEASIBILITY OF INQUIRY ACROSS CURRICULUM

5.1 Introduction

In the last Chapter, the researcher discussed how data was collected, transcribed, analysed, presented and interpreted. In this Chapter, the researcher presents, interprets and discusses the research findings on the following themes; awareness and perceptions of the student teachers on engaging pupils, importance of critical thinking, feasibility of employing philosophical inquiry across curriculum, and the effectiveness of NTC teacher education in preparing student teachers for TP. The researcher discusses these themes and concepts as they emerged from data analysis. As Chapter 4 indicates, the grounded theory model of analysis is employed. The themes are formulated in line with the research questions as well as themes that emerged from collected data that were relevant and important though not captured by the research questions. It is important to note that the presentation of the findings is not based on methods of data collection but themes that have emerged from data analysis. Under each theme, the researcher presents findings from all the sources of data which were focus group discussions held with the third year student teachers who had completed their TP, individual interviews with lecturers and student teachers, lesson observations and document analysis.

The findings are presented from two epistemological perspectives, phenomenological and hermeneutic approaches within the interpretive paradigm. From a phenomenological approach, the chapter presented and discussed the NTC student teachers' lived experiences in the form of narratives and descriptions (Saunders, Lewis, Thornhill & Briston (2016) in Saunders, Lewis and Thornhill (2016). This penetration into reality was meant to uncover new meanings from student teachers' experiences which are normally taken for granted. The researcher applied Martin Heidegger's hermeneutic approach in this study, as a pedagogical practice of text interpretation (Mantzavinos, 2016). The approach was used to interpret texts such as lesson plans, schemes of work, records and syllabuses among others that explicate the lived experiences of the student

teachers. The findings represent the emic perspective and the discussions give both the 'emic' and 'etic' perspectives (Yin 2011:11).

5.2 Research Process

The research data was collected through interviews, focus group discussions, lesson observations and document analysis as explained in Chapter 4. The permission to collect data was sought in writing from responsible authorities and gatekeepers. The researcher got written consent from all the participants. The data were collected from selected schools and at the NTC campus. All the data was audio taped except data collected through document analysis. The transcription of audiotaped data was done by the researcher. No names were attached to any of the transcribed data. Trustworthiness of data was established through triangulation of data and methods as well as interviewing for consistency and clarification. The researcher viewed inconsistencies as an opportunity to uncover deeper meanings of data. The researcher presented the findings in a way that reflected the meanings as described and perceived by participants. Hence, there are direct quotations and in cases where the researcher was indicating her own perspective, she indicated as such.

5.2.1 Biographical data

5.2.1.1 The researcher

Disclosure of the researcher's personal information related to the phenomenon under study is an ethical standard in research. Maykut and Morehouse (1994) as cited by Shenton (2004:680) advised that the researcher divulge personal and professional information related to the problem under study. The researcher was a lecturer in Philosophy of education at NTC. She was also involved in supervision of student teachers on teaching practice. This means that she was not new to the participants and schools she collected data from. She was also the HOD of Theory of Education. She had eleven years of experience of teaching Philosophy of Education at NTC.

5.2.1.2 Teacher educators

The researcher involved ten teacher educators, two females and eight males. Generally, there are more male teacher educators at NTC. These participated in individual

interviews. All of them had at least five years of teaching experience at NTC. All the ten teacher educators were involved in supervising student teachers on TP. Their age range was from 38 to 50.

5.2.1.3 Student teachers on campus

These were 40 third year student teachers on campus who had finished their TP. They were twenty females and twenty males. Fifteen of the selected student teachers taught in urban schools. The student teachers had taught grades 4 to 6. Their ages ranged from 25 to 39. These participated in focus group discussions. The student teachers were pursuing Diploma in Education (Primary) General Course.

5.2.1.4 Student teachers on TP

The selected eight student teachers on TP were interviewed and observed teaching their pupils. They were teaching grades 4 to 6 in primary schools. The number of pupils in eight classes ranged from 35 to 50 pupils. They were in their fourth term of their 5 term TP. They also produced the documents which were analysed. Their ages ranged from 24 to 30.

5.2.1.5 Primary school pupils

The primary school pupils from eight classes from eight selected schools were involved in the research. The classes were composed of boys and girls ranging from 35 to 50 pupils per class. Their ages ranged from nine to 12. They were observed learning during lessons taught by the selected student teachers.

5.3 Findings on awareness to engage pupils in philosophical inquiry and how

This section focuses on presenting findings on student teachers' awareness to engage pupils in philosophical inquiry and how to do so. Awareness in this research is the knowledge and understanding one has pertaining to a practice, issue or ideas. The focus is therefore on whether the NTC student teachers have the knowledge that they are supposed to engage their pupils in inquiry and an understanding of how to do so.

The research findings indicated that there are three categories of students on awareness of engaging pupils in philosophical inquiry. The first category were those who claimed that there were not aware that they are supposed to engage pupils in philosophical inquiry and how. When asked a question on awareness to engage pupils in philosophical inquiry and ability to do so. They explained that;

“Well, I do not know that pupils in grade 5 are supposed to learn philosophy or learn other subjects as if they are learning philosophy. I teach them like pupils not college students. There are no topics on philosophy in their syllabuses.”

“At college I was not taught to use philosophy to the subjects that I am teaching. After all these pupils cannot read like college students.”

“I think our lectures before teaching did not equip us with this knowledge and skills. When we went out for TP we had been taught other teaching methods, how to interpret the syllabus and how to scheme not to really engage pupils in learning philosophy.”

These student teachers were not aware of what is referred to as philosophical inquiry. Some of the teacher educators indicated that there were not quite sure that their student teachers are aware that they should engage pupils in philosophical inquiry. One of the teacher educators had this to say;

“I even doubt if these student teachers are aware that they are supposed to engage their learners in philosophical inquiry talk-less of how to engage.”

The second category consisted of student teachers who indicated that they were aware that they are supposed to engage pupils in inquiry but lacked knowledge on how to engage. Some of the student teachers explained that;

“We are aware that we are supposed to have our pupils learn through philosophical inquiry which is thinking and answering questions.”

“I know that my pupils should answer questions which help them to think.”

“I am aware that I should engage my pupils in critical thinking; however when we were taught at college not much was done on the practical aspect on engaging pupils.”

“We were not well versed with the teaching methodology that allows pupils to inquire.”

The third category of student teachers were those who professed that they were aware that they are supposed to engage their pupils in philosophical inquiry and how to engage. They claimed that they were not employing the inquiry method because of other challenges such as shortage of time. However, these were not able to explain clearly how to engage pupils during learning. It seems they were not aware that questioning plays an important role in inquiry based learning. This is what they had to say;

“I know that I should engage my pupils in philosophical inquiry but there are challenges in terms of time and resources. We have few books for pupils to read”.

“I was aware and I engaged pupils in inquiry and my pupils would understand what I taught them. When I was teaching them I could give them questions after explaining. They did not ask questions because I would have simplified concepts”.

The last quotation indicates that while the student teacher claimed to be aware of how to engage pupils in philosophical inquiry, her explanation proves otherwise.

5.3.1 Discussion on awareness to engage pupils in philosophical inquiry and how

It is clear from the research findings that some of the students were not aware that they should engage learners. The first category lacked knowledge of this teaching approach. The research findings revealed that these student teachers were not aware that philosophical inquiry is a teaching approach that can be used at primary school level. The fact that they equated philosophical inquiry to teaching philosophy was clear evidence that these student teachers did not understand it at college. Their understanding of philosophy is defective. It seems they associate philosophy with the

study of philosophical ideas. Their understanding of philosophy is content based. They failed to realise that philosophy is more concerned with asking fundamental questions and answering them in a reflective and critical manner. This means that these student teachers did not understand clearly both philosophy as subject and philosophical inquiry as an approach to learning

The second group of students demonstrated an average level of awareness. They indicated that they were quite aware that they are supposed to engage their pupils in philosophical inquiry. These student teachers acknowledged that they are not able to engage pupils in inquiry during teaching. They cited lack of such pedagogy in teacher education as the reason they are not aware of how to employ philosophical inquiry.

It is important to note that knowing your expectations and implementing them are two different things. Whilst most of the student teachers observed claimed to be aware that they should engage pupils in inquiry, they were certain that they lacked adequate knowledge and skills to employ it in their practice. This could be an indication that these student teachers were taught in theory that they are supposed to engage their pupils in philosophical inquiry. This seems to suggest that these student teachers were not engaged in inquiry during their pre- TP teacher education.

The last category is that of student teachers who claimed to be aware that they are supposed to engage their pupils in philosophical inquiry and how to do so. These claimed that they are not engaging pupils because of other reasons. The researcher found out that the student teachers observed were not aware of how to implement inquiry based learning. They lacked implementation strategies. They were not aware that an inquiry approach goes beyond mere thinking and learning of content. This suggests that teacher education before TP paid little attention to dissemination and implementation process of such pedagogy.

Some of the NTC student teachers who were observed and interviewed were not aware that questioning is at the centre of learning. The questions they referred to were simple recall questions asked by the NTC student teacher. They were not aware that the process of questioning triggers critical thinking, reflection and problem solving skills. As

a result their practice did not create opportunities for pupils to question and challenge ideas and opinions of others.

5.3.2 Summary

The findings reflected that most of the NTC student teachers are not aware of implementation strategies of the philosophical inquiry approach. While some of the student teachers claim to be aware that they should engage pupils in inquiry they seem not aware of how to engage them. They should be made aware that teaching and learning begin where pupils raise questions and have misconceptions about phenomenon being covered. The NTC student teachers should be taught analytical frameworks because these do not develop naturally or through reading. The NTC teacher education before TP should conscientise and empower student teachers to engage their pupils in philosophical inquiry. The next section looks at the perceptions of the student teachers who claimed to be aware of how to engage learners in philosophising.

5.4 Findings on the NTC student teachers' perceptions of philosophising

It is very important to understand one's perception before attaching meaning to his or her action. The Merriam Webster Dictionary (2015) defines perception as the way one thinks about or understands someone or something. The study of human behaviour and actions can give insights on socio-cultural anthropology but people's actions or behaviour cannot be entirely understood by merely studying their behaviour without knowing and understanding what informs that behaviour. The way student teachers of NTC engaged their learners during teaching practice was possible to understand because the researcher explored their perception of philosophising.

The researcher got the clear picture of how student teachers of NTC engaged their learners during teaching practice because she first explored their perceptions of philosophising. This also addressed one of the research questions which were meant to establish whether student teachers of NTC were aware of what philosophising is all about.

The student teachers were quite aware that the process of engaging in philosophising or philosophical inquiry involves thinking and dialogue. They identified questions as stimuli for thinking. The student teachers who participated in focus group discussions raised a number of teaching and learning approaches which they believed to mean philosophising or philosophical inquiry. In response to the question: ‘How did you engage your learners in philosophical inquiry?’ Some student teachers cited the following approaches and activities:

Table 5.1: Approaches and activities employed by NTC student teachers as a way of engaging pupils in philosophical inquiry

FOCUS GROUP	APPROACHES AND ACTIVITIES
Focus Group 1	Class discussion Question and answer Using a variety of media Problem solving
Focus Group 2	Group work Question and answer Problem solving Guided composition
Focus Group 3	Group work Giving work from simple to complex Problem solving Thinking outside the box
Focus Group 4	Group work Question and answer Problem solving
Student teachers on TP	Group work Answering questions Any child-centred approach

The student teachers interviewed agreed that methods or activities which involve learners promote critical thinking. One of the group discussants said,

“What I was doing during TP to engage my learners in philosophical inquiry, I posed a problem, they would try to solve it using their own thinking.”

The study revealed that some of the NTC student teachers who were interviewed were knowledgeable that child-centred methods promote critical thinking. They agreed that philosophical inquiry is more than ordinary thinking. The following were some of their responses to the question: 'What is your understanding of philosophical inquiry?'

"I think it is getting deeper into thought, to think critically"

"When pupils are given the chance to speak their minds out ... not necessarily recalling what they have been told but to think beyond that and try to find solutions to certain problems."

Some student teachers on TP were also conscious that engaging learners in philosophical inquiry entails learner involvement. They described the process as group work, giving pupils questions, the use of the question and answer approach and discussing in pairs. The following were some of their responses to the question: 'How are you engaging your learners in philosophical inquiry when teaching your pupils?'

"Usually I give some questions to do in groups. I always instruct the group leader to lead the group ..."

"I sometimes give them certain tasks to do. When they answer those questions, it means nearly everyone has something to do since they have answered some questions I have given them."

"I can give them some role play and some other activities that involve them much"

Some student teachers on TP perceived that when pupils answer questions, that is philosophical inquiry. They were quite aware that philosophical inquiry involves child-centred methods but not necessarily the critical aspect of it.

5.4.1 Discussion on the NTC student teachers' perceptions of philosophising

It was imperative to explore NTC student teachers' understanding of philosophical inquiry before exploring their challenges in engaging their learners. Their perceptions of philosophical inquiry or philosophising could have influenced how they engaged their pupils. The reason for asking participants' understanding and how they engaged their

pupils in philosophical inquiry was meant to have an understanding of reality as constructed by the student teachers.

The findings indicated that student teachers who had spent a term at college after their TP had a better understanding of philosophising than those on teaching practice. Some of these student teachers who participated in focus group discussions perceived philosophical inquiry as a process of engaging pupils in critical thinking which they referred to as 'deeper thought'. They made it clear that philosophical inquiry is not recalling of learned facts or information.

From the findings, it would seem that some of the student teachers on TP did not have a clear perception of what is involved in philosophical inquiry. Their responses did not give a clear indication that philosophical inquiry requires higher order thinking which is more than recalling. They seemed to perceive philosophical inquiry as a process of answering given questions. This seems to imply that the student teachers became more knowledgeable when they were taught after TP. Philosophical inquiry can be viewed as a pedagogy that promotes four aspects of thinking which are creative, critical, caring and collaborative. Lipman (2003) in *'Thinking in Education'* gives a broader perspective of thinking when he highlighted that although critical thinking is important and highly valuable, it is not sufficient.. Student teachers must develop creative and caring thinking as well.

The focus group discussants focused more on the critical and creative aspects of thinking. They seemed not to be aware that philosophical inquiry has the caring aspect and mental meta-cognition process. Chick, (2016) defines meta-cognition as a process of thinking about one's own thinking in an effort to detect flaws or to establish whether the thinking had taken into consideration the context of the issue. Pupils cannot improve on their thinking if they are not engaged in the process of thinking about their thinking.

The findings from interviews seem to suggest that the NTC student teachers on TP viewed pupils' ability to answer given questions as a sign of critical thinking. It was noted from observations and documents analysed that most of the questions given to pupils were gap-filling questions. The researcher believes that, such type of questions cannot

give learners opportunities to practice their capabilities to think critically. It is important to take into consideration Paul's (2004) comment that classroom tests often set the nature and standard of the instructional and learning process. Paul's (2004) comment implies that if classroom tests require pupils to recall information, it means pupils' learning focuses only on information acquisition. This means that a pupil can use his or her memory to remember information that answers a question without necessarily engaging in critical thinking. It therefore implies that there is no clear understanding of philosophical inquiry and critical thinking by some students on TP.

The findings seem to imply that some of the student teachers on teaching practice who were interviewed were not engaging their pupils in philosophical inquiry. Those who claimed to be engaging their pupils seemed to equate recalling to thinking. They seemed to lack a clear concept of critical thinking and how to stimulate it through an inquiry. Document analysis and lesson observations suggested that what they claimed to be group discussions could not be equated to a community of inquiry. Questions given could not sustain discussion because they required one-word answers. The discussions did not promote a give and take dialogue. The researcher saw this as a lack of an understanding of what critical thinking is and its relationship with learning. A similar view is held by Cottrell (2011:1) who states that "skills in reasoning can be developed through a better understanding of what critical thinking entails and by practice". The findings provided confirmatory evidence that some student teachers lack a clear understanding of what critical thinking entails.

The study also noted from the lessons observed and the interviews with some student teachers on TP that some of the student teachers were not aware that critical thinking also includes analysing other pupils reasoning or arguments. Cottrell (2011:3) views analysis of others' reasoning as a cognitive process which involves evaluating whether their reasons support their conclusions, identifying flaws in their reasoning among others. The lessons observed and interviews revealed that some student teachers' engagement of their pupils in philosophical inquiry is not as clear-cut as Cottrell's (2011:3) view suggested. Pupils' discussions were centred on remembering what the teacher had taught them. The findings from the study revealed that the process of evaluating an argument, which is crucial in critical thinking, seemed not to be part and parcel of what some student teachers on TP call group discussion.

The evidence gathered in this study seems to imply that some of the student teachers play the role of a technician in the process of inquiry. Some of the student teachers on teaching practice described their role as to supervise group discussions without them being part of the pupils. From the observations made, group discussions were characterised by answering of questions from the textbooks. Dana and Yendol-Hoppey (2014:8) view such teachers as transmissive mode of teachers who are neither problem posers nor problem solvers.. Dana and Yendol-Hoppey (2014:8) are right to view them as transmissive mode of teachers because their focus seems to be on transferring information from textbooks to pupils. Lipman (2003) who is prominent in the literature on philosophical inquiry explained the role of the teacher as facilitating as well as participating in group discussions.

Other student teachers described their main task as correcting misconceptions during group feedbacks. The findings from the lesson observations indicated that what these student teachers were referring to as misconceptions were in actual fact wrong answers. They seemed to be unaware that during an inquiry the teacher guides pupils to think philosophically and learns from the pupils. The researcher felt that a reflective classroom practice promotes an intellectual relationship between the teacher and the learner. The argument being advanced here is similar to Harada's (2003: iii) point that pupils are teachers as well as learners. This would mean that both the teacher and the pupils have two roles to play during an inquiry, the teacher who learns from learners (teacher-learner) and learners who teach (learner-teacher) (Freire, 1993:61) In his progressive discourse, Freire (1993:61) sees the teacher and the students as participants in the classroom. The consensus view seems to be that teachers should not present themselves as authorities who know it all. The study revealed that some of the student teachers had inadequate information and knowledge on engaging their learners in philosophical inquiry.

A closer look at the analysed data seems to indicate that some of the student teachers on TP did not realise that sound pedagogical approaches empower both the teacher and the learner. This was reflected in their explanations of the importance of promoting critical thinking in the classroom. When the researcher probed on the teacher's benefits of engaging learners in philosophical inquiry, they did not refer or mention anything

about professional growth. The findings from documents analysed also corroborate the notion that some of the student teachers are not inquiry oriented classroom practitioners although they claimed to be such. Dana and Yendol-Hoppey (2014:12) describe an inquiry professional as “one who seeks out change by reflecting on their practice”. Some of the student teachers on teaching practice seem to lack this inquiry disposition. Consistence in formulating simple gap filling questions might suggest that they were not critical and reflective of their practice.

5.4.2 Summary

The findings from the study offer some important insights that some student teachers on campus were better knowledgeable than those on teaching practice. This suggests that they covered important content on philosophical inquiry after TP. Those on TP had a bigger challenge in terms of knowledge gap on philosophical inquiry and critical thinking. They perceived critical thinking as the ability to answer questions.

5.5 Findings on the importance of critical thinking to learners

The importance of critical thinking needs not be over-emphasized. All the interviewees stressed the importance of engaging student teachers and pupils in philosophical inquiry for the development of philosophical skills. The study revealed that there is a growing awareness among practicing teachers of NTC that critical thinking skills are necessary if education is to produce people who are functional in the society. Critical thinking is a mental process that enables learners to see beyond the superficial appearances. The responses to the importance of critical thinking are summarised on the following page.

5.5.1 Findings on the importance of critical thinking to student teachers

The analysis of data has indicated that the importance of critical thinking to student teachers should also be paid attention to. Under this section, the importance of critical thinking to student teachers as perceived by teacher educators and student teachers themselves is explored.

The teacher educators interviewed specified that for one to be a competent student teacher, critical thinking is necessary. The findings revealed that critical thinking skills

are important to student teachers in their studies as well as practice. One of the teacher educator interviewees explained that:

“... The skills are very important to our students. In Social Studies critical thinking is of primary importance, the reason being that, when given social issues, our students are expected to examine different points of view, different opinions to weigh them and to make judgments based on the clear examination of different points of view.”

The nature of the student teachers' course requires them to have critical thinking skills because they need to look at things critically and argue logically said one of the teacher educator interviewees. The general feeling was that student teachers should be active agents in their studies. It was also made clear that the nature of some of the subjects they study require them to have philosophical skills. One of the teacher educator interviewees had this to say about thinking skills;

“... in Science, they are referred to as basic scientific skills. They are processes of learning Science and you can learn science if you have developed a good skill of observing. ... a lot of critical skills in the learning of science is what we emphasise. It's not about teaching facts ... learners should be able to arrive at their own interpretations through the process of observing patterns and from patterns being able to infer.”

Interviewed teacher educators from various departments indicated that critical thinking skills are important in the subjects they teach. They also explained the importance of thinking outside the box, going beyond the provided information. They believed that this skill demands high order thinking. One of the lecturers interviewed explained that in Mathematics, student teachers are expected to use logic when solving mathematical problems. All the teacher educators associated critical thinking with the development of problem solving skills. The other skills that were believed to be developed through philosophical inquiry are creativity, analysis, logical thinking, interpretation, inference, reasoning, judgment, evaluation, reflective, examine and question.

Apart from the demands of their course, lecturer interviewees shared that student teachers need to have critical thinking skills for their practice. The teacher educators clearly stated that student teachers should have critical thinking skills because they are expected to develop the same skills in their pupils. Some of the teacher educator interviewees had this to say:

“... our students deal with children of various levels ... finding out what their challenges are and how they can groom them into people who are capable of facing any challenges ...”

“Philosophical skills are very important to our students because they will enable them to impart important skills to learners. If they do not think philosophically, they will not be able to impart philosophical skills to learners.”

“... it is important that our student teachers before they can cause learners to acquire the same skills, they themselves should develop these skills.”

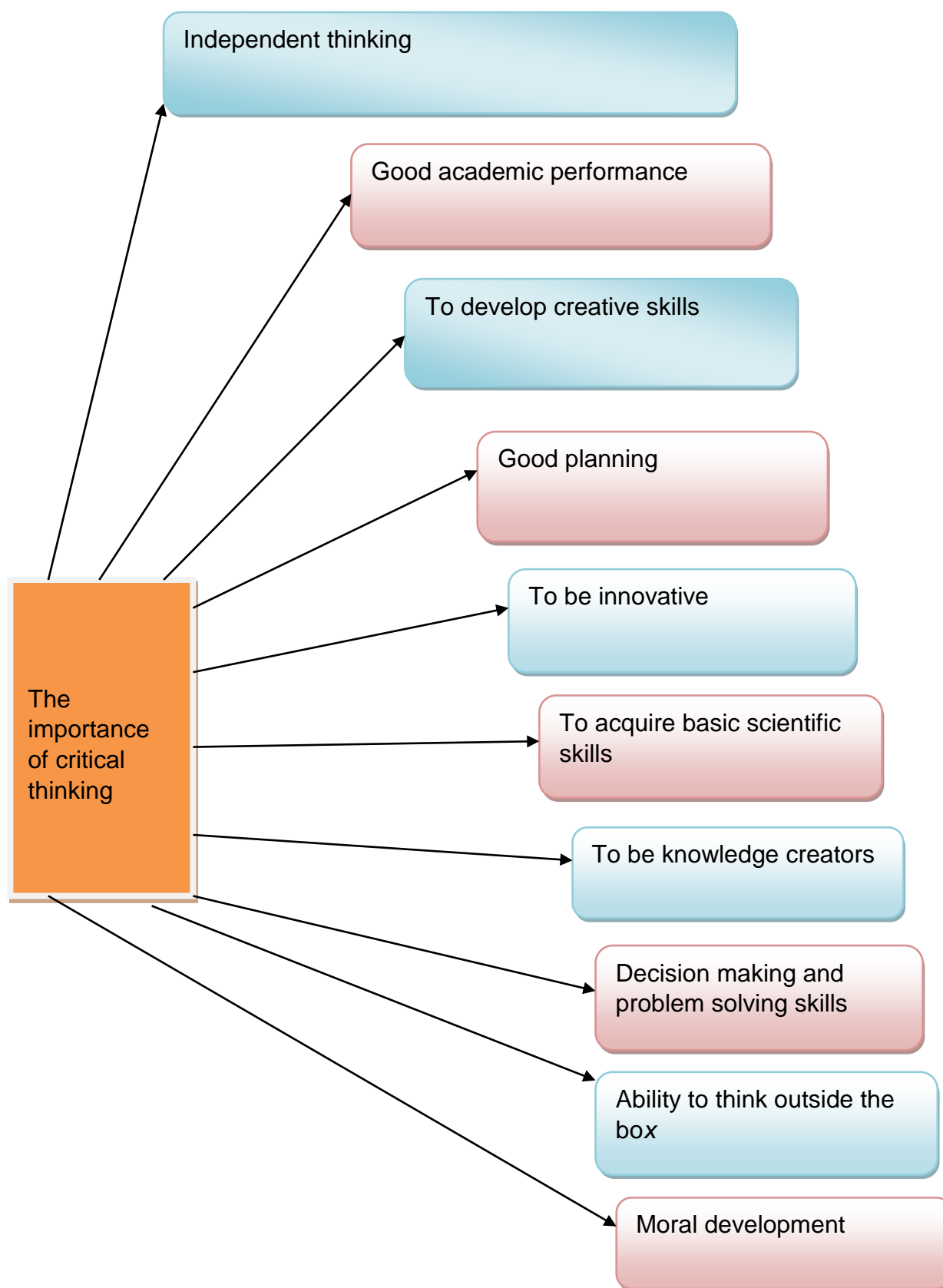
The student teachers who were involved in focus group discussions were in agreement with the teacher educators that it is important for them to acquire these skills so that they can develop the same skills in their pupils. . When one of the groups was asked why they could not engage learners in an inquiry, one of the group discussants had this to say;

“When we left college we had not developed critical thinking. So how was I to develop in pupils the ability to think critically, a skill I did not possess?”

The student teachers indicated that critical thinking skills are very important to them as they are required to develop the same skills in their pupils.

Figure 5.1 on page 124 is a summary of responses on the importance of critical thinking to the student teachers and pupils

Figure 5.1 Summary of responses on the importance of critical thinking to the student teachers and pupils



5.5.1.1 Discussion on the importance of critical thinking skills to the NTC student teachers

The importance of critical thinking in this ever-changing world cannot be over-emphasised. The research findings indicate that both lecturers and student teachers interviewed were aware of the importance of critical thinking skills.

This study revealed that lecturers were aware of the philosophical dimension of the subjects they teach. This implies that critical thinking skills are a vehicle they use for understanding different concepts or phenomena in their subjects. Fisher (2013:5) showed the connection between thinking and learning when he said that “critical and creative thinking is needed to make sense of knowledge in a subject area”. This means that critical thinking enhances conceptualisation, analysis, reflection and problem solving. The overall picture that came out from this aspect of the importance of critical thinking was that whilst critical thinking itself is necessary for effective learning, efficiency and effective learning could lead to critical thinking. This indicates that the presence of memory alone is not enough for student teachers to be competent in their studies. In agreement with this point of view are Bercaw and Stooksberry (2004) who believed that critical thinking is essential for student teachers to be reflective in their studies and practice in schools. Philosophical inquiry promotes reflective practices in student teachers. It therefore suggests that critical thinking is very important to student teachers. Some of the teacher educators indicated that their student teachers need not to be limited to acquisition of information or facts. They need meta-skills to go beyond superficial appearances.

This study noted from the responses that critical thinking empowers student teachers to understand cause and effect relationships of phenomenon. Some of the lecturers pointed out that in sciences, student teachers’ ability to use meta-skills is a requirement. This implies that if student teachers lack critical thinking skills, they cannot learn scientific concepts and phenomenon efficiently. With the Ministry of Higher and Tertiary Education, Science and Technology Development’s thrust on Science Technology Engineering and Mathematics (STEM) curriculum oriented, the development of critical thinking skills in student teachers is necessary. Some of the lecturers were quite cognisant of the fact that scientific inquiry is more important and rewarding than mere acquisition of scientific facts. The study of science requires student teachers to interpret

the information they gather. However, interpretation cannot be an end in itself because the study of a phenomenon and the world should lead to problem solving. Focus group discussants emphasised the place of inquiry in overcoming challenges.

Another aspect that came out from the findings is that critical thinking skills are also applied when writing essays. The teacher educators interviewed felt that these skills are very important because their student teachers are expected to display evidence of critical thinking in their essays. Along similar lines, Bluemel (2016) says that “critical thinking is a core academic skill that teaches students to question or reflect on their own knowledge and information presented to them”. The NTC student teachers sit for examinations, which they are expected to pass before deployment for TP. It therefore means that those who go for TP would have displayed some critical thinking in these examinations. However, the findings suggested that some student teachers’ TP documents do not display some critical thinking.

The study reflected that the requirement for student teachers to look at things critically and argue logically make critical thinking an invaluable skill in all subjects across the curriculum. This evidence is also consistent with a rapidly growing literature on critical thinking, which indicates that critical thinking is a mode of thinking that can be applied to any subject (Paul, 2004). While it was noted through interviews and focus group discussions that critical thinking skills are necessary in teacher education, some of the student teachers had a great challenge in this area. However, the findings seem to imply an awareness of how higher level cognitive thinking enables student teachers to gain an in-depth understanding of the areas they cover before going for TP.

From the study findings, the teacher educators indicated that critical thinking skills are necessary for their student teachers because they are expected to be critical teachers. Their position is premised on the assumption that if the student teachers are going to teach critical thinking skills, they should have acquired the skills themselves. This implies that without critical thinking skills, student teachers cannot employ critical pedagogy. It therefore means that the development of critical thinking skills should be incorporated in teacher education. The findings seem to be in agreement with Lipman’s (2003) position that teachers need to be trained in philosophical inquiry in order to use it

when teaching. The underlying argument is that a student teacher with a low level of thinking cannot teach his or her pupils to develop higher order thinking skills. The study therefore concludes that approaches that are being used or employed by some NTC student teachers are a reflection of the skills they have.

The study findings seem to be indicating that critical thinking is important to student teachers because they need to be knowledge creators. The NTC student teachers' over reliance on textbooks was viewed as a sign of lack of critical thinking. The teacher educators were quite aware that with relevant skills, their student teachers could create theories through critical thinking and engaging learners in philosophical inquiry. If the mind is challenged, it can go beyond the given, which the participants referred to as "thinking outside the box". The NTC student teachers are faced with many challenges in their practice which they need to overcome. The process of solving problems requires that they be more thoughtful, reasonable, judicious and innovative.

The findings from the study revealed that learning without critical thinking should not have a place in teacher education.

5.5.2 Findings on the importance of critical thinking to primary school pupils

The student teachers emphasised the importance of teaching pupils to think critically. In response to the question: 'What is the importance of teaching critical thinking skills at primary school level?' The NTC student teachers indicated that teaching critical thinking enables pupils to be independent thinkers. One of the interviewees said:

"They will be able to think on their own"

The focus group discussants made it clear that if pupils are engaged in the practice of reflection, they will develop critical thinking skills. They believed that these skills are important in their learning as well as for higher level of education. Most of the focus group discussants indicated that critical thinking skills help pupils in the process of learning. They were very precise that it improves their performance. Some of the focus group discussants had this to say:

"I also found out that it help the ability to answer questions."

“It will help them in answering examination questions because they will be applying reasoning.”

Some student teacher interviewees believed that it is important for critical thinking to be taught at primary level so that pupils will not face challenges during learning at secondary and tertiary level. Some of the student teacher interviewees explained;

“I think philosophical skills are important... to be taught at primary school level so that at tertiary level it will be easier for pupils ... if we try to groom them whilst they are small it will be easier”

“I think it prepares them for what they are to meet at secondary school level.”

Related to improvement of performance was the idea of improving pupils' command of language. One of the focus group discussants explained as follows:

“I think the ideas, reasoning and so forth need to be boosted by language. I think it is of great importance for philosophical elements to be imparted to pupils so that they can learn to know how to develop their ideas through the use of language because without language it will be impossible for them to develop these ...”

The analysis of data indicated that focus group discussants agreed that critical thinking is important because it develops life skills in pupils. Some of the life skills suggested included planning, reasoning, creating, giving sound judgement, decision making, reflecting, thinking outside the box and problem solving. The following were some of their views:

“We face a lot of challenges in life, so philosophical skills are very important in order for pupils to give sound judgements on the ideas or situations they face in life ...”

“I think philosophical skills help the child in solving problems ...”

“... they can broaden their minds. They can think outside the box.”

“Critical thinking skills are important because they enable them to be good planners. Like if you take evaluation as a critical thinking skill, we see that the

process of evaluation involves reflecting on one's weaknesses and one's strengths. It also involves suggestions to weaknesses. So if a child is a critical thinker, that child will be able to see where her or his weaknesses are ...That pupil will be able to plan on activities that would help him or her to resolve his or her weakness."

5.5.2.1 Discussion on the importance of critical thinking to primary school pupils

The study noted from the responses that critical thinking is perceived as equally important to primary school pupils. Some of the teacher educators and student teachers were able to explain the importance of critical thinking as it relates to education and life experiences. They indicated that critical thinking is important to pupils in three ways. Firstly, it enhances pupils' learning capacity. Secondly, it prepares them for further studies especially at tertiary level where application of such skills is a requirement. Lastly, critical thinking is important in decision-making and problem solving in their lives.

Analysis of data revealed that focus group discussants agreed that critical thinking improves pupils' performance. Critical thinking enables pupils to grasp content, judge, give reasons and evaluate outcomes (Fisher, 2005:55). The focus group discussants viewed it as a skill which enables pupils to answer examination questions correctly. They stressed that if pupils are able to think outside the box, then their understanding of concepts will be easier. While it is true that they were very clear on the importance of critical thinking in learning, it does not necessarily follow that they develop thinking skills in their pupils. On the contrary, findings from document analysis and lessons observed revealed that, the NTC student teachers were giving gap-filling questions. These questions did not require critical thinking. This suggests that although some of the student teachers were aware of the importance of critical thinking, they seemed to be unaware of how to formulate questions which promote the development of critical thinking. The absence of thought provoking questions could be an indication that these student teachers have knowledge 'what' without knowledge 'how'.

Some of the responses from a number of NTC student teachers on TP appeared to suggest failure to perceive the connection between thinking and pupils' learning at primary school level. They indicated that thinking skills are important because pupils use

them at secondary and tertiary level. It is important to take into consideration an observation made by Paul, Elder and Bartell, (2013) that “an understanding of critical thinking at a deeper level can lead to the realisation that content must be taught through thinking”. When learning, science pupils should think scientifically, the same applies to the other subjects. The primary importance of critical thinking to pupils should be their own learning. The researcher feels that it is prudent for student teachers to understand that content is a springboard for critical thinking. The study revealed that some of the NTC student teachers’ practice is not premised on the idea that when teaching different subjects, they are not just teaching pupils to think from different perspectives. Paul (2004) gives a substantive conception of critical thinking when he draws attention to the idea that “content should be taught through thinking and not content then thinking”. Paul’s conception implies that every subject on the timetable presents an opportunity to develop critical thinking in pupils. Critical thinking is very important at primary school level because it is the vehicle through which learners understand the content.

Another concept that came out from the findings is that some of the NTC student teachers viewed teaching and learning as a process of imparting life skills. What came out very strongly was the idea that critical thinking develops life skills such as synthesising and problem solving. They also viewed life skills as skills that are necessary for one to cope with life’s challenges. Some of the student teachers identified the ability to interpret meaning of words, pictures or symbols and actions as a life skill developed through teaching critical thinking. The overall picture that is coming from this aspect of life skills is that some of the NTC student teachers seem to perceive the importance of the ability to interpret as an essential skill not only in enhancing one’s ability to learn but also equally important, in social discourse as well.

The other importance of critical thinking to pupils revealed by the study was the enhancement of complete communication. They emphasised the development of language skills such as oral, that is listening and speaking as well as written that is reading and writing. The findings imply that most of the student teachers who participated in the focus group discussions were aware of the relationship between language and thought. Their thinking was in agreement with Vygotsky’s (1986) investigation of human mental development. In his work *“Thought and Language”* Vygotsky (1986: 212) notes that “thought is expressed in words and comes into

existence through words". This means that the development of language skills is crucial for the development of thought.

From the findings of the study, it seems that both NTC student teachers and teacher educators viewed the ability to give a sound judgement as a critical thinking skill. Most of the participants focused more on one's ability to assess the situation before coming up with a conclusion as sound judgement. This implies that they viewed judgement from an objective order than subjectivity. They were quite aware that any course of action one takes should be determined by facts surrounding the situation. This clearly reflects on the interviewees' ability to link an action one takes to critical thinking.

From the findings, it is evident that the most important goal in teaching pupils to think critically is to develop in them problem-solving skills. Some of the lecturers and student teachers perceived problem solving skills as thinking skills which include divergent processes such as analytical, logical and creative thinking. In agreement with this perception are scholars such as Fisher (2003:81) who points out the importance of meta-cognition in solving problems when he says, "what underlies efforts to solve a problem is some form of cognitive processing or thinking". The problem solving skill is also viewed as a thinking skill for learning and dealing with everyday challenges. There is growing literature on critical pedagogy which indicates that problem solving is an effective learning method (Freire, 1996: 62; Fisher, 2013:145; Lipman, 2003). In the context of this study, it can be argued that critical thinking is important to primary school pupils because they need problem solving skills to deal with challenges they encounter in any learning process and in life generally.

The data analysis seems to indicate that closely related to the problem solving skill is the skill to analyse. The focus group discussants viewed analysis as a critical thinking skill which involves the breaking of a whole into parts or units. Some of the teacher educators were quite aware that the process of analysis is done to gain a deeper understanding of phenomena, concepts or processes to make a decision on issues at hand. Analysis is the fourth cognitive process of the revised Bloom's taxonomy (Clark, 2015). However, there has been an inconclusive intellectual debate about Bloom's taxonomy. Hidden Curriculum (2014) indicates that some critics question the division of

human thought into distinct ranked categories. Contrary to this critique, some of the participants viewed analysis as a higher order thinking process. A closer look at the findings indicates that teaching pupils to think critically is important because it develops analytical skills, a higher order thinking which is essential for learning in particular and decision making in general.

From the findings emerging from focus group discussions and interviews with lecturers, it is evident that critical thinking develops decision-making skills. They considered it as higher order cognitive process. The participants implied that decision-making requires reasoning because it is a process of selecting the best out of two or more alternatives. The findings symbolise the rational model of decision-making. Lombardo (2016) considers rational decision making as “a process of analysing facts step-by-step to come to a decision”. The study findings appeared to be validating Lombardo’s (2016) view of rational decision-making. The main focus of the participants was the identification of the best alternative or decision to take. Some of the participants gave an indication that in multiple choice examinations or tests, pupils are expected to choose the correct answer from four or five options. In the context of the findings of this study, it can be argued that if one takes a wrong decision it implies that he or she has not thought critically. This reflects the importance of critical thinking as viewed by the NTC student teachers.

The findings appeared to be suggesting that focus group discussants viewed the importance of critical thinking in relation to reflection. Their views seem to imply that if pupils develop a habit of thinking or analysing their experiences, they will become critical thinkers. They considered the two aspects to be intertwined. Whilst it seems to be true that the two are connected, some scholars argue that not all reflections are critical reflections (Harvey, Coulson, Mackaway & Winchester-Seeto, 2010; Knodt, 2008; Lone, 2011; Halton and Smith in Lucas, 2012). This gives an indication that not all reflections can lead to critical thinking. Some of the NTC student teachers seemed not to realise that thinking about one’s action and the world around needs to be critical so that one does not only develop thinking skills but critical thinking skills. However, the study findings are compatible with scholars who consider reflection to be a key component in the learning process as well as professional practice (Brookfield 2009; Jarvis 2010; Leijen, Valtna, Leijen & Pedaste 2012; Lucas, 2012). The participants linked reflection to problem solving. They believed reflection to be a mental process which is very important

in supporting deep learning. An important implication of these findings is that reflection is a very significant educational discourse to pupils and student teachers.

5.5.3 Summary

The research findings indicated that both the teacher educators and student teachers were aware of the importance of critical thinking skills to student teachers and primary school pupils. The student teachers need to have critical thinking skills to develop the same skills in their pupils. The instructional process, from planning to lesson delivery, demands that the student teachers be critical in their thinking. Primary school pupils need to acquire critical thinking skills to solve problems they encounter in the learning process and life in general.

5.6 Findings on the effectiveness of the NTC teacher education before TP

Much of what is presented in this section are the findings from document analysis and interviews carried out with both the NTC student teachers and teacher educators.. The documents analysed included the University of Zimbabwe Handbook for quality assurance in associate teachers' colleges, Faculty of education, Department of Teacher Education and Syllabuses for different departments of NTC.

Before student teachers are deployed to schools for teaching practice, they undergo teacher education for two terms, where each term is three months long. During the two terms, student teachers are expected to attend lectures and write assignments in each of the subjects indicated. Lecturers interviewed felt that the curriculum is content laden and the timetable is fully packed. Both teacher educators and student teachers interviewed agreed that the time spent at college and the content expected to be covered are not at the same wavelength. Content to be covered is too much to be covered in two terms. Two lecturers had this to say;

“The main problem is that of time. I think with adequate time most of our students would be able to reach the expected standard.”

“The teacher education curriculum is overloaded that no effective learning can take place. Everything is scratched at the surface.”

A number of student teachers indicated that teacher preparation was not effective in many ways. Some of them had this to say;

“Some of the lecturers do not care whether we understand or not. They are concerned with covering schemed work for the term.”

“Most of the lecturers do not realise that some of us are slow learners. So we go for TP without clear knowledge of what we are supposed to do.”

Focus group participants showed concern over pre- TP teacher education which they believed to be ineffective in imparting philosophical inquiry skills. They indicated that there seem to be no set standard on assessment items and delivery methods. They explained that;

“Most of the lecturers do not press on the issue of critical thinking or reasoning in the assignments or lectures. In a number of cases the nature of the assignments that fail in TOE, in subjects like Philosophy, Psychology and Sociology fetch high marks in most of the subjects including PSB areas which focus on the teaching aspect as a result the culture of questioning and thinking outside the box was not cultivated in us.”

“We finished TP in a state of confusion because lectures delivered in most subject areas before we went for TP touched on teaching methods theoretically.”

The model of teacher training being followed is the 2–5–2 model. The teacher educators explained this model by saying that student teachers spent the first two terms at College, five terms doing TP and the last two terms at College. More time is spent on teaching practice. The table on the next page indicate the NTC curriculum structure before TP.

Table 5.2: The NTC curriculum structure before TP

COMPONENT	STRUCTURE	FOCUS
Theory of Education (TOE)	<ol style="list-style-type: none"> 1) Theory of Education and Educational Management. 2) Educational Psychology and Inclusive Education. 3) Sociology of Education and Curriculum Studies. 	<ul style="list-style-type: none"> -Critical understanding, analysis, evaluation and application of the foundations of education and related concepts -Theories -Philosophical ideas of educational management -Sociological concepts and curriculum issues
Professional Studies Syllabus 'A' (PSA)	<ol style="list-style-type: none"> 1) Educational Media and Technology. 2) Educational Administration. 3) Classroom Management. 	<ul style="list-style-type: none"> -General classroom practice, Class Management, Public Service Regulations and Conditions of Service
Professional Studies Syllabus 'B' (PSB)	<p>Subjects that are taught at primary school.</p> <p>English, Shona, Mathematics, Home Economics, Religious and Moral Education, Social Studies, Environmental Science, Art Education, Physical Education, Music.</p>	<ul style="list-style-type: none"> -Subject content and methodology. -Assessment, monitoring and evaluation. -Scheming, planning and records. -Peer and micro teaching.
Professional Studies Syllabus 'C' (PSC)	<p>Research procedures</p> <ol style="list-style-type: none"> 1) Qualitative research design and methods. 2) Quantitative research design and methods 	<ul style="list-style-type: none"> -To develop research skills in student teachers
Professional Studies Syllabus 'D' (PSD)	<ol style="list-style-type: none"> 1) Health and Life Skills Education (HLS). 2) Information, Communication and Technology (ICT). 3) National and Strategic Studies (NASS) 	<ul style="list-style-type: none"> -Health life skills. - I.C.T. skills. - Using ICT in education - National heritage - History of Zimbabwe. - Entrepreneurship skills
Co-curricular	Different sporting activities.	Skills in different sporting disciplines.
Home area Teaching Practice (HATP)	<ul style="list-style-type: none"> - Teaching practice for two weeks. 	A two week long TP under the guidance of a mentor

5.6.1 Discussion on effectiveness of the NTC Teacher education before TP

The importance of teacher education in this ever-changing world cannot be over-emphasised. It has the potential to transform education and society for the better. The nature of teacher education or preparation seems to determine the quality of teachers produced. This has either positive or negative implications to the learner. It is against

this view that the researcher paid attention to how NTC prepares its student teachers for TP.

The findings suggested that the NTC teacher education curriculum cover the necessary components that enable student teachers to practice without facing major challenges. The components included seem to cover teaching methods and understanding of children and learning, understanding the subjects they will teach at primary school, theoretical foundations of education, research methods and national issues. The findings on the composition of the NTC curriculum are almost in line with the findings of a study on Teacher Education carried out by Perraton (2010:4). The findings suggested that the content is relevant. However, it is not taught in a manner that would develop philosophical skills in student teachers.

This study noted that the NTC curriculum included the study of educational foundations which is referred to as Theory of Education. Theory of Education provides some grounding in educational foundations. This component should enable the student teachers to be reflective teachers who are able to relate theory to practice. The findings indicate that in Theory of Education (TOE), they study educational ideas, theories, perspectives and concepts. The study seems to imply that the main thrust is on analysis, critique, relevance, reflection and applicability of ideas, theories and perspectives as they relate to education. Similarly, Taylor (2016) demonstrates the significance and focus of the educational foundations when he indicates that “they provide the theoretical framework for teaching and learning”. Theoretical elements of thinking seem to be covered to some extent in the TOE syllabus. Some of the lecturers from this department indicated that the teaching of TOE would be very effective if they had enough time to employ critical pedagogy.

The importance of TOE was also highlighted in an article by Virginia Commonwealth University (2015) which pointed out that a deep understanding of educational psychology and philosophy of education prepares students to be effective educational practitioners. The study therefore concluded that if TOE was taught through critical pedagogy, it could capacitate the NTC student teachers to understand, analyse critically and reflect on issues and their practice in education with a view to improve. This goes on

to show that the NTC teacher education pedagogy is not effective enough to empower student teachers to do the same to their pupils.

The study reflects that the NTC teacher education curriculum affords student teachers an opportunity to learn the teaching of the subjects they teach in primary schools. The findings indicated that PSB subjects were intended to cover all aspects that are critical for the student teacher to teach effectively. However, the study revealed that student teachers had challenges in teaching thinking in these subject areas. This implies that some of the student teachers did not gain the skills to engage their learners in philosophical inquiry. This finding is in line with Torff's (2005) findings on a survey carried out in Kentucky with 242 principals. The survey established that, the teachers lacked implementation skills. Torff (2005:304) indicates that lack of teaching competencies could be viewed as a sign of ineffective teacher preparation. Probably, the focus was more on content acquisition than skills. It should be noted that the teaching of a subject is not only determined by the nature of the subject. The educational philosophy of the teacher and the nature of the learners also determine the teaching approaches. In other words, the teacher needs to be a critical, caring and creative thinker to come up with effective inquiry based learning.

The NTC curriculum indicates that before the student teachers are deployed for TP, they are taken through general classroom practice and class management in PSA. Seemingly, this suggests a general approach which is not particular to a specific subject. While other components in PSA such as conditions of service and public service regulations are important, there seems to be a repetition of content in PSB on classroom practice. Some lecturers indicated that teaching methods are covered in PSB areas; there is no need to cover them again in PSA. Although methods are being taught in PSA and PSB, most of the student teachers on TP had a big challenge in inquiry-based learning. This suggests a shortfall in the way these areas are taught to the student teachers.

In an effort to equip the student teachers with necessary skills for problem solving, the curriculum includes PSC which is research methods. The college believes that if the student teachers are equipped with research methods, they will be able to find solutions to problems they encounter in their daily practice. The other reasons cited for teaching

research are to have evidence-based practice and to create knowledge in the field of education. The findings from document analysis and interviews with lecturers are consistent with growing literature on research methods in teacher education which recognises the importance of informed practice. (Unite for Sight 2015; Field in Express & Star, 2016; Hine, 2013; Stanovich & Stanovich, 2010; Ritchie, 2016). This means that the teaching and learning process should be grounded in some researches. The point being put forward here is largely in agreement with the findings of an inquiry carried out by the British Educational Research Association (BERA) and the Royal Society for the Encouragement of the Arts, Manufacturing and Commerce (RSA) in 2014. BERA and RSA (2014) indicate that:

“... the inquiry concluded that teachers and educators need to engage with research in the sense of keeping up to date with the latest developments in their academic subjects and on effective instructional techniques to inform their pedagogical content knowledge”.

While some teacher educators were able to articulate this as the reasons for doing research methods, most of the student teachers indicated that research methods are a preparation for the CDS they are expected to submit for assessment. In the context of this study, it can be argued that some of the student teachers failed to see the significance of research methods beyond assessment. Based on the findings, the researcher felt that the student teachers seemed not to realise that they are consumers of research. Therefore, they need skills to be independent evaluators of researches so that they are informed by trustworthy studies. The study revealed that although the inclusion of research methods in teacher education is a valuable way of capacitating student teachers for inquiry-based practice, there are knowledge and competence gaps amongst the student teachers. These gaps seem to have rendered NTC teacher education before TP ineffective in developing philosophical inquiry skills. What seemed to be at stake here is the tension between, what teacher education before TP is intended to do and what it actually do. This means that teacher education is not achieving what is meant to achieve. This indicates that it is not effective in developing inquiry skills in student teachers.

The other component of the NTC teacher education curriculum focuses on the increase of knowledge and understanding of the subjects they are majoring in. This study noted from the teacher educators' responses that this element is for enriching the student's knowledge. It does not have a direct bearing on the teaching and learning at primary school level. This was based on the assumption that even though the NTC student teachers major in subjects that are taught at primary school level, their content does not include pedagogy.

The findings of the study revealed that the teacher-training model followed by NTC is a 2-5-2 model. This study focused more on the first two terms which is about 28 weeks which is a preparation for TP. This teacher education model seems to afford student teachers more time to practice than to prepare for that practice. The assumption behind this model is that the student teachers will learn as they practice. With experience they become better practitioners. The study findings from the responses from lecturers and students indicate that the 2-5-2- model is not the best for quality teacher education because a lot of content has to be covered within two terms at the expense of skills. Some of the teacher educators indicated that this forced them to resort to the banking concept of education in order to cover enough content. Similar findings have also been found from a study carried out by Majoni (2014) in Zimbabwe teachers colleges. One of the findings was that the 2-5-2 model results in high lecturer-student ratio which compromises quality of delivery. The study indicated that student teachers find it stressful to cope with the pressure of work because a lot needs to be covered before TP. The problem is not as simple as it appears. The issue at stake is if students leave College without the expected skills it may be difficult to learn them as they teach. The reason being that, they need knowledge for practice to inquire and reflect on their teaching experiences. This means that NTC teacher education before TP is not giving student teachers strong foundation for professional growth during practice.

Some lecturers and student teachers indicated that they would feel comfortable if colleges resorted back to the 3-3-3 model. They believed that this would afford them time to cover adequate content qualitatively before TP. With the 3-3-3 model, student teachers would spend the first three terms at college, the following three terms on TP then the last three terms back at college. The overall picture that is coming from this aspect of teacher education model is that the 2-5-2 model is rendering otherwise high

quality teacher education curriculum to produce low quality teachers. The issue at stake is, do NTC teacher educators really understand that the model 2-5-2 emphasize knowledge in and of practice. It seems as if these teacher educators are not aware of this. Each model of teacher education is in line with a specific conception of teacher learning. The assumption behind this model is that student teachers learn as they practice. This understanding should guide them on what to teach and how. With the 2-5-2 model, teacher educators should focus not on much content but on skills that would enable student teachers to inquire and reflect on their practice.

5.6.2 Summary

The findings of the study offered some important insights that while some lecturers seemed to be well informed or knowledgeable of why they teach their courses, some student teachers had inadequate information and knowledge of the purpose of some of the subjects they do. This inadequacy was attributed to the pedagogy which is more teacher educator centred and to some teacher educators' and student teachers' incompetence.

5.7 Findings on the feasibility of philosophical inquiry across curriculum

The analysis of data indicated that it is feasible to engage pupils in philosophical inquiry in all the subjects that are taught at primary school level. Some lecturers and student teachers interviewed agreed that philosophical inquiry entails asking thought provoking questions, engaging learners in thinking critically. One of the lecturers had this to say about the teaching of Science:

“In terms of philosophical thinking or inquiry at science level, inquiry is the basic quality of a scientist. To have an inquiry mind is to be asking questions. One could look at it from that perspective to say why things the way are? Why are leaves green? What makes them green? What could happen if certain variables are added or removed etc?”

The teacher educator interviewee clearly specified that the thrust of teaching science is based on creating an inquiry mind.

It was also indicated by one of the teacher educator interviewees that philosophical inquiry can be employed when teaching subjects that focus on social issues. One of the teacher educator interviewees explained that;

“In Social Studies, critical thinking is of primary importance, the reason being that when given social issues, students are expected to examine different points of view, different opinions to weigh them and to make judgements based upon clear examination of different points, possible interpretations that can be given.”

The necessity of engaging learners in philosophical inquiry when teaching and using ICT was also highlighted:

“... the world we are living in now requires learners, those that are taught by our student teachers to be reflective, to think through. For instance in Information Technology there is massive information... learners should be able to sieve, to take that information which is important.”

Some of the lecturer interviewees drew attention to the teaching of Mathematics. They underscored the study of Mathematics as the application of logic and critical thinking. One of the lecturers explained that:

“... When we teach Mathematics, we are instilling the ability to think logically, critically and to bring out results after careful consideration in whatever we will be considering.”

The teacher educators and student teachers shared the same sentiments on the idea of engaging learners in philosophical inquiry in practical subjects. One of the lecturers interviewed pointed out the importance of practical subjects in developing critical thinking when she explained one of the challenges faced in engaging pupils in philosophical inquiry:

“... The focus will be on examinable subjects and this may hinder them from developing practical skills of creativity and innovation because some of the subjects that could help them to develop those skills are not considered seriously

... subjects like Art and Craft, Music and PE, where learners can develop creative skills because they are not examined.”

This line of thinking was also highlighted by another teacher educator when he said that:

“... Every subject should be taken with equal weight, not to say PE does not come in as an examinable subject, so they leave it. These are some of the activities that need thinking in physical activities. Why am I doing this? If I do this with this muscle what is the end result ... It is from there that the student, in later life, can become analytic to an extent of bringing up innovations that have to do with pulleys and levers because he has studied the muscle function.”

Student teachers who participated in focus group discussions shared how they engaged and how they can engage their pupils in philosophical inquiry in various subjects. This is what they had to say:

“You can give children a case study. Let’s say maybe you are teaching Home Economics. Maybe you tell them about a family without a toilet. Then ask them... consequences of not having such a facility at home.”

“Discussion was used in subjects like Mathematics where pupils were given some tasks so that they can do group work and come up with solutions to the problems given to them”

“I was teaching a Grade 6 class. I was teaching composition writing. I used to create a topic and they could discuss at least five ideas on the topic.”

“In RME I also used the discussion method. Pupils discussed in groups. ... I would tell them a story ... then ask them to find lessons from the story.”

“I used discussion when I was teaching the topic Shelter in Social Studies....”

“... discussion in subjects like Art, I was involving pupils to explore a situation. Maybe you give them a market place and come up with activities and they can put them on paper as Art.”

“I taught my pupils to reason. For example in PE, I was using the discovery method on educational gymnastics whereby I would say balance on one body part.”

Findings from the analysis of primary school syllabi indicated that most of them aim at promoting critical thinking skills. The participants agreed that philosophical inquiry promotes the development of critical thinking. The following are some of the aims from primary school syllabi:

“2.6 think and express themselves clearly and logically”

“2.8 develop an inquiry mind through experimentation”

“2.10 grow intellectually”

(Ministry of Education, Sport and Culture, Mathematics syllabus Grades 4-5, 2006:3)

“2.4 To enable pupils to develop an inquiring mind and the ability to solve problems”

(Ministry of Education, Sport and Culture, Home Economics syllabus Grades 4-5, 2000:3)

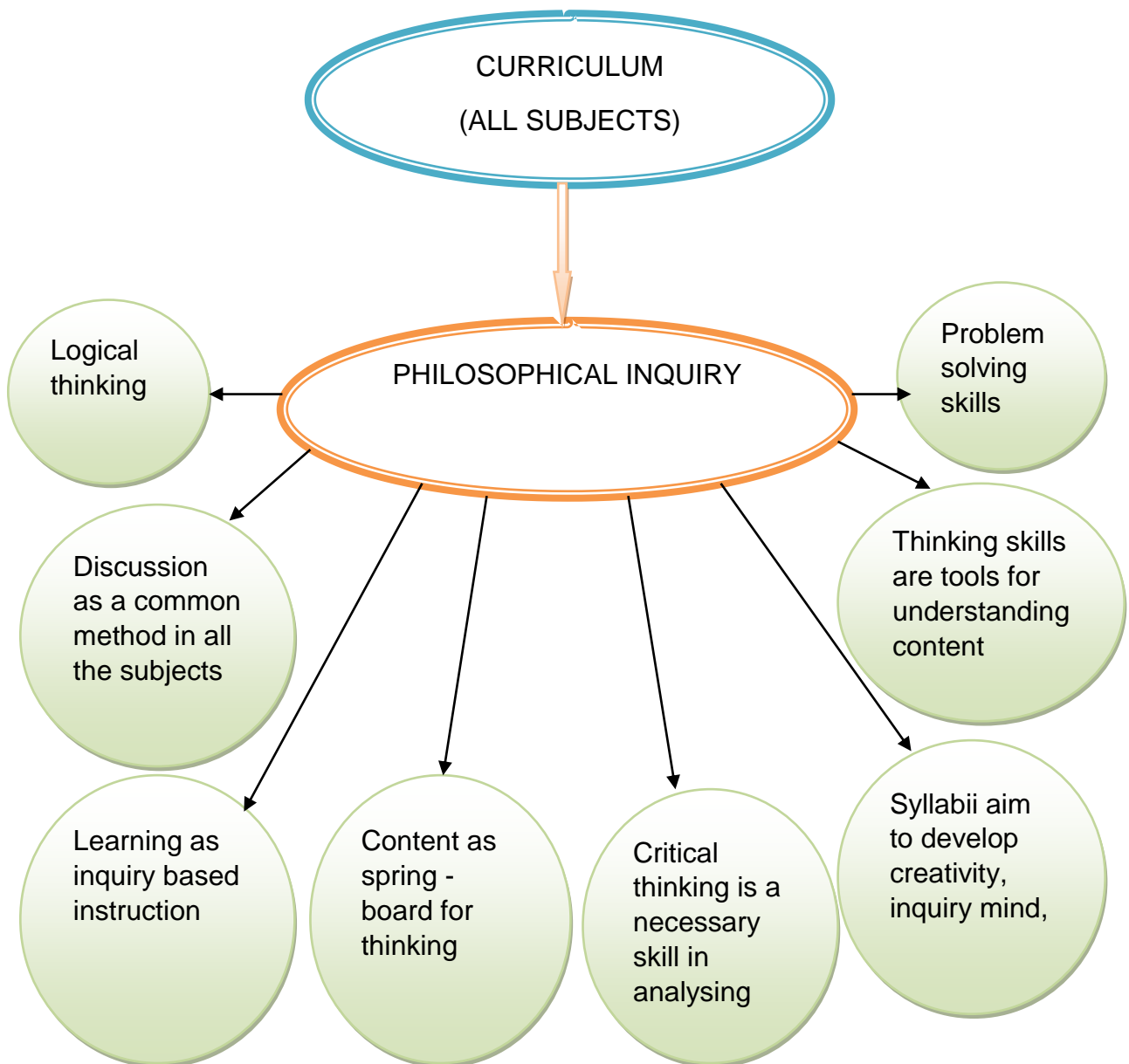
“1.1 The syllabus aims to encourage creativity and logical thinking”

(Ministry of Primary and Secondary Education, Computers syllabus Grades 1-7, 2013:3)

The findings indicated that the syllabi that are used in Zimbabwe primary schools emphasis the development of critical thinking and skills related to it. This goes on to show that philosophical inquiry can be employed across curriculum. In Mathematics, they are expected to grow intellectually, which means they are expected to develop problem-solving skills, to analyse, synthesise and evaluate. These are some of the critical thinking skills.

Figure 5.2 on page 144 is a summary of the findings on feasibility of employing philosophical inquiry across curriculum.

Figure 5.2: Summary of the findings on feasibility of philosophical inquiry across curriculum



5.7.1 Discussion on the feasibility of employing philosophical inquiry across curriculum

The participants agreed that philosophical inquiry could be employed as a teaching method. Lipman (1980) proposed that schools teach P4C as a subject whose content are novels. Contrary to Lipman's (1980) proposal, the findings indicate that philosophical inquiry can be employed when teaching any subject. The findings reflect that the

participants, both lecturers and student teachers were quite aware that philosophical inquiry is neither a discipline normally called Philosophy nor a study of great philosophers such as Plato. Their responses suggested that the majority perceived it as a teaching and learning approach which can be employed in any subject to promote critical thinking and independent learning.

This research's findings seem to imply that any subject matter can be used as a stimulus for thinking. The participants' responses on how they engaged their pupils in philosophical inquiry suggested that it is an approach that can be employed in any subject. This seems to indicate that content is not an end in itself but a means to an end. The study revealed that most of the lecturers interviewed and focus group participants made it clear that learning is skills-based than content based. They perceived learning as a process of acquiring skills such as analysing, questioning, interpreting, judging, reasoning and critical thinking among others.

The assumption behind this view seems to be that changes in the world can render content or information irrelevant. Skills can be applied to any situation or challenge. They also believed that learners understand content better through those skills. In agreement with the findings of this study is Ackerman and Perkins' (2016) view on the skills-content relationship that "skills are helpful and essential to learners trying to unlock content". The findings seem to suggest that philosophical inquiry can be employed across the curriculum.

This study findings lend support to the claim that although some of the student teachers were cognisant of the importance of thinking skills in teaching any subject, they seemed not to realise that these various subjects are ways of thinking. It is important to take into consideration the idea of Paul (2004) that every discipline is a mode of thinking. This suggests that when a pupil is applying critical thinking in Religious Studies and Science, he or she is thinking religiously and scientifically respectively. The findings of this study provide strong convincing evidence that the syllabi for subjects such as Mathematics, Home Economics and 'ChiShona' spell out clearly the acquisition of critical thinking skills as the main thrust for teaching the subjects. This study therefore concluded that philosophical inquiry as an approach can be employed in all subjects.

The findings suggested that lecturers and some student teachers agreed that the best method of learning any subject is an inquiry-based approach. They believed that the approach focuses on questioning and finding answers. Thomson (2011) expresses a similar view when he says that, “effective questioning is important for promoting critical thinking”. This implies that an inquiry approach can be employed in any subject where questioning is done. This study noted that some of the teacher educators had a deeper understanding of inquiry than their student teachers on TP. The student teachers viewed it as a process of asking pupils questions which require them to recall content.

Evidence from some of their documents suggested that they had a shallow perspective of inquiry. Some of them believed that philosophical inquiry could be employed in all the subjects because they give pupils questions to answer in all subjects. These student teachers seemed not to perceive inquiry in the context of investigating, formulating questions and exploring in order to arrive at truth or different perspectives. From the researcher’s point of view, truth can be established with certainty if one investigates circumstances surrounding the problem or phenomenon then try to understand cause and effect relationship. Although some student teachers acknowledged the importance of questions, their pedagogical practice is in line with some scholars’ conception of good questions. Thompson (2011) rightly points out that good questions are those that guide and encourage pupils to think, interpret, analyse, synthesise, critique and reflect. In the context of this study, it can be argued that some student teachers’ theoretical claim of engaging in inquiry-based approach across curriculum was not substantiated by their practice.

While some of the student teachers on TP seemed to display limited understanding of inquiry-based learning, the syllabi they used for scheming clearly spelt out the development of an inquiry mind as the main thrust of education. This seemed to indicate that some of the student teachers were not able to interpret the syllabi effectively. This study therefore concluded that there was a competence gap in terms of interpreting learning aims.

The study seemed to indicate that lecturers perceived the possibility of engaging learners in philosophical inquiry across the curriculum. The reason being that content is

taught through thinking. This implies that one cannot understand any subject unless he or she engages in thinking. The indications are therefore that effective learning can only take place if learners are engaged in thoughtful learning. Without thoughtful learning, the process of teaching and learning becomes the chronicling of facts and phenomena. Facts or phenomena can only translate to learning if they are analysed, judged, questioned and reflected upon. In agreement with this discourse, is Hester's (1994) observation as cited by Harada (2003) that "the quality of learning is determined by the quality of the process of thinking used in learning". Given these findings, it can be concluded that learning and thinking seem to be inseparable.

The findings from the lessons observed and documents analysed suggested that in practice, some of the student teachers on TP were not teaching the thinking element. Their main focus was on information giving. It is important to take into consideration the observation of Paul (2004) that "a deeper understanding of critical thinking can make one realise that there is a need to teach content through thinking, not content and then thinking". In light of Paul's (2004) observation, the indications are therefore that some student teachers on TP lack an understanding of the centrality of critical thinking in learning. Given these findings, it can be seen that their practice is characterised by mundane activities which do not cultivate independent thinking.

The findings, particularly on employing philosophical inquiry across the curriculum seemed to reflect that both lecturers and student teachers on campus viewed teaching in the context of Freire's (1996) educational discourse. Freire (1996:83) proposed that content should be presented in the form of a problem to learners (Freire, 1996:83). Most of the lecturers felt that students could engage their learners in philosophical inquiry in any subject. They argued that no content should be taken as sacred wisdom which cannot be questioned. Their argument was grounded in the idea that the content of any subject is a human product and therefore represents a specific human perspective. If content is presented in the form of problems, then pupils can be engaged in philosophical inquiry because the process of solving problems involves inquiry. They pointed out that pupils are expected to inquire into the problems presented by the teacher, analyse them, think of solutions, choose the best option then implement it. These findings are consistent with the growing literature on critical pedagogy which

indicates that education has transformative power through critical inquiry (Freire 1996:69; Kincheloe 2008:17-21; McLaren 2016: 8-11).

This study reflected that in Mathematics, for example, the main thrust is the application of mathematical principles in solving mathematical problems. While some student teachers on TP could not link philosophical inquiry to Mathematics, some lecturers were very clear on the fact that the learning of Mathematics implied the use of logic and critical thinking. The aims in the Mathematics primary school syllabus indicate that the process of learning mathematics should involve and develop logical thinking in pupils. (Ministry of Education, Sport and Culture, Mathematics syllabus Grades 4-5, 2006:3). Thinking and logic are important in the process of inquiry. The indications are that inquiry skills can be used to learn Mathematics. For example, on teaching simple addition, pupils can be asked to find out errors on given sums and justify why they think it is not correct for example, $4 + 5 = 3$. Given this sum, they should be able to use logic. Logically 3 is a smaller number than 4 and 5, so the addition of these two numbers that are greater than 3 cannot add up to 3 only. A teacher would expect his/her pupils to explain why 3 is not the answer than simply saying 3 is not the answer because the correct answer is 9. The study findings have revealed that every subject needs an inquiry mind.

The findings from the interviews with lecturers seem to suggest that it is possible to engage student teachers in philosophical inquiry across the curriculum because each subject can be viewed as a mode of thought. It appears that their student teachers both those on campus and those on TP lacked this conception of critical thinking. The teacher educators expected their student teachers to think philosophically when in Philosophy of Education, sociologically in Sociology of Education, the same applies to other areas. Some of the student teachers did not show an indication that they also expect their pupils to think scientifically or mathematically. The lecturers' view on subjects as modes of thinking is largely in agreement with that of Paul (2004) who makes it clear that every discipline is a mode of thinking. In making this comment, Paul argued that "when History is taught as a mode of thought, then students learn historical content by thinking historically about historical questions and problems". While the NTC student teachers acknowledged that critical thinking can be taught in any subject, they

did not realise it in the sense or context presented by Paul (2004) and their teacher educators.

5.7.2 Summary

The research findings indicated that philosophical inquiry could be employed as a critical pedagogy in any subject across the curriculum. The teacher educators indicated that student teachers are expected to develop in pupils inquiry skills in every subject they teach. The student teachers believed that all the subjects whether practical or theory require pupils to engage in some thinking and this cognitive process can be developed if pupils engage in the process of inquiring.

5.8 Conclusion

This Chapter has presented and discussed this research's findings on themes indicated in the introduction. The research findings were discussed in relation to the research problem, challenges faced by NTC student teachers in engaging their pupils in philosophical inquiry. The Chapter has established that the student teachers on TP had knowledge gaps in their perception of philosophising as compared to those who had spent a term in college after TP. It is clear from the findings that the relevance and importance of critical thinking to student teachers and their pupils cannot be over-emphasised. From the findings, it is also clear that some student teachers claim to value higher order thinking skills but their practice does not reflect such. The research findings are clear that it's feasible to inquire in all subjects. However what seemed to be an issue is the ability to do so. Each learning area has its own problems which need to be inquired into and solved. Philosophical inquiry is the best suited approach for this task. This study has also established that the teacher education is not very effective in producing critical teachers due to lack of critical pedagogy. The researcher feels that teacher educators at NTC have a crucial role to play in the provision of high quality teacher education. This would ensure that student teachers develop relevant competencies. The next Chapter will focus on the challenges faced by NTC student teachers in engaging pupils in philosophical inquiry and how they can be overcome to promote philosophising among pupils.

CHAPTER 6

6.0 RESEARCH FINDINGS AND DISCUSSIONS ON CHALLENGES AND FEASIBLE SOLUTIONS TO PROMOTE PUPILS' ENGAGEMENT IN PHILOSOPHICAL INQUIRY

6.1 Introduction

Chapter 5 has focused on the following themes; perceptions, awareness, importance, the effectiveness of teacher education at NTC before TP and feasibility of engaging pupils in philosophical inquiry across curriculum. This Chapter explores challenges faced by NTC student teachers in engaging pupils in philosophical inquiry and ways of overcoming them to promote philosophical inquiry. These are the main aims of this research. The identification and analysis of the challenges faced by NTC student teachers in engaging pupils in philosophical inquiry gave a deeper understanding of the obstacles presented by the challenges. This exploration and analysis is the first stage towards feasible solutions. The engagement of pupils is feasible if ways of overcoming are explored and examined. This will promote reflective and critical practice by student teachers.

6.2 Findings on the NTC student teachers' challenges in engaging pupils in philosophical inquiry

The engagement of pupils in philosophical inquiry has never been an easy task. A number of challenges faced in engaging pupils to philosophise were identified by both the teacher educators and the student teachers who were interviewed in this study. The challenges revealed by the data in this study can be classified as training based, school system based and student teachers' competencies.

6.2.1 Findings on the NTC teacher education based challenges

Teacher education plays a critical role in preparing teachers for their practice. In order to establish the student teachers' challenges in engaging pupils in philosophical inquiry, the researcher interviewed lecturers.

The lecturer interviewees pointed out that the 2-5-2 training model is producing student teachers who are not adequately prepared. All the lecturers interviewed indicated that the two terms that they spent at college is little a time to cover all the necessary areas in their curriculum. They stressed that within two terms it is difficult to produce student teachers who are philosophically oriented. They complained of a fully packed timetable and the time allocated for each subject which they said was not enough considering what was expected to be covered. One of the lecturer interviewees explained that:

“... because of time, we do not have anywhere where we would say we are engaging our students in problem solving ...”

It was also indicated that teaching student teachers critical thinking would mean engaging them in communities of inquiry which they believe is time consuming. According to them, the shortage of time has resulted in some of the teacher educators resorting to lecture methods.

Some of the approaches employed by teacher educators in preparing their student teachers for teaching practice were cited as another challenge. This was pointed out by interviewees, teacher educators and student teachers. One of the student teachers who participated in a focus group discussion chronicled her experience with some of the lecturers:

“... Most of them are not giving us room to engage in critical thinking. We sit down and then listen to lecturers dictating notes. We are just doing things in order to complete the course not to gain skills.”

Most of the student teachers interviewed agreed that they lacked necessary skills to engage their pupils in philosophical inquiry. The reason for this inadequacy was explained as lecturers' failure to engage student teachers in philosophical inquiry. One of the student teacher interviewees had this to say:

“... I, as a teacher was not fully equipped with philosophical skills as I tried to apply philosophical skills, the teaching process become difficult.”

Data analysis revealed that some lecturers' choice of the lecture method was premised on the assumption that all the topics in various syllabi should be taught or covered during lectures. One of the lecturers explained his efforts and challenges:

"...we try to...employ philosophical skills while delivering lectures to our students, but I think it is somehow limited by the time we have. We have to cover the syllabus."

Lecturers interviewed highlighted that some of the lecturers do not feel comfortable in engaging student teachers into discussions, talk less of engaging them in critical thinking. The reason for preferring the lecture method as explained by one of the lecturer interviewees was that:

"... because it's a very safe method to use. When using the lecture methods then students do not ask too many questions, so you remain in the comfort zone, no student would unsettle you with questions you cannot answer."

Critical to this issue of methodology as cited by some focus group discussants was the absence of critical pedagogy in the teaching of PSB areas. One of the student teachers showed concern when she said:

"In PSB areas... we were taught about methods but the inclusion of philosophical inquiry was not there. These were just explanations."

Some of the student teachers' low level of thinking was cited as a challenge. On one hand, the teacher educators who were asked to evaluate their efforts to produce a philosophically oriented student teacher expressed concern over the nature of their student teachers. They indicated that some of the student teachers are not used to a culture of thinking critically. All lecturers interviewed appeared to be worried by the low level of thinking of some of their student teachers. On the other hand, some student teachers felt that some of the lecturers are not competent enough to incorporate the element of critical thinking in the subjects they teach. One of the focus group discussants had this to say:

“If student teachers are to be well equipped to be able to teach critical thinking, lecturers should have a workshop on critical thinking. Some subjects are taught to finish the content without focusing on critical thinking.”

Some of the teacher educator interviewees also pointed out that some teacher educators seem to be incompetent when it comes to equipping student teachers with the necessary skills. The following is one such sentiment from a lecturer interviewed:

“... I think there is something wrong again in the way things are done at college... the student is not really equipped with the skills of scheming and planning... It leaves a lot of gaps in the way students are planning and scheming. They cannot produce a comprehensive scheme of work or lesson plan; talk less of including these philosophical thinking skills.”

The same sentiments were echoed by student teachers during a focus group discussion. One of the discussants underscored that:

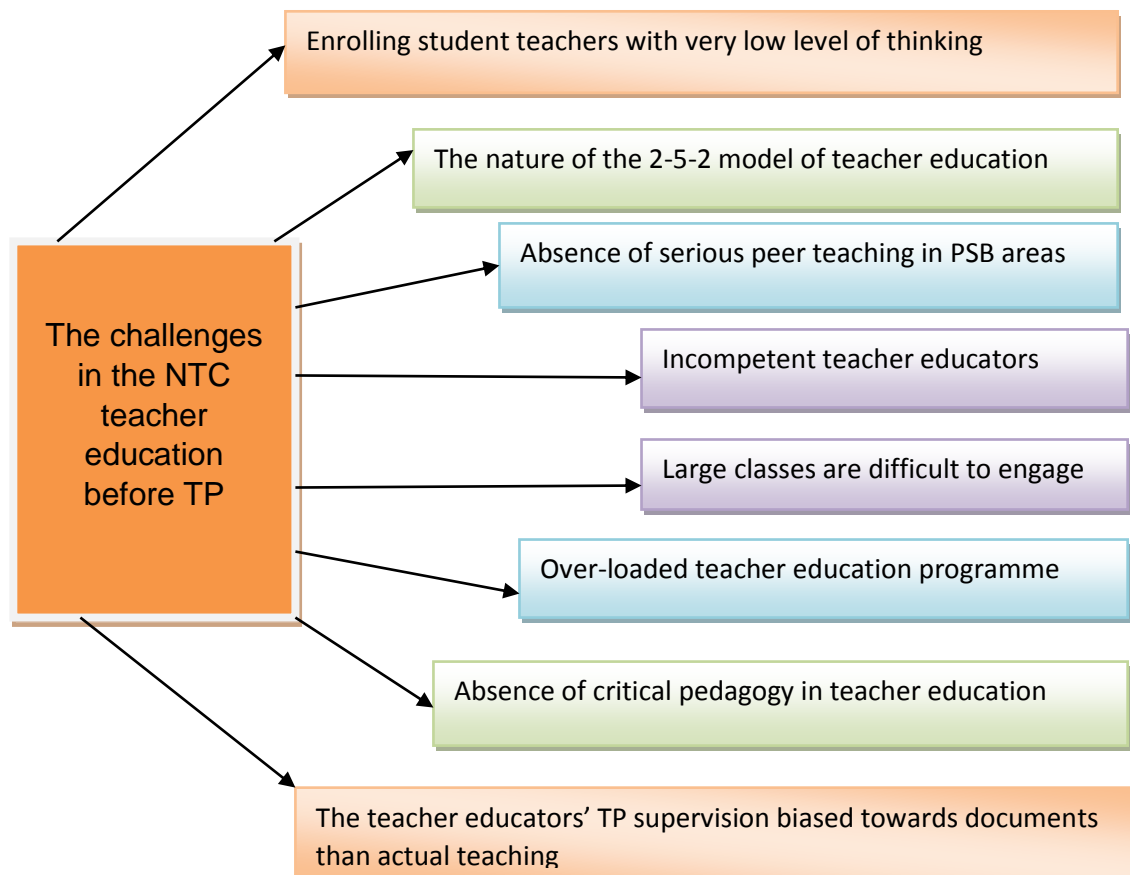
“... Some of the lecturers brought confusion, for example in some subjects we were taught scheming and planning. We were given assignments on scheming and planning but no one was able to scheme in that subject.”

The assessment criterion was also highlighted as a cause of concern. Some student teachers who participated in focus group discussions felt that Professional Studies Syllabus ‘B’ areas, which are subjects that are taught at primary school level, are not being taken seriously. This, according to the focus group discussants, was evidenced by the lack of examinations as assessment. They further indicated that in most of these areas they are given assignments which they think are not an effective way of assessing student teachers. They queried this type of assessment. One of the student teachers had this to say:

“The criteria of assessment are the ones that drive an attitude in PSB subjects. Why are the PSBs not examined? Students just think these can be completed easily.”

Figure 6.1 below gives a summary of the findings on the challenges in the NTC teacher education before TP.

Figure 6.1 Summary of the findings on the challenges in the NTC teacher education before TP



6.2.1.1 Discussion on the NTC teacher education based challenges

The findings seemed to suggest that the training model, 2-5-2 was not affording both the NTC teacher educators and student teachers adequate time to engage in critical teaching and learning. This implies that some of the teacher educators, if not most of them, do not engage student teachers in critical thinking because of the shortage of time. There was an indication that they concentrate more on content coverage. However, the researcher felt that in an effort to cover content, the quality of understanding content is compromised. It is important to take into consideration the view of Paul (2004) that “when thought is sacrificed in an effort to gain coverage, knowledge is also sacrificed”.

This means that if the lecturers are not effectively engaging their student teachers in philosophical inquiry, some student teachers will not be able to employ critical pedagogy. This interpretation is in line with the proposition made by (McCall, 2009:1) which highlights that to be proficient in any activity or skill one needs to be exposed to the activity and to practice it. This means that for student teachers to be capable of engaging their pupils in philosophical inquiry, they should have been taught through critical pedagogy and practiced it. In agreement with McCall's scheme is Fani ([sa]) who indicated that unless educators are well versed with critical thinking processes and approaches to teach it, they would not be able to develop it in their learners.

The findings seemed to reflect that the 2-5-2 model has serious implications to the receiver, who in this study is the pupil. The implication is that classes will be held to arrive at the right answers than develop in pupils the ability to be independent thinkers. The study also noted that the other challenge related to the 2-5-2 model is the overloading of the timetable and the demands of the course which are too much. Some teacher educators indicated that student teachers hardly have adequate library time during the day. They are expected to do assignments in 16 areas of study. They are also expected to write personal notes for every topic they would have covered during lectures. The indications are that quality is greatly compromised.

The findings suggested that lack of critical pedagogy in teacher education at NTC is a very serious challenge. Both the teacher educators and student teachers felt that lack of critical skills in student teachers' practice was a major hindrance to the teaching of critical thinking. The idea that most of the focus was on covering content or syllabi suggested that some student teachers were going for TP with adequate content but without the ability to employ critical pedagogy. It is very important to take into consideration Crookes and Lehner's (1998) observation that teachers teach in the way they would have been taught. This implied that some of the student teachers' failure to engage their learners in philosophical inquiry could be explained in terms of how they were educated. In a study carried out by Ok and Toy in 2011, student teachers acknowledged that a critical pedagogy promotes the development of philosophical skills (Ok & Toy, 2011:50). If the student teachers went through interpretation of a topic with a teacher educator, it did not necessarily mean that they would have grasped the skill unless the method or approach used promoted such. The researcher's point was that

the process should enable the student teachers to have a hands-on and heads-on approach which is the actual interpretation of a given topic and the how and why of the process. In other words, the findings suggest that they were not taught critically and adequately to be philosophically oriented teachers, hence it is difficult for them to use critical discourse in their practice.

The teacher educators complained about a culture of silence amongst their student teachers. This means that the pupils were not comfortable to engage themselves in a dialogue. In that case, the student teachers seemed to have difficulties in encouraging their pupils to participate and construct knowledge as social communities. Letseka and Pitsoe (2013:199) point to the importance of students' participation when they reported that it gives an indication of students' understanding of what they learn. In light of this contribution, the instruction of teacher educators who are not creative enough to engage their student teachers is not informed by the student teachers level or standard of performance. Becoming a critical and creative teacher may be difficult without a critical approach to learning. Sarroub and Quadros (2015:253) believe that in the process of utilising critical pedagogy, teachers must reflect on their practices in the instructional process. Sarroub and Quadros' (2015:253) suggestion could be feasible if the student teachers have been exposed to such discourse, then it would not be a challenge for them to promote strong engagement of pupils with the curriculum. However, it should be noted that some student teachers' failure to engage their learners cannot be explained solely by lack of criticality in their teacher education. A creative student teacher should be able to engage his or her learners in philosophical inquiry based on the theory covered at college.

The research findings suggested that the way PSB areas were assessed seemed not to promote criticality as well as the professional growth of the student teachers. Some of the student teachers indicated that they did not write examinations or tests as assessment in the subjects they are expected to teach. It is important to consider the view of Yukino (2016) that examinations are important because they force students to learn. This means that in the absence of examinations in PSB areas, the student teachers can decide not to take this component seriously. Some of the student teachers believed that if a subject is not assessed through an examination or test, then that subject is rendered not very important. On the contrary, anyone familiar with pre-service

primary teacher education can agree that the subjects they are going to teach are very important because they focus on practice. They indicated that in some cases, assessment through assignments cannot give a true measure of whether the student teachers are able to teach, scheme and plan or not. Their argument was that, an assignment can be done as a group or one can copy from others. However, the researcher feels that one does not need to be assessed through a written examination only in order to develop skills necessary for teaching. An assignment is equally important and better if not best. Through an assignment, student teachers can research, engage in dialogue and can gain more skills due to group dynamics.

The study has revealed that some student teachers feel that teacher educators' TP supervision makes them compromise the quality of their teaching. They indicated that lecturers focused more on documents than the actual teaching. On one hand, the student teachers believed that some teacher educators' emphasis on TP documents such as records, schemes, evaluation and lesson plans have made them focus more on updating records at the expense of the instructional process. On the other hand, the teacher educators felt that their supervision is clinical and documents are evidence that teaching and learning has been taking place and how. The researcher believes that TP documents are very important because they assist the student teacher in monitoring pupils' learning and planning instruction in relation to pupils' previous learning experiences. In line with the teacher educators' responses, Brennen (2000) points out that "clinical supervision helps to diagnose instructional problems and provides valuable information which can enable the supervisee to come up with strategies to solve identified problems". If the teacher educators' supervision is clinical in the sense of Brennen's (2000) idea, then it would have been helping student teachers to employ classroom instruction.

One of the lecturers pointed out that not all the lecturers are concerned with encouraging student teachers to promote critical thinking among their pupils. The researcher also observed that most of the lecturers' supervision reports in the student teachers' files did not make reference to critical pedagogy or teaching pupils to think critically. It is the researcher's assumption that if clinical supervision was done effectively, some of the student teachers would become aware of the importance of documents in their daily practice. Some of the student teachers would develop critical

skills and strategies to improve their instruction. This study therefore concluded that, although supervision was being done, there were still gaps in terms of empowering the student teachers

6.2.2 Findings on the challenges in the NTC practicing schools

A number of challenges which are school system based were identified. Both lecturers and student teachers interviewed highlighted that the student teachers were attached to mentors who somehow owned the class. The mentors expected the student teachers to teach in the way they did and wanted. One of the students on teaching practice stated:

“Mentors forced us to teach the way they wanted, which did not promote critical thinking.”

The student teachers showed great concern over challenges they faced which they thought to be a result of mentors’ malpractices. Some of the malpractices included a negative attitude towards slow learners and they could label them as such. One of the focus group discussants elucidated how she was affected by her mentor’s negative attitude;

“As a student teacher even if you want to work hard, the mentor’s negative attitude would affect you. They do not put effort into promoting critical thinking. These (pupils) were given fill in composition. For example,

1. My name is _____ 2. I learn at _____ school. 3. We are _____ in our family. 4. My father is a _____.

These are the type of composition questions they give which did not promote critical thinking.”

Some of the student teacher interviewees alleged that some mentors over-relied on textbooks. These student teachers saw this as a weakness which developed in pupils a culture of having pupils identifying the answer in the text without engaging in any thinking. Two student teachers on teaching practice had this to say:

“The pupils that we teach are not exposed to questions that require them to think critically. In most cases the pupils are asked to read from a textbook and answer questions whose answers are in the passage read.”

“... mentors derive their work from textbooks...”

The student teacher interviewees also indicated that some mentors are in the habit of labelling pupils negatively, a practice which has adverse effects on pupils. One of the focus group discussants related her experience:

“The problem I encountered was that, some pupils in the classroom were labelled by mentors so they become very lazy because they now think they are dull. These needed to be motivated so as to develop critical thinking.”

The other challenge that was cited by both lecturers and student teachers was the teacher-pupil ratio. They indicated that the classes are very big for a teacher to engage his or her learners in effective inquiry. This is what some of the student teachers had to say:

“The teacher- pupil ratio would discourage you. You may have 45-50 pupils in one class, to employ methods which promote critical thinking was a challenge.”

“I struggled to attend to children individually because it was a class of 50. At times you would be tired so you will end up just copying things from the textbooks.”

“My challenge was teacher – pupil ratio. I find it difficult to promote critical thinking...Time management was also a challenge because of the class size.”

The student teachers felt that if the pupils were to be taught to think critically, then class sizes should be reduced. Shortage of time was not only a challenge for teacher educators, the student teachers also felt that the time allocated for each subject on the timetable was not adequate. Considering the nature of critical pedagogy, the student teachers felt that 30 to 35 minutes and 1 hour to 1 hour 10 minutes, for a single and double lesson respectively, is not adequate to engage pupils in a community of inquiry.

The pupils' difficulty in understanding and communicating in English was cited by the student teachers as an obstruction to pupils' engagement. There was a general feeling amongst the student teachers that it was easy to engage pupils in a discussion when teaching in their native language of ChiShona than their second language, English. This was cited as a common challenge in rural areas, where in most cases English is only spoken during learning at school. Some student teachers elucidated how the use of English language became an obstacle in teaching pupils:

"The first challenge is on speaking, normally the English. The pupils do not answer questions when you ask them."

"... We face challenges if we give pupils' comprehension questions especially in English. If we do not discuss the questions first, almost the whole class will fail to answer the questions in English."

Another challenge that was explained as a hindrance to the teaching of critical thinking was the examination oriented primary school education. Some of the teacher educators interviewed pointed out that achievement in an examination was used as a measure of the effectiveness of curriculum implementation. The grade seven examinations and class tests have been identified as main culprits in hindering the development of critical thinking skills in pupils. One of the teacher educators had this to say:

"The questions are normally the 'what' and they avoid the 'why' which in my view is the key element to make the learner reflective. Another militating factor is the issue of examination oriented curriculum."

In some cases, competition is viewed as a way of promoting better performance. On the contrary, competition in terms of performance has negative effects to quality as observed by some lecturers and student teachers. The teacher educator interviewees pointed out that those schools are organisations that measure their success in terms of pass rate. The emphasis on high pass rate and covering syllabi were cited as the basis of rote learning and spoon-feeding during learning in some schools. One of the student teachers shared her experiences during a focus group discussion

"... The issue that is there between the mentor and the so called pass rate. So you find that they do not concentrate much on giving pupils problems that can

engage them in philosophical inquiry. Instead, they will tell you that involving pupils in those activities will waste time. Instead, you should spoon-feed the pupils so that they can only be equipped for the examination, so that they can pass the examination and the mentor can be given glory for raising the pass rate. However the child will not be able to critically think.”

One of the teacher educators pointed out that:

“...The mentors and this idea of covering a lot of ground in preparing for the examinations. You see the methods they use are mostly those that encourage covering of more ground rather than equipping pupils with philosophical skills.”

Lack of effective supervision of mentors by heads of schools was cited as one of the challenges. Focus group discussants agreed that teacher supervision as an educational practice is being relegated. One of the student teachers explained that:

“There is lack of supervision. The head visits the class once per term.”

Some of the focus group discussants pointed out that even if supervision was to be done, some heads do not know how critical thinking skills are taught. One of the discussants recommended that:

“The heads need to be equipped with philosophical skills so that they will be able to supervise. They do not mind whether curriculum implementers are asking recall questions or not.”

The student teachers also cited the nature of the pupils as an impediment to the development of philosophical skills in them. It was pointed out by a number of student teachers on teaching practice that most of the pupils, especially in rural areas have low self-esteem. One of the student teachers on TP explained why they have low self-esteem;

“They lose confidence just because mumwe wavanenge vainaye pagroup vanofunga kuti anoziva saka iye mwana haakwanise kuburitsa answer yake.”

Translation

They lose confidence just because they think others can perform better than them, so they will not participate.

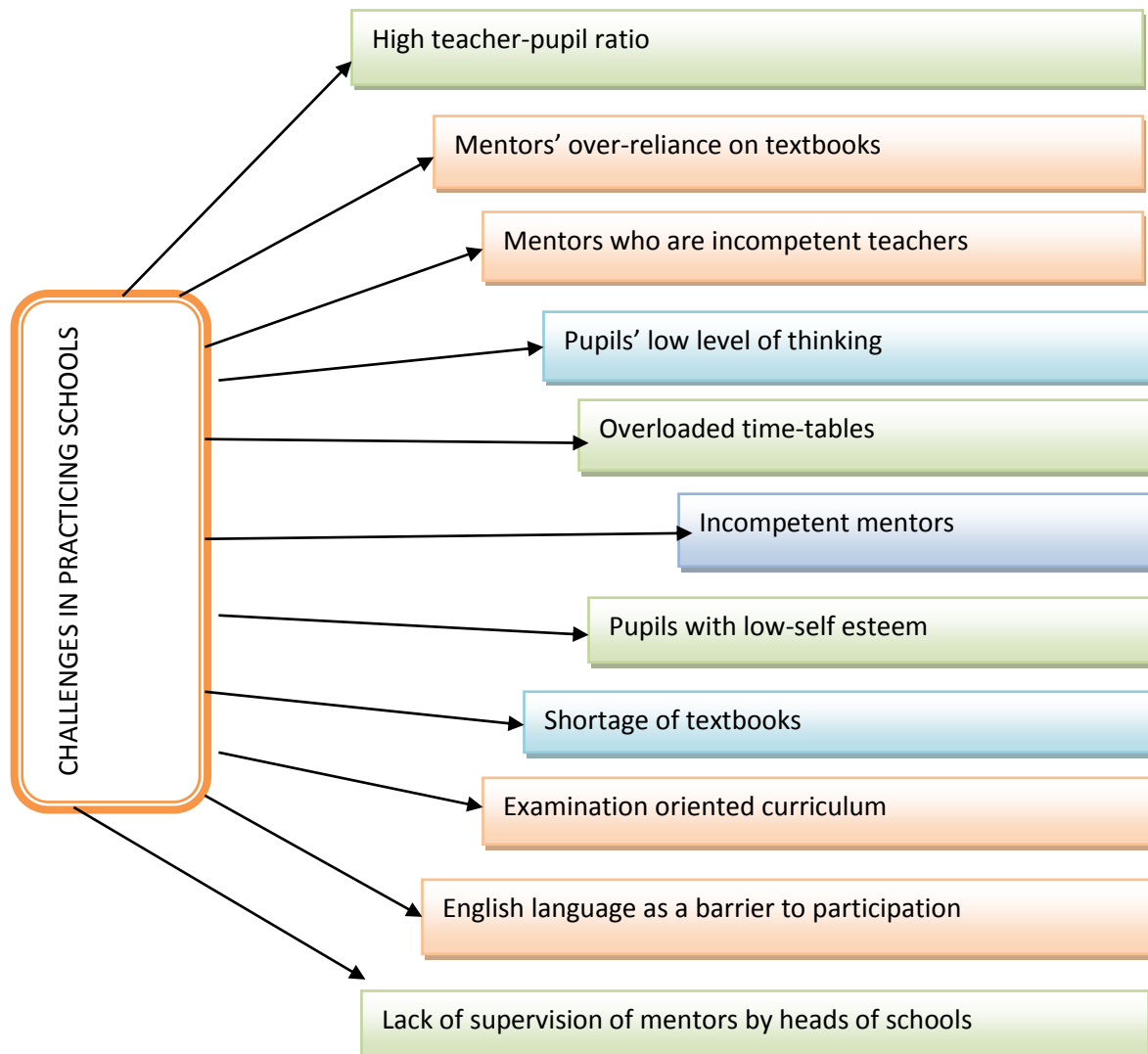
The other interviewee said that:

“I feel that maybe they have low esteem. They feel that their answers are not correct so they remain quiet.”

The researcher observed that in some schools, there is a critical shortage of resource textbooks. In some cases, only the student teacher had a book which he or she read to the pupils. One of the student teachers observed that he ended up telling pupils everything, even answers to the fill in questions on the board.

Figure 6.2 on page 163 summarises the challenges in the NTC practicing schools.

Figure 6.2 Summary of the challenges in the NTC practicing schools



6.2.2.1 Discussion on the challenges in the NTC practicing schools

Among the challenges suggested by the findings are school-based challenges. The study noted from the responses that some student teachers seemed to be worried by the absence of professional development opportunities in practicing schools.

The findings seemed to suggest that the mentoring approaches employed by some teachers were not contributing to the professional growth of the student teachers. Some of the student teachers claimed that, those serving as mentors in schools do not seem to have an idea of how they can promote the minds-on learning, talk less of teaching such

to student teachers. From the observations done by the researcher, some of the student teachers who did not have mentors seemed to be doing better than those with mentors.

This goes on to suggest that not all mentors are effective and also the student teachers' ineffectiveness cannot be solely explained by the mentor's incompetence. The student teacher has a part to play in his or her professional growth.

This study appears to suggest that some of the teachers in schools are not only weak in mentoring but in teaching as well. Seemingly, this confirms the weakness that was noted by Lipman (1982) who observed that critical thinking was not being taught in schools. Therefore, he developed a programme P4C to enable teachers to engage pupils in philosophical inquiry. Some sentiments from the student teachers suggested that some mentors do not infuse thinking in the teaching of the different subjects. This implies that some student teachers are being exposed daily to the teaching that does not promote thoughtfulness in pupils. If the college expects the student teachers to grow professionally by observing and copying from mentors, it means some student teachers are not benefitting. The findings seemed to reflect that some of the mentors have weaknesses in interpreting the syllabi. The student teachers claimed that the mentors over-relied on textbooks. Over-reliance on textbooks could be an indication that some of the mentors were not creative and critical thinkers who could go beyond the book. The study concluded that if some of the mentors were not able to employ critical pedagogy, it meant that they could not mentor the student teachers to be critical thinkers.

One of the themes that emerged from the data suggests that some of the student teachers alleged some mentors to be responsible for pupils' low performance through labelling. The student teachers argued that they could not engage their pupils in philosophical inquiry because they could not participate. By labelling pupils as dull or lazy, they contributed to their loss of confidence. Pupils with low self-esteem do not feel comfortable to participate in class. Critical pedagogy requires learners to be actively involved in the learning process. If mentors label pupils, it suggests that their perception of pupils' learning and capability is somehow wrong and unprofessional. Kivi (2015) rightly points out that "the labelling can lead to reduction of goals and expectations of both the learner and the teacher". Labelling them as dull would imply that their pupils do

not have the potential to do better. The study suggested that if this were true of some of the mentors, then their philosophy of what learning is and the aim of education might be limited in scope.

The findings also revealed that the shortage of resources in schools especially textbooks made a huge negative impact on instruction. Some of the student teachers argued that in the absence of textbooks the telling method was the option. They claimed that it was not easy to conduct lessons in subject areas such as Science in a school where the class had only one textbook. Similar findings came out from a survey carried out by The Chronicle Newspaper in primary schools in Zimbabwe which established that there is a serious shortage of textbooks that has impacted negatively on the teaching and learning process (The Herald, 23 October 2016). While a lack of resources could have affected instruction, it is not justifiable for some of the student teachers to use it as a scapegoat. Instead, the shortage of textbooks would have made learning more interactive because more focus would be on their life experiences. This study findings therefore suggested that student teachers were not creative enough to rise above situations.

The other theme that emerged is that some of the student teachers believed their failure to engage pupils in philosophical inquiry can be explained by the nature of the pupils they teach. They argued that their pupils lacked confidence hence most of them could not dialogue with others. Engagement in philosophical inquiry entails that pupils share their thoughts with other pupils. They create knowledge as a community. A class forms what Fisher (2013:38) refers to as Pierce's community of inquirers. These findings concur with the observation made by Collins (1997), that "class or group discussions are often dominated by a small number of confident not necessarily articulate children". Collins' (1997) observation implies that those who believe in themselves participate in discussions. The researcher feels that the teacher either builds or destroys pupils' confidence. Instead of blaming the nature of the pupils, the student teachers should reflect and see how they can build pupils' confidence. Therefore, this study can conclude that pupils' lack of confidence is an indication of the teachers' failure to build it.

This study points out at the pupils' poor command of the English language as a hindrance to engagement in philosophical inquiry. Poor command of the English

language by both student teachers and the pupils they teach was indicated as a barrier to engagement at college and in schools respectively. Some of the teacher educators indicated that at college, the student teachers are not eloquent in English. Therefore, it is difficult to engage them. Some student teachers indicated that most of the children in some rural schools do not speak English at their homes. Therefore, it is difficult to converse well in English at school. The findings are in line with Pinnock's (2009:3-6) observation as cited by Elsworth (2016) that "children experience higher failure rates in school if the language they learn at school is different from the one spoken at home". This observation implies that when learners face difficulties in expressing themselves, it is difficult for them to develop thinking skills. The researcher feels that in some cases this challenge might be a result of the student teacher's failure to promote oracy in the classroom. Some of the student teachers explained that this challenge is a major setback in their effort to engage pupils. To them, engagement entails sharing ideas which is only possible if pupils are able to verbalise their thoughts.

The research findings suggested that high teacher-pupil ratio is also a barrier to engagement of pupils in philosophical inquiry. Most of the student teachers interviewed indicated that they tried to engage pupils in philosophical inquiry by dividing the class into groups which would be given tasks to discuss. The findings from lesson observations indicated that classes which had about 45 to 50 pupils could have about five groups of nine pupils each or nine groups of five pupils each group. Since engagement in philosophical inquiry entails that the teacher assists in scaffolding pupils through his or her participation as both the teacher as well as participant of the group, it was difficult to play the latter role. Managing many groups was not an easy task for some of the student teachers. Some of the lessons observed indicated that some of the student teachers were not engaging their pupils in what Lipman (2003) referred to as community of inquiry. Having many communities of inquiry in a single class suggested that the student teacher's guidance for each group was not effective enough to promote critical thinking in their pupils. There is a rapidly growing literature on the relationship between class size and performance which indicate the advantages of small class sizes (Mathis, 2016, Whitehurst & Chingos 2016; Bandiera, Larcinese & Rasal, 2010). Large class sizes affect pupils' performance negatively. Engaging pupils in a large class is very challenging. Therefore, this research's findings suggested that when classes are large, the student teachers are unable to manage and tailor their teaching to the pupils' needs.

This study reflects that mentors focus more on covering content in the syllabi's content than developing thinking skills. Where practical subjects were concerned, the findings suggested that the main thrust was on giving information and hands on. Document analysis indicated that in some cases there were little of minds-on in some of the student teachers' instruction. The implication is that, if mentors focus more on covering syllabi than developing thinking skills, it means mentees are expected to do the same. Teaching and learning content as an end in itself is detrimental to pupils' outcome or achievement. Some of the student teachers alleged that some mentors regarded engaging learners as a waste of time. This attitude seemed to suggest that their conception of learning was limited in scope. It means they confined learning to acquisition of information.

The other aspect suggested by the findings is that content to be covered is too much and all content should be covered as a preparation for examinations. If content is covered at the expense of thinking for the sake of the examination, then the findings imply that passing the final examination would not require critical thinking. Then many questions would arise. Why do pupils still fail? Do the examinations really require pupils to recall learned information? Do they really grasp the information delivered? It is important to take into consideration the observation made by Paul (2004:4), who says "when we sacrifice thought to gain coverage, we sacrifice knowledge at the same time". Paul's (2004:4) observation implied that without thinking, it was not easy to grasp the content. In making this comment, Paul argued that knowledge was produced, comprehended, organised, evaluated and maintained by thought. In other words, Paul believed that thought played a very crucial part in the acquisition of knowledge (Paul, 2004:4).

Paul's observation answered the questions raised especially on why some pupils still failed even if the examinations did not necessarily require critical thinking. According to the student teachers' responses, most of the questions asked required pupils to recall information given to them by the teacher. If the aim of teaching pupils was to make them pass the examination by recalling content, then teaching them critical thinking would be deemed unnecessary and a waste of time. In such circumstances, the student teachers claimed that they were obliged to focus on content delivery only. This study's findings

therefore suggested that too much content to be covered, coupled with recall questions hindered engagement of pupils in philosophical inquiry. The teaching was more of examination oriented than skills oriented.

6.2.3 Findings on the NTC Student teachers' competency based challenges

A number of student teachers' competency gaps were identified as challenges to engagement of learners in critical thinking. The lecturers and student teachers themselves were in concurrence that some of the student teachers were not competent enough to engage their pupils in philosophical inquiry. One of the student teacher interviewees said:

"... We are talking of teaching pupils to think critically but most of us student teachers cannot think critically. We do not have those skills ..."

Some of the interviewed teacher educators felt that student teachers who are enrolled for the Diploma in Education Primary course had low levels of thinking, so cannot learn effectively. One of the lecturers noted with concern that:

"In terms of general reflection, when we are presenting lectures, you ask on what transpired yesterday you still find out that students cannot go back to the last lecture ...they are not able to reflect on what went on in a lecture Although we are making efforts, the reflection aspect is not being reciprocated by student teachers."

Some of the teacher educators felt that the teacher education at NTC should enable student teachers to try to use or promote some sort of thinking in their pupils. One of the lectures had this to say:

"... one challenge that is obvious to me is that, they themselves, the student teachers have not mastered the skill of critical thinking. Some of them, it is even doubtful if they know that they are supposed to be engaging in critical thinking."

The analysis of data revealed that some of the student teachers viewed pupils as dull and incapable of thinking. Some of the student teachers indicated that they do not even

try to engage their learners because they believe that their pupils cannot think critically and do not know anything. One of the focus group discussants shared her experience:

"We looked at the background of the pupils and where they come from. We would say what can a child from... think about this, and I am the only one who knows. So I would just tell them what I know."

Another student teacher related that there was a challenge on over-reliance on textbooks. Some teacher educators pointed out that not everything in textbooks promotes critical thinking. One of the teacher educators asserted that:

"...our students tend to use the textbooks as if the textbooks are their 'the all'... they extract questions from the textbook. This means their input is very little."

The reason for over-reliance on textbooks was given as lack of critical thinking skills to interpret the syllabi. One of the teacher educators explained that:

"...they are not creative enough because they are supposed to interpret the syllabus that is where critical thinking should come in. Textbooks are also an interpretation of the syllabus but that is someone else's interpretation, so they use someone else's syllabus interpretation."

The student teachers interviewed raised the challenge of over-relying on textbooks. They acknowledged this challenge but remarked this as the reason for the practice:

"Mentors forced us to teach the way they wanted which did not promote critical thinking."

They claimed that mentors over-relied on textbooks so they were compelled to do likewise.

The other reason given by some lecturers for the student teachers' incompetency was that they were a product of a type of education which did not emphasise on the importance of critical thinking. One of the teacher educators pointed out that:

“... Most of our students have passed through a system where they would be required to regurgitate information.”

Another teacher educator viewed student teacher incompetence because of defective primary and secondary education. The teacher educator pointed out that their primary and secondary education focused more on remembering and their thinking skills were not developed.

“I can trace the problem from primary and secondary education ... which is more of recalling.”

Findings from document analysis indicated that the challenges in engaging pupils in philosophical inquiry originated from the way they planned their lessons. Some of the student teachers were setting lower order objectives which did not require critical thinking. Most of the lesson objectives required pupils to remember what they knew or to recall what they had just learned. The following are examples of the lesson objectives for a lesson in Social Studies for a Grade 6 class. The syllabus topic was food and the lesson topic was energy requirements:

“By the end of the lesson pupils should be able to:-

- State at least three deficiency diseases;*
- State at least five causes of malnutrition; and*
- Answer at least six questions on food requirements.”*

The above observation was also pointed out by a teacher educator who said:

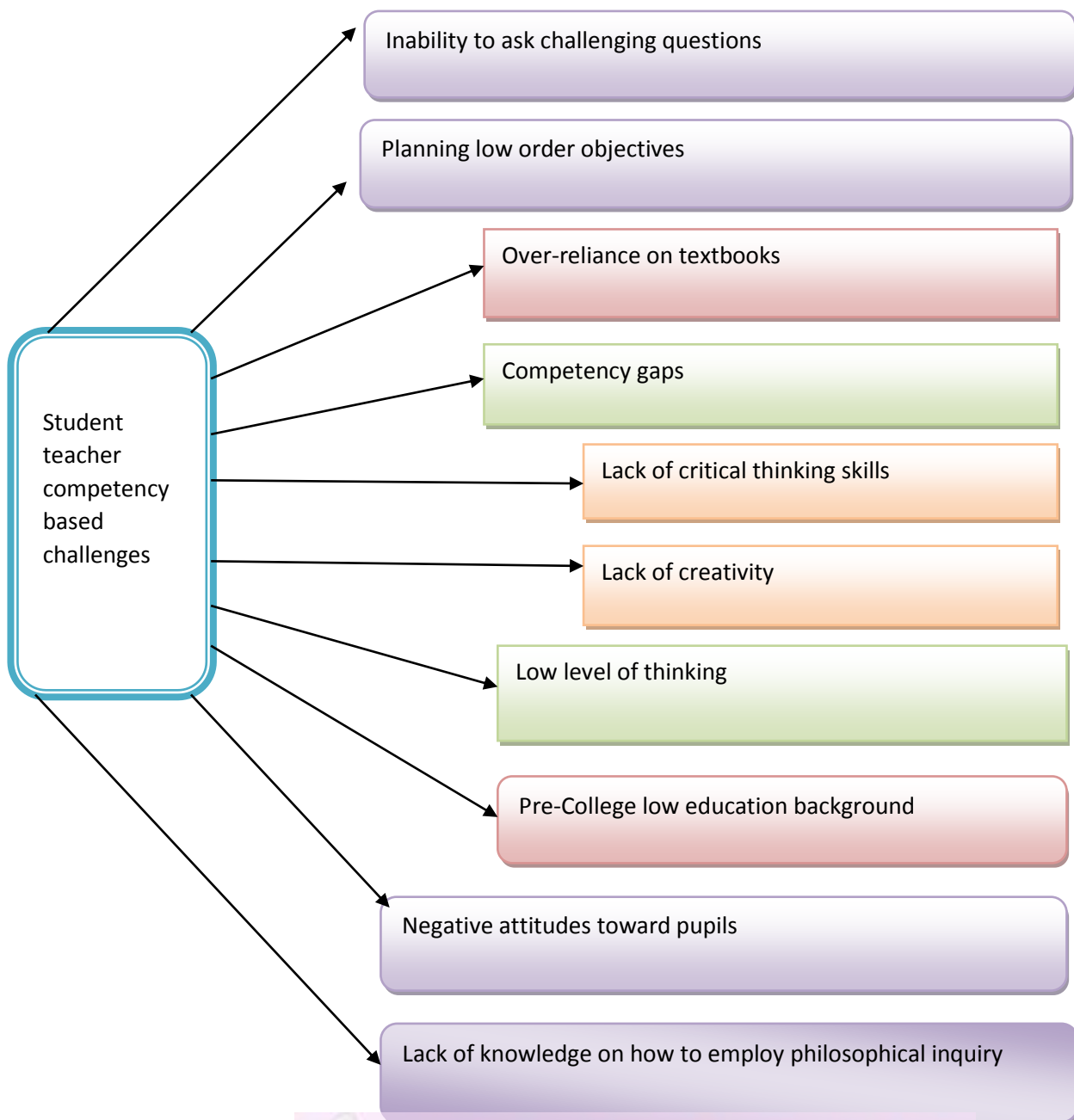
“They give low order objectives which naturally require low order thinking.”

The TP documents indicated that, the NTC student teachers were not aware of how to engage their pupils in philosophical inquiry. The learning activities reflected did not require philosophical answers or discussions. Although they claimed that they were engaging the pupils in philosophical inquiry, their guiding documents suggested

otherwise. However, a few indicated that they did not know how to engage pupils in philosophical inquiry.

Figure 6.3 below gives a summary of the findings on the student teachers' competency based challenges.

Figure 6.3 Summary of the findings on the student teachers' competency based challenges



6.2.3.1 Discussion on the NTC Student teachers' competency based challenges

This research's findings revealed that failure by some of the NTC student teachers to engage their learners in philosophical inquiry cannot be explained by teacher education and school based challenges only. A number of responses indicated that the student teachers themselves have competence gaps. In order for them to engage their learners in philosophical inquiry, a number of competencies are a pre-requisite. This study's findings revealed that student teachers' existing competencies seemed not to match tasks they were expected to perform.

The findings indicated that some of the student teachers lacked syllabus interpretation skills. Their claim that they were not able to scheme suggest that they had not developed the skills to interpret syllabi. Through syllabus interpretation, they could be able to determine content to be covered. The teacher educators felt that instead of interpreting syllabi, their student teachers over-relied on textbooks. Some lecturers indicated that textbooks should be understood as the writer's perspective of the syllabus. It is important to consider Pautler's (2016) observation that an over-reliance on textbooks makes the textbook the expert and not the student teacher. Pautler's (2016) observation implies that over-reliance on textbooks relegates the student teacher to a passive role. If the student teacher reduces himself or herself in importance, then classroom instruction will be determined by what the author views to be important. The researcher feels that the problem with over-reliance on textbooks is that, what was the essence of learning when the textbook was written might not necessarily be relevant now.

The other problem of over-relying on textbooks is that they do not take into consideration the learners' actual background knowledge. Murris (2012) noted that "texts usually express particular ideologies, moral values and epistemological assumptions". Over-reliance on the textbooks means that the teacher is not tailoring his/her instruction to the specific needs and interests of pupils. Instruction based on textbooks may not address the real life challenges of the day. This study's findings suggested that although textbooks have a place in teaching and learning, over-reliance on them does not only compromise student teachers' competence but also the quality of education. Similar results have also been found from a study carried out by Freeman and Porter (2015) in 1989. One of their findings was that textbooks are limited in how they can direct

teachers' activities. This means that for effective instruction, the student teachers should go beyond the scope of textbooks.

Data analysis indicated that some of the student teachers did not engage themselves in critical and creative thinking. The findings from document analysis and lesson observations led the researcher to note that some of the student teachers were not able to promote inquiry based learning because they were setting low order objectives. This seems to be evidence that these student teachers were not engaging themselves in critical and creative thinking. The fact that they planned low order objectives which required pupils to grasp knowledge as an end implies that their own thinking was limited to the first and second level of Bloom's taxonomy, knowledge and comprehension respectively. It is important to consider how some scholars elaborated the link between planning and teaching and learning. They pointed out that if teaching is to enhance thinking skills in pupils, then instruction must be planned, organised, and conducted in the same manner (Stiggins, Rubel & Quellmaiz (1988) in Owu Ewie, 2009). This implies that if student teachers planned higher order objectives, then the classroom instruction would promote higher order thinking. In the context of these findings, it can be concluded that critical thinking skills are lacking in student teachers at the planning stage thus the reason why they focus on low-level objectives instead of including both low and higher order objectives.

This study also revealed that closely related to setting low-level objectives is the student teacher's poor questioning technique. Most of the student teachers' documents such as lesson plans, test records and pupils' books revealed that some of the student teachers were not able to set or ask thought provoking questions. Most of the questions they set did not challenge pupils' minds to go beyond knowledge and comprehension levels. Some of the student teachers argued that if pupils are given higher order questions, they would not participate. These student teachers' thinking seemed to be based on the assumption that learning takes place when pupils are saying something. While they seemed to be correct, their thinking failed to recognise that learning was more than repeating what the teacher or the book said. This suggests that some of the student teachers do not ask thought provoking questions which engage their pupils in philosophical inquiry because they also do not go beyond comprehension of facts in their practice.

The researcher felt that the comprehension of facts should lead to manipulation of facts through connecting them to other facts, categorising them, inferring and applying them in problem solving. Engaging pupils in philosophical inquiry entails engaging them in questioning analysis, examining and solving problems. Logically, pupils cannot develop skills of questioning when their teacher cannot pose thought provoking questions and cannot question his or her beliefs. The study findings seemed to suggest that some of the student teachers were failing to engage their pupils in philosophical inquiry because their questions could challenge the minds of their pupils to go beyond the given.

One of the themes that emerged from the data indicated that some of the student teachers have negative attitude towards pupils' learning ability. They looked down upon their pupils' ability to think so they assumed that the pupils had challenges in critical thinking. Based on the lessons observed, the researcher felt the student teacher had challenges in engaging pupils in philosophical inquiry to promote critical thinking. Some of the student teachers expected their pupils to be at a certain level. They seemed not to realise that a competent teacher is supposed to understand where pupils are. They should scaffold pupils from where they are to the level they want them to be.

The teacher's attitude on the pupils' ability affect positively or negatively pupils' performance. Similar findings have also been found from a study conducted by Ulug, Ozden and Eryilmaz (2011:742) on 'the effects of teachers' attitude on students' personality and performance'. Their study indicated that the teacher's positive attitudes have positive effects on student's personality and performance development. The same applies to negative attitudes. This goes on to show that the pupils' performance is determined by many factors, chief among them is the teacher's attitude which can build or destroy pupils' confidence. This study therefore concludes that some student teachers' negative attitude towards pupils is not evidence of pupils' inability to think but rather student teachers' inability to tap on the pupils' existing competencies.

6.2.3.2 Summary

The findings reflected a number of the NTC student teachers' challenges or factors that hinder the engagement of pupils in philosophical inquiry. Major themes that emerged

from analysis of data fall into three categories, which are teacher education related, school based and lastly student teacher competency. The study has established that chief among them is the absence of critical pedagogy in the NTC teacher education before TP.

6.3 Findings on feasible ways of overcoming the challenges and promoting engagement of pupils in philosophical inquiry

One of the main thrusts of this study was to find ways of overcoming the challenges faced by the NTC student teachers in engaging pupils in philosophical inquiry. The analysis of data indicates that there are many feasible solutions as there are challenges.

6.3.1 Findings on the ways of overcoming challenges and promoting philosophical inquiry in teacher education

One of the solutions given had to do with teacher education curriculum and the training process. There was a general feeling that the teacher education curriculum for primary school teachers is over-loaded and time is not adequate. A solution suggested for this challenge was the removal of unnecessary subjects. One of the lecturers said:

“...The curriculum at tertiary level must also be weaned of unnecessary subjects so that we have enough time for the learners to engage in critical thinking, discussions, explorations and debates.”

Most of the subjects that the student teachers learn at college are the ones they teach in schools. Some of the lecturers felt that the subjects that are referred to as Main Subjects whose content have nothing to do with teaching at primary school level, can be done after one has finished his or her teacher training course. One of the lecturers had this to say:

“Main subjects are for self-enrichment which can be done at any time by the student, but our time-table seems to have those areas with more time than those areas the student has to teach.”

Both student teachers and lecturers felt the same for the primary school curriculum. They felt that some of the subjects should be merged. They recommended:

“Some of the subjects can be merged so that the teacher has enough time to involve pupils in critical thinking (student teacher).”

“I want to think there are some subjects that would merge. If we look at SS and ES, there are a lot of topics which are related. You find there is a topic Health in SS and also... in ES. Of course the topic in ES is talking of health of the environment but still if we look at SS topic Health it involves the people and the community which is the environment.”

It was a general feeling that the 3-3-3 model can afford the student teachers adequate time to learn before they go for teaching practice than the 2-5-2 model. They were worried about the time student teachers spend at College for TP preparation. One of the lecturers said:

“I did 3-3-3 programme, I can say it was better because we had more time to do things.”

One focus group discussant indicated that:

“If time is increased, students will go out for TP better equipped.”

The other feasible solution suggested by data analysis was the employment of critical pedagogy in teacher education. It has been evidenced by the interviewees' responses that in most cases teacher educators do not engage the student teachers in philosophical inquiry. Both lecturers and student teachers emphasised the need for lecturers to use the approach they expect their student teachers to employ. The following are some of the feasible solutions suggested by lecturers:

“...we really need to try by all means to equip teachers with these philosophical skills so that when they go to primary the schools system he or she can develop philosophical thinking in our children.”

“Our students need to be equipped with this idea of being creative, they come up with their own questions instead of taking those from the textbook.”

“... Our teaching methods here should also reflect critical thinking especially the way we teach... It should start with us lecturers here. We should adopt methods that help our students to think critically.”

Some lecturers underscored the need to have small classes or groups for effective group discussions. Seminars were suggested as another way of promoting critical thinking in student teachers. During seminars, the teacher educators expected the student teachers to present on a topic to a group of students under the guidance of a lecturer. Some of the lecturers indicated that during seminars, student teachers engaged in discussions, critiqued the presentation, raised questions and discussed them. One of the teacher educators had this to say:

“One solution is to have seminars with students and leave mass lectures. Seminars and small group discussions ... will help to improve on the issue of critical thinking ...”

It was indicated that in TOE, seminars are done after teaching practice during the last two terms of the course. These are done as part of assessment. Some of the teacher educators from TOE department pointed out that the seminars are starting very late and it was not enough for the student teachers to develop critical thinking skills. One of the lecturers in the department stressed that:

“... seminars should not be seminars for assignment presentation only but should be a continuous process even starting from the first year.”

The same sentiments were also underscored by a student teacher when he suggested that:

“I think seminars in TOE should start before going for TP.”

These sentiments were substantiated by some of the focus group discussants who had been doing seminars. They indicated that they were now better informed on philosophical inquiry as a critical pedagogical approach than they were before teaching practice, hence one of the student teachers reverberated that:

“The programme had no much information on critical thinking. We were just writing notes. Some of the strategies we are learning them now after the practice.”

Conducting seminars and engaging the student teachers in philosophical inquiry were seen as feasible solutions to the challenges of teaching pupils to think critically. However, the student teachers felt that employment of critical pedagogy in teacher education could only be effective if the teacher educators possessed philosophical skills and were able to think critically. They suggested staff development workshops on philosophical skills and critical pedagogy for lecturers. One of the student teacher interviewees drew attention to this when she said:

“If students are to be well equipped to be able to teach critical thinking, lecturers should have workshops on critical thinking. Some subjects are just taught to finish the content without focusing on critical thinking.”

The student teachers also felt that they should practice teaching under the guidance of lecturers before they are deployed in schools for teaching practice. They believed that peer teaching would enable the teacher educators to assess the student teachers' performance or skills. One of the focus group discussants emphasised that

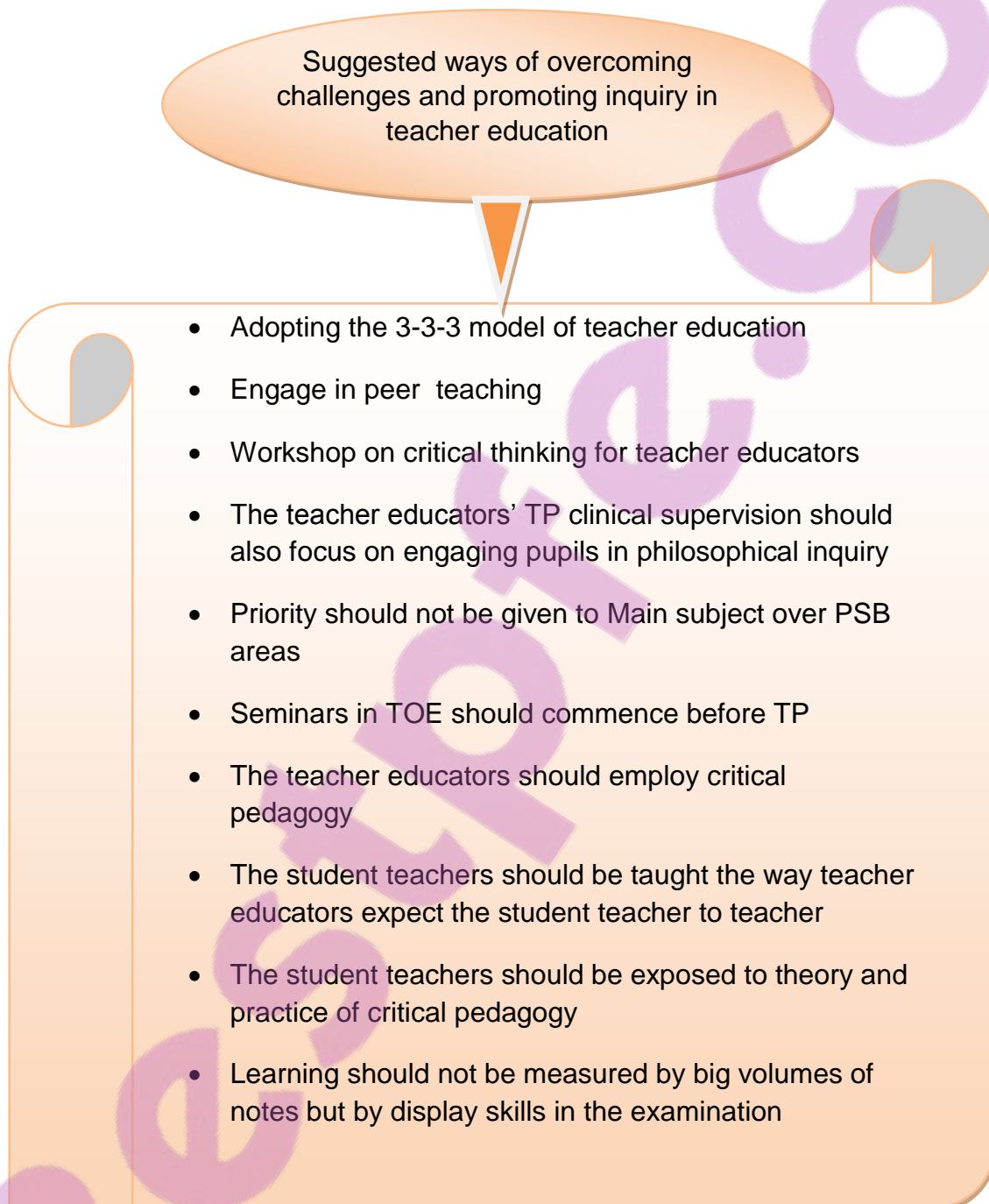
“We should have peer teaching before we go for TP, so that lecturers can see where we are lacking and we improve ourselves.”

The student teachers on teaching practice appreciated the role of supervision during TP in enhancing their development of skills and professional growth. However, they felt that clinical supervision by lecturers should focus more on the actual teaching than documents. One of the focus group discussants had this to say

“We concentrate more on documents than developing skills... Focus should be on how students are delivering their lessons rather than their record books. Let the students practice what they were taught rather than being secretaries.”

Figure 6.4 below gives a summary of the suggested ways of overcoming challenges in teacher education.

Figure 6.4 Summary of the suggested ways of overcoming challenges and promoting philosophical inquiry in teacher education



6.3.1.1 Discussion on the ways of overcoming challenges and promoting philosophical inquiry in teacher education

The findings from both the teacher educators and student teachers seemed to indicate that the Ministry of Higher and Tertiary Education, Science and Technology Development in Zimbabwe should adopt the 3-3-3 model for teacher education. They felt that this model could afford teacher educators adequate time to engage student teachers in philosophical inquiry as compared to the current 2-5-2 model. The lecturers seemed to be certain that they could empower their student teachers if they employed the teaching approaches they expected their student teachers to employ.

This study also revealed that the removal of unnecessary subjects would enable them to have time to engage student teachers in philosophical inquiry. However, they were not very clear as to which subjects are not necessary. A close look at the subjects that are on their timetable can reveal that all subjects that are taught have a bearing on teaching except for main subjects. A main subject is a subject that is studied in depth for personal enrichment. Some of the teacher educators were of the opinion that main subjects should not be done at pre-service level. The essence of their argument was that main subjects could be studied later after one has finished the pre-service teacher education programme. The researcher felt that what could also be done was to relook at the amount of content in each subject. Instead of giving the student teachers many topics, it would help to cover few topics and equip them with skills which could enable them to study any topic on their own. This would lead to skills based learning than content-based learning. The study findings suggested that with few subjects on the timetable, the student teachers could be engaged in philosophical inquiry.

This research's findings indicated a reduction in class size as a feasible solution. The findings seemed to suggest that student teacher classes should be reduced to small class sizes of about fifty or less rather than class sizes of two hundred and fifty to three hundred student teachers. Their reasons for this proposal seemed to be premised on the idea that a small class is manageable and easier to engage as compared to a class of about 300 student teachers. Some of the teacher educators pointed out that the student teachers participated more in smaller classes. Similar findings have also been revealed by a survey carried out by School Improvement Network (SIN) in Salt Lake City in Utah in 2012. The study indicated that 62% of teacher educators strongly agreed that class

size has a direct bearing on student achievement (SIN, 2016). According to SIN (2016), most of the teacher educators interviewed believed that reduction of class sizes would enable them to engage their student teachers in community of inquiry to create knowledge. It is important to view their position from the perspective of collaboration. Their assumption is that the process of inquiry and critical thinking would be organised and beneficial to the student teachers if dealing with smaller groups than when dealing with larger groups.

The researcher is of the opinion that in a 'give and take' dialogue, positive self-esteem would be developed. This thinking is in line with the observation made by Kennedy (2016) that "in a small class, those facing challenges can be identified easily, encouraged to express their points of view and to defend their beliefs which develops their self-confidence". Kennedy seems to imply that even slow learners benefit from small class sizes. However, an exploration of the hard data from the Student Teacher Achievement Ratio (STAR) project by Konstantopoulos (2008) on the correlation between small class size and reduction of the achievement gap, indicates "that higher achievers benefit more than low achievers from small classes". It is important to take into consideration the fact that the same study indicates that "low achievers from smaller class sizes performed better than low achievers from larger classes", (Konstantopoulos, 2008). This goes on to indicate that even though the achievement gap was not reduced, both fast and slow learners benefited.

Another feasible solution suggested by student teachers was to have workshops on critical thinking and its teaching. The assumption seemed to be that, if lecturers are aware of teaching strategies for critical and creative thinking, then their lectures would be characterised by critical pedagogy discourse. Some of the student teachers felt that critical pedagogy should start with teacher educators. The thinking is in line with the suggestion made by Crookes and Lehner (1998) that, teacher educators should use techniques and principles that they hope their student teachers will use. The researcher believes that empowering teacher educators with critical thinking skills and its teaching will in turn transform the production of knowledge in the learning process. If teacher educators are empowered they will not only teach about critical thinking but will practice it in their lectures. The view the researcher is putting forward here is largely in agreement with that of Freire (2014). In his work entitled: '*Pedagogy of Commitment*' he

emphasizes the need to congruent pedagogical theories and practice dialectically (Freire, 2014:97). In light of Freire's (2014:97) contribution, teacher education should not focus only on critical pedagogical theories. Instead, these should be viewed as informing practice.

Good ideas lead to good practices and good practices can improve ideas. In the same work, Freire (2014: 97) insists that "there is no theory that does not need to be proved practically and it is the practice that informs whether a theory is correct or not". The essence of Freire's (2014) argument is that true knowledge is when theory or ideas are verified through practice. His pragmatic approach to learning is very relevant and can transform teacher education for the better. Some of the student teachers pointed out that if they had observed their teacher educators engaging them in philosophical inquiry, then they would have been motivated to employ the same approach. The student teachers' point was that critical pedagogy should not exist in teacher education as a theory only. They believed that more focus should be on how student teachers may actually do or practice it. Application of critical pedagogy in the learning room will go a long way in the promotion of critical classroom practice. This study concludes that it is necessary for teacher educators to be equipped with skills for critical pedagogy if their student teachers are to become effective teachers who engage in critical praxis.

This research's findings suggested that peer-teaching should be conducted before the student teachers are deployed for teaching practice. Peer teaching is an educational strategy which enables learners to assist each other. Some of the student teachers viewed peer-teaching in the context of putting into practice the pedagogical theories they would have learned. They felt that skills such as planning, questioning and engaging learners in philosophical inquiry could be perfected by teaching peers. This seems to be premised on the fact that there is immediate feedback on how lessons are taught. It enables all student teachers involved to reflect as they are required to discuss the lesson taught. This means that the peer teacher and peer learners would be actively involved in the course of constructing pedagogical knowledge. The solution suggested by the findings agrees with the view of Fines (2008), who considers collaborative learning as a significant approach since it helps students to empower themselves. This implies that the student teachers can gain important skills through teaching peers and reflecting on the lesson as a group. The aspect being raised by the findings is that the

teacher education programme should give the student teachers opportunities to put into practice pedagogical theories as preparation for TP.

Most of the focus group discussants suggested that seminars in TOE should commence before they go for TP. Their argument was that with a smaller number of students involved in a seminar, the expectation is that they take an active part sharing ideas with others. They also believed that through seminars they could develop critical thinking skills as they are obliged to justify their views, to interrogate issues, question other student teachers' thinking as well as understanding issues from their perspectives. Plymouth University (2011) highlights on the importance of seminars that they provide an opportunity for student teachers to develop a number of skills such as listening to different perspectives, expressing opinions and assumptions upon which they are based and arguing logically. The teacher educators felt that seminars could go a long way in developing philosophical skills in the student teachers as they are expected to examine their individual beliefs and assumptions on issues being discussed. This study therefore concludes that seminars should not only be done after TP as a way or approach for covering content only but also as a way of developing skills in the student teachers for their own engagement in critical thinking.

This research's findings indicate that some of the student teachers proposed that teacher educators' TP supervision should focus more on the actual teaching than on documents. The essence of their proposal was that one could have quality documents which might not be a reflection of what is actually taking place in the classroom. While their argument seems to be valid, it does not necessarily follow that all student teachers with well-written documents are not good in the actual teaching. A close analysis of the issue seems to suggest that some of the student teachers appear to be unaware of the importance of the documents they write. Yet a sober analysis of the matter reveals that these student teachers are both right and wrong. They appear to be right in the sense that some of the student teachers concentrate more on updating documents at the expense of engaging learners. They also seem to be wrong in the sense that well written documents might actually reflect effective instruction. The researcher feels that some of the student teachers do not seem to understand or appreciate the value of TP documents in guiding them in planning and instructional process. The records enable the student teacher to understand the learner's needs and to individualize instruction.

The findings from the study therefore, offer some important insight that some student teachers have knowledge gaps on the value and connection of TP documents and instructional processes. This being the case, there is a need to educate the student teachers on the importance of TP documents and how to balance time on actual teaching and writing documents.

This study revealed that some of the teacher educators felt that the student teachers should not be required to produce big volumes of notes whether lecture or research notes as evidence of learning. This proposal was based on the thinking that removing this requirement would increase time for student engagement. Their argument was that writing lecture notes and research notes is not a problem on its own. However, requiring a certain volume is the problem. The researcher is in agreement with these findings in that, while it is important that student teachers attend lectures and write notes, requiring them to produce certain amounts of notes is not evidence enough that learning took place.

The teacher educators' argument was that if colleges are to produce critical teachers, then assessment should be skills-based rather than content based. Common sense seems to dictate that a student can produce a big volume of notes without having necessarily developed any skill or attended any lecture. The findings also indicated that because of this requirement, some of the teacher educators focused more on dictating notes instead of engaging learners to develop critical thinking skills. The researcher feels that a good examination can test whether learning took place or not. The overall picture that is coming out from this aspect of assessment is that there is a need for a paradigm shift where assessment should be skills based than content based.

6.3.2 Findings on the ways of overcoming challenges and promoting inquiry in NTC practicing schools

Mentors play a significant role in the professional development of student teachers. Smith (2011) described them "as skilled performers who can be observed, consulted and their actions copied". The student teachers on campus and those on TP indicated that as far as engaging learners in critical thinking is concerned, their mentors were not role models. They stressed the need for in-service mentors in schools on philosophical

inquiry. This suggestion was underpinned by the fact that some of the mentors were not contributing to the student teacher's development of skills in critical pedagogy. One of the student teachers suggested that:

"Those mentors need to be staff developed especially on teaching methods. They use the same methods over and over again."

It was also suggested that the mentors should be supervised by heads of schools. One of the student teacher participants explained that:

"I think there should be strong supervision of these curriculum implementers so that they can be supervised on whether they are using these methods."

Other student teachers felt that even the supervisors who happen to be heads of schools, should be equipped with skills on engaging learners in philosophical inquiry. A student teacher interviewee proposed that:

"The heads also need to be equipped with philosophical skills so that they will be able to supervise."

The importance of teaching practical subjects in schools needs not to be over-emphasised. Focus group discussants and some lecturers agreed that the teaching of practical subjects could improve pupils' critical thinking and problem solving skills. They had this to say:

"The examinations should include practical subjects."

"Practical subjects teach pupils to think critically, when they think on how to solve problems."

"We need practical subjects to have enough time. We have a lot of people who are educated who are roaming the streets. They do not think how to help themselves. They were not taught to think, they were taught to summarise content so that they become successful academically. Hands-on subjects should be given enough time."

“I think subjects should be treated equally important. Examinations should include subjects like Art and Craft... they help them to develop critical thinking in the learners. They must be examined.”

The reduction of teacher-pupil ratio was cited by the student teachers as one of the feasible solutions to the challenge of managing large classes when engaging learners in philosophical inquiry. One interviewee highlighted this when she said:

“... I think the problem of teacher-pupil ratio sometimes the class has up to 40 pupils. If teacher-pupil ratio could be reduced it could be easy to engage learners and you will be able to identify pupils who are able to think and those who are facing challenges.”

Some of the student teachers on teaching practice emphasised the role of examinations in influencing what is to be taught and how. They made it clear that if examinations require critical thinking, this would translate to the use of critical pedagogy by curriculum implementers. The Zimbabwe School Examination Council's (ZIMSEC) examinations were believed to be promoting rote learning in schools hence some of the focus group discussants proposed restructuring of examination questions when they said:

“I think there is also need for ZIMSEC to consider restructuring the way they ask questions... in their examinations there are a lot of recall questions than questions that require pupils to think critically. In as much as they continue to give pupils such examinations, teachers out there will continue training pupils to recall rather than to critically think. If ZIMSEC restructure the way questions are to be answered, it will give teachers the motive to engage pupils in critical thinking because they will know that if a pupil cannot critically think they will fail the examination.”

In line with this proposition was the suggestion that:

“Those who set examinations should also be equipped with critical thinking skills...”

The assumption behind this proposition was that those who set the examinations lack critical thinking skills.

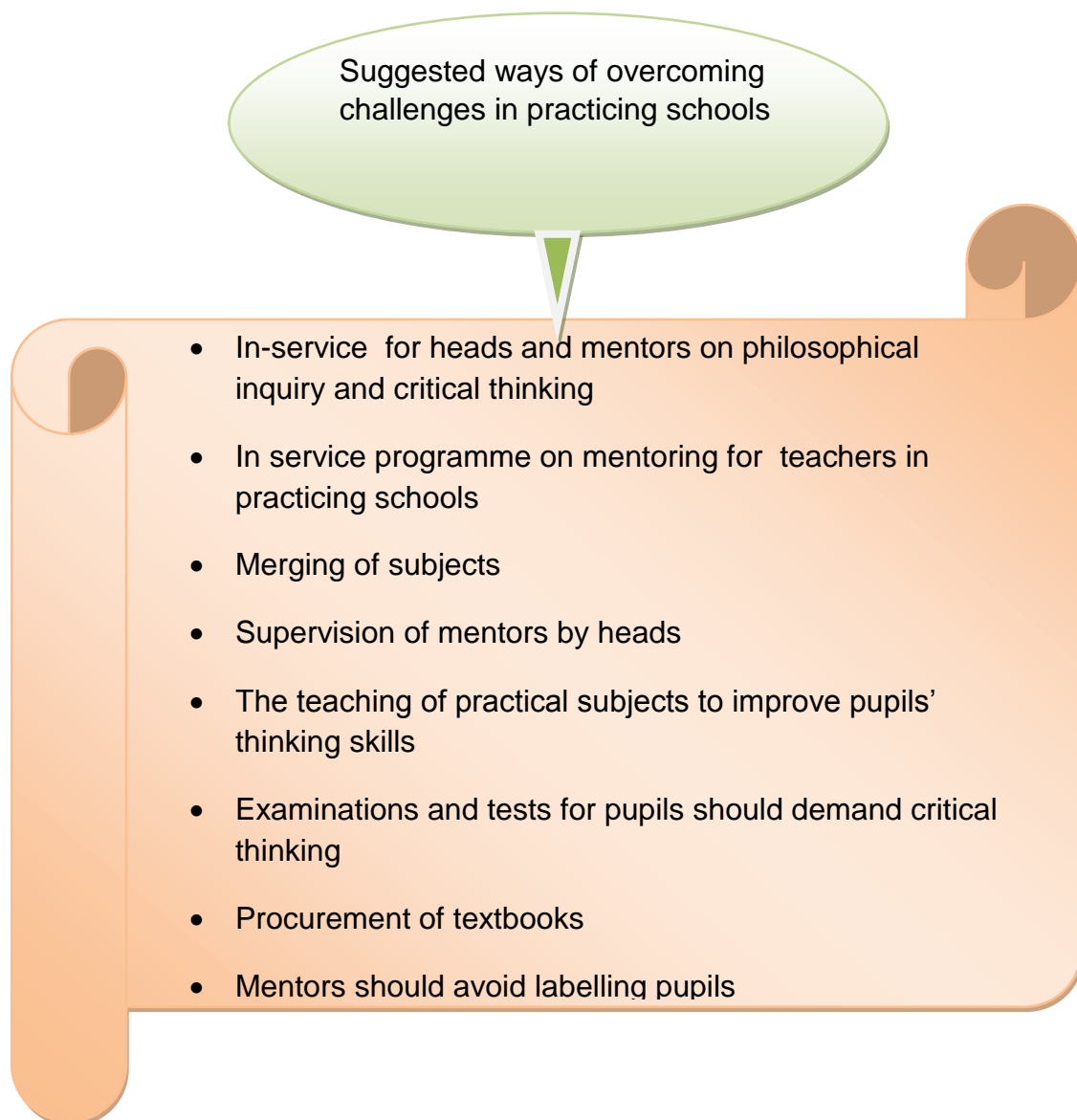
The shortage of resources such as textbooks was presented as a major challenge in promoting critical thinking in pupils. This challenge compelled some of the student teachers especially those who were deployed in rural areas to resort to the telling method. Student teachers on teaching practice recommended that the schools should procure more textbooks so that it becomes feasible to engage pupils during learning.

One's attitude towards an individual determines how that individual is treated. It was emphasised that the mentors and student teachers' attitude towards pupils should be positive. One of the lecturers shared his experience:

“Most of the time that I have engaged students they think pupils do not know anything.”

Figure 6.5 on page 189 is a summary of the suggested ways of overcoming challenges and promoting inquiry in NTC practicing schools.

Figure 6.5 Summary of the suggested ways of overcoming challenges and promoting inquiry in NTC practicing schools



6.3.2.1 Discussion on the ways of overcoming the challenges and promoting inquiry in NTC practicing schools

The findings suggested the reduction of teacher-pupil ratio as one of the feasible solutions towards establishing a conducive classroom environment. Most of the student teachers felt that if classes are reduced to less than 30 pupils, it would be easier to conduct a critical dialogue with the pupils. They believed that with smaller classes, the effort would be directed towards the development of skills than acquisition of content. Their argument was that large classes tend to pose more disciplinary problems than small class sizes, where most of the time the teacher is maintaining discipline by being a

dictator. Research indicated that reducing class sizes reduces disciplinary problems and increases opportunities for more interactive learning situations which benefit the struggling learners.

Some of the student teachers emphasized the need for individualised instruction which is possible and effective when the class size is smaller. The one size fits all concept does not take into cognisance that there are individual differences amongst the learners. A number of studies indicate that learners' performance improved where classes were reduced (Bascia, 2010; Monks & Schmidt, 2010; Zyngier, 2014; Gagne & Lenard 2012). This implies that reduction of class sizes is a step towards the engagement of learners. This study noted that the student teachers were of the idea that if class sizes are reduced to less than thirty pupils each, they would be able to employ critical inquiry as their pedagogical praxis. The reduction of class sizes is viewed by Pitsoe (2013:317) as a measure of improving the working conditions of teachers. The improvement of conditions can translate to provision of quality teaching. In the same manner, the reduction of class sizes can also improve the student teachers' practice and pupils can also benefit.

One of the themes which emerged as a feasible solution was the need for mentors to be in-serviced on engaging pupils in philosophical inquiry. The findings appear to suggest that the credibility of some teachers to provide mentoring services is questionable. The findings suggest that some of the mentors rely on student teachers on scheming instead of the opposite. Some of the student teachers felt that the mentors need to grow professionally. The proposal being espoused is similar to that of Khan (2015), who asserts that in-service education is very critical for the professional growth of the educators. In making this comment, Khan (2015) argues that the teacher needs to refresh his or her knowledge, develop a wider outlook, and be in touch with challenges, trends, methods and techniques in education. This means that an effective teacher is the one who continues to learn.

Some of the student teachers felt that mentoring could impact positively on student teachers if effective approaches are employed. Their argument was that their mentors are not effective classroom practitioners, talk less of mentoring. The researcher feels

that the assumption by some heads of schools that every trained teacher is capable of mentoring is not valid. The process of mentoring demands more skills and knowledge than mere teaching. This study revealed that not all schools were able to place the student teachers with good teachers with relevant skills for effective mentoring. The other reason for the need for mentors to go for in-service education is their misconception of what is involved in mentoring. Some of the student teachers alleged that some of the mentors think that mentoring is giving a student a chance to teach. Some of the student teachers believed that if mentors are in-serviced, they would become competent in setting performance standards for student teachers, providing feedback of the mentee's performance and coming up with feasible strategies for improvement.

This study revealed that the student teachers suggested the provision of opportunities for in-service education to school supervisory as a feasible solution to engagement of pupils in schools. The reason for this suggestion was that the head supervises the teachers' instructional process, so they should be well-versed with pedagogy, especially engaging learners in philosophical inquiry. The supervisors, head, deputy head and Teacher-in-Charge are instrumental in the development of the teachers' skills, so they should stay abreast of current trends in education. Kochhar (2011:65) underscores the criticality of the supervisory role in professional growth of subordinates when he points out that the availability of expert advice, helps teachers to grow in their practice and become self-directive. In making this point, Kochhar (2011:65) argues that a supervisor provides an "opportunity for self-evaluation, reflection and development. This implies that if supervisors are aware of how to engage learners in critical inquiry, the teachers would be expected to employ critical pedagogy. The student teachers believed that if supervisors are in-serviced, they would not focus more on the amount of written work at the expense of acquiring skills. This study's findings suggested in-service programmes on supervisors to remove knowledge gaps for effective supervision.

Frequent supervision of mentors was also considered as a feasible solution to the effectiveness of mentors. Some student teachers felt that mentors should be supervised regularly to ensure that their competency in subject matter instruction and assessment match expected standards. They believed that lack of instructional and mentoring competencies was due to little or no supervision. This implies that these teachers are

not self-motivated. The researcher feels that if mentors need close supervision in order to perform their duties effectively, then they are not dedicated and competent teachers and are not good role models to the student teachers. Competent teachers or mentors should be able to engage in accurate and honest self-evaluation and reflection of their instructional, assessment and professional competencies. In this regard, the findings can mean that such teachers do not only need close supervision but also need to understand professional ethics and change in their professional attitudes.

The teacher educators and the student teachers proposed the teaching of practical subjects to promote the development of problem solving skills in pupils. Most of the student teachers alleged that mentors were not teaching practical subjects because they are not examined at the end of primary school education. Their reason for their proposal was that by nature, practical activities enhance the development of creative skills, critical thinking, innovation, analysis, problem solving and decision-making. Some of the focus group discussants indicated that in Physical Education, pupils could play chess, a game which poses problems. This game requires an opponent to analyse and make a decision on what piece to move and why. The researcher feels that the importance of learning is not only measured by the presence of an examination, but by the learning outcomes. In agreement with the findings is Singh (2014) who emphasises the importance of practical education to students. In making this emphasis, Singh (2014) argues that learning theory is not really important unless it is followed by application in real life. In light of the findings and Singh's comment, it is clear that the teaching of practical subjects can promote the development of important skills as they marry theory and practice and deal with real life situations.

This study noted from the participants' responses that informative and summative assessments at primary school level in some of the NTC practicing schools do not test critical thinking. Most of the focus group discussants suggested a paradigm shift on the focus of the primary school tests and examinations. They felt that their mentors' instruction was examination oriented. Pupils need to acquire more information in order to pass tests or examinations. Their proposal was based on the assumption that if examinations are to require critical thinking skills for one to pass, automatically mentors would be compelled to teach critical thinking skills. This would have a bearing on what pedagogy mentors would expect their mentees to employ. In most cases, learning

outcomes of the courses are tailor-made to suit the demands of the examination or tests. Good questions promote higher order thinking and student centred pedagogy (Berkely Graduate Student Instructor, 2016). In other words, the findings are suggesting a relationship between the nature of the examination questions and the nature of instructional process.

It is important to take into consideration the acknowledgement made by Letseka and Pitsoe (2013:204) that assessment should upgrade the standard of teaching and learning. Some of the student teachers' arguments seem to be that while it is important to test comprehension of content, it is invaluable to test skills such as critical thinking. The essence of the argument seems to be that, in this ever-changing world, the information one has today might be rendered useless in the future. The situations learned at school may not be the same or similar situations one may encounter in life. Critical thinking skills can be applied in any situation. The findings, therefore, indicate that teacher educators and student teachers were very positive that a paradigm shift in demands of tests and examinations towards critical thinking would not only ensure inquiry based instruction but development of invaluable skills as well.

The issue of resources is a critical issue in education for socio-economic development. Some of the student teachers suggested the removal of resource barriers through procurement of textbooks. The researcher observed that some schools had one textbook per class in subjects such as Environmental Science and Social Studies. There are a number of studies on the correlation of availability of resources and learner achievement in teaching and learning (Afana, Liets & Tobin, 2013; Yara & Otieno, 2010; Nascimento, 2008). The main finding of the studies was that the provision of adequate resources had a positive influence on the teaching and learning process. Textbooks play an important role in teaching and learning. The teacher can use information in the textbooks as a springboard for engaging pupils in philosophical inquiry. The student teachers indicated that pupils could be asked to critique, analyse, evaluate and reflect on information provided in the textbooks. They felt that textbooks are good stimuli for pupils to think critically. However, it is important to note that mere possession of textbooks does not guarantee pupil engagement and effective learning. It takes a creative and innovative student teacher to make a textbook an important tool in the

instructional process. From the foregoing, it is clear that schools should make an effort to invest in education by procuring more textbooks.

6.3.3 Findings on the ways of overcoming the NTC student teachers' competency challenges

Some of the student teachers confessed that they had a misconception about pupils' ability and level of knowledge. Both teacher educators and student teachers emphasised that mentors and student teachers should not take pupils for granted. They are not empty vessels. Interviewees recommended that mentors and the student teachers should take advantage of the pupils' knowledge or potential and engage them in critical thinking. One of the lecturers had this to say:

"If we were to treat them as part of the learning community and the teacher as part of the community, then the problems we want to learn about could be community owned."

The data indicated that some of the lecturers and student teachers saw the idea of requiring students to write a big volume of notes which are considered as an assessment item by the University of Zimbabwe as a waste of time. That was cited as another source of pressure on students. There was a general feeling that the Colleges and the University of Zimbabwe should not base learning on the production of volumes of notes but on the display of skills in the examination. One of the lecturers suggested a solution to this challenge:

"I think it is possible to have student centred lectures and not worry about the volume of notes that they will produce, because the volume of notes does not necessarily indicate that student teachers have been taught critically."

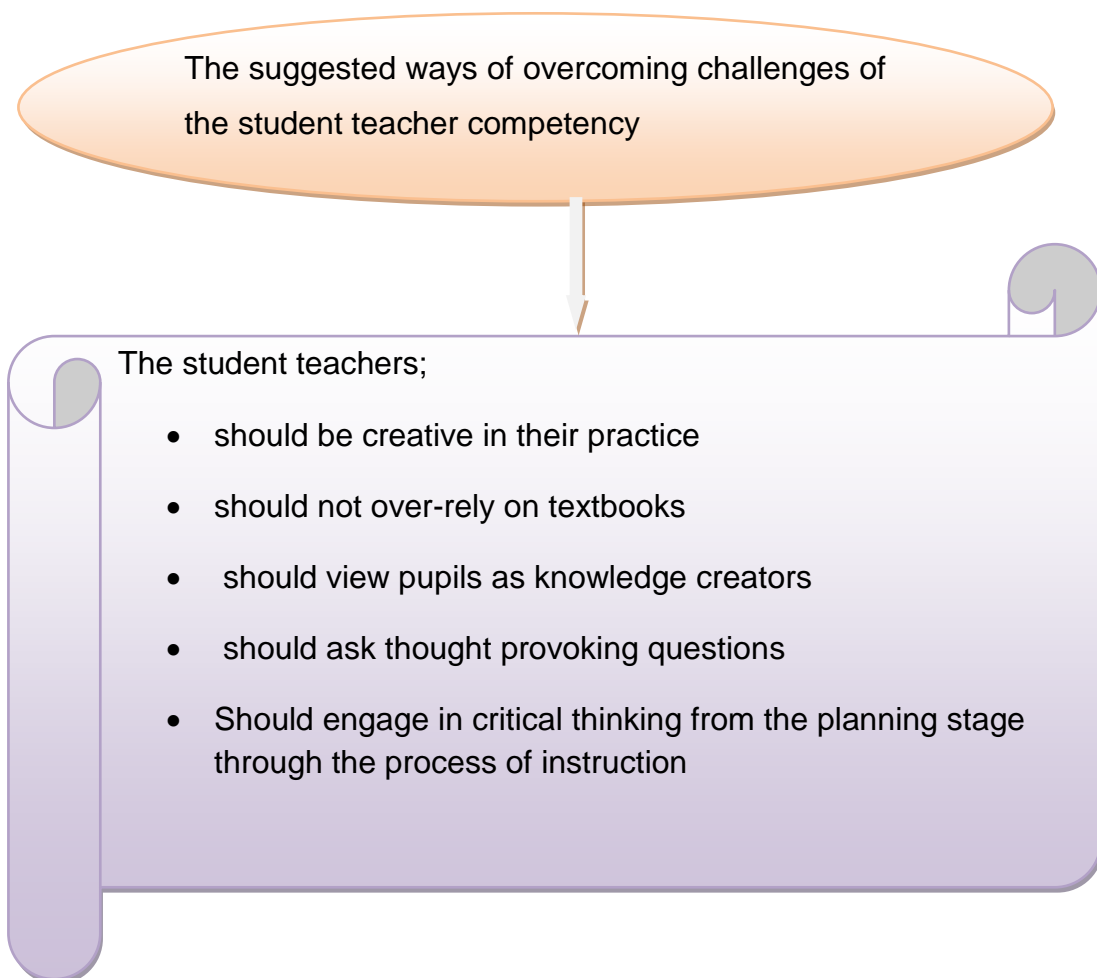
The findings also indicated that student teachers should be creative and should not over-rely on textbooks. Their documents and practice should reflect that they themselves are critical thinkers. The student teachers suggested that critical thinking should start at the planning stage. One of the lecturers had this to say:

"The student teachers should be creative, to avoid relying on the author of the textbook's interpretation of the syllabus. They should plan higher order

objectives which promote the pupils engagement. If they set higher order objectives they will automatically ask thought provoking questions. Even during instruction, the student teachers should ask thought provoking questions. All this are possible if we also engage them in critical thinking through critical pedagogy.”

The findings established that the NTC student teachers were not good in formulating objectives that would have required their pupils to think critically. Figure 6.6 below summarises of the suggested ways of overcoming the student teachers’ competency based challenges.

Figure 6.6 Summary of the suggested ways of overcoming the student teachers’ competency based challenges



6.3.3.1 Discussion on the ways of overcoming the NTC student teachers' competency challenges

Some of the feasible solutions suggested had to do with student teachers' competency as practicing teachers. The student teachers suggested that the student teachers should be creative in the discharge of their duties.

This study indicated that the student teachers should be critical and creative in their practice before they encourage pupils to be critical thinkers. Some of the teacher educators acknowledged that the student teachers have the potential to be creative. They need to remove barriers to creative thinking such as low self-esteem and lack of confidence. The teacher educators believed that if their student teachers practice their creativity and reflect on their teaching, engaging their pupils in philosophical inquiry would be part of their daily practice rather than an occasional activity. Creativity is an invaluable skill that prepares student teachers and their pupils for life beyond the school. The current literature on critical thinking and creative thinking abounds with examples of how teachers can be creative and ways of teaching their pupils to be creative (Haviland, 2012; Preble, 2016; Hicks, 2015; Bartel, 2014). The teacher educators believed that if the student teachers stopped over-relying on textbooks, they would not only be creative but also competent in teaching pupils to be critical thinkers.

The teacher educators believed that a textbook is just a resource, not the only one. A textbook can only be an effective resource if it is in the hands of a great teacher. Their attitude towards textbooks was based on the assumption that, they were not written in consideration of the nature of pupils in one's class. The researcher believes that a student teacher provides his or her pupils with other sources of information and uses textbooks sparingly. The findings of the study concur with the advice given by Graves (2000:176) that teachers ought to use a textbook as one of the resources and should be free to adjust, evaluate and supplement. In light of Graves' (2000:176) guidance, creative student teachers should not confine their instruction to the dictates of textbooks. Therefore, this study revealed that for student teachers to engage their pupils in philosophical inquiry, they need to be critical and creative in their thinking and practice.

This study suggested that the student teachers should be critical from the stage of planning throughout the instructional process. The teacher educators indicated that they expected student teachers to set out objectives of higher order. The nature of objectives set determines the nature of the questions and learning activities. In other words if learning outcomes focus on knowledge, the learning experiences will enable the pupils to acquire knowledge. The researcher feels that failure or weakness at planning stage might translate the same at instructional and assessment level because they are influenced by the former. The findings seem to suggest that the student teachers need to set objectives from low order to higher order. Learning should not end at knowledge and comprehension level, instead the pupils should be able to use the facts correctly, break down given information and combine ideas to come up with a new aspect. This study revealed that solutions to address challenges in engaging learners in philosophical inquiry should be addressed at the planning stage.

The teacher's attitude towards his or her learners determines how and what he or she thinks about them and how he/she behaves towards them. The teacher educators suggested that the student teachers see their pupils as knowledge creators than empty vessels. A student teacher's attitude can be a very significant instrument in the building or destruction of pupils' self-esteem and confidence. A negative attitude towards pupils can breed an inferiority complex in pupils and hatred of school. A teacher who sees pupils as knowledge creators works hard to bring his or her pupils' capacity to learn, think critically, examine issues and create among others. Some lecturers indicated that a teacher who sees his or her learners as knowledge creators makes the class a community of inquiry. The teacher becomes a facilitator who knows that the teacher can also learn from pupils and pupils can teach their teacher.

The student teachers are failing to realise what Baggin (2016) considers as a way of promoting successful personal traits when he says that "successful traits develop when pupils realise that they are taken seriously and are given opportunities". A student teacher with a negative attitude towards learners can otherwise make knowledge creators passive recipients of facts or knowledge. The teacher educators made it clear that, student teachers who have a negative attitude towards their pupils do not engage them during learning. Such classroom practice can cause the development of low self-esteem and pupils will not enjoy learning. It is important to consider an observation by

Briggs (2014) that “confidence plays a great role in learning and boosting it can make a difference in a child’s performance”. Briggs’ (2014) observation implies that the student teachers should have a positive attitude towards pupils to build their confidence for better outcomes. The first step towards developing critical and creative thinking in pupils is the development of high self-esteem and confidence. Based on this finding, this study concludes that the student teachers should see pupils as inquirers and create opportunities for learners to develop positive perceptions of their ability or competence to perform tasks.

6.3.4 Summary

The findings suggested a number of ways of overcoming the challenges faced by the NTC student teachers in engaging pupils in philosophical inquiry. The suggested feasible ways of overcoming challenges in teacher education would not only necessitate the engagement of pupils but would also improve the NTC teacher educators’ practice. The suggested feasible solutions for challenges in schools would improve the quality of the student teachers and mentors’ practice. This would turn practicing schools into centres of communities of inquiry. Improvement of student teachers’ competency would also empower the pupils they teach to be autonomous thinkers and learners.

6.4 Conclusion

This Chapter has presented and discussed the research findings. The research findings were discussed in relation to the research problem, challenges faced by NTC student teachers in engaging their pupils in philosophical inquiry. This study established that the challenges faced by NTC student teachers in engaging their pupils centred on lack of critical pedagogy in teacher education, competence gaps and ineffective methods among student teachers, and lack of skilled mentors. The researcher feels that teacher educators at NTC have a crucial role to play in the provision of high quality teacher education to ensure that student teachers develop relevant competencies. The student teachers need to be taught analytical frameworks. The student teachers can promote philosophical inquiry through asking thought provoking questions and creating opportunities for pupils to raise questions and answer them thoughtfully and logically. Such practice is possible if teacher education develops such skills in the student teachers. There is need to improve teacher education programmes through a philosophical shift, from output to process. Based on the findings presented in Chapter 5

and this Chapter, the next Chapter gave a summary of the findings, conclusions, recommendations and suggested areas for further research.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS OF THE STUDY

7.1 Introduction

Chapter 5 presented the findings of the study. The absence of critical pedagogy in teacher education has been identified as one of the causes of lack of philosophical skills among NTC student teachers. One of the suggested ways of overcoming this challenge is through exposing student teachers to theory and practice of philosophical inquiry. The key objective of this Chapter is to give a summary of the findings of this study and conclusions on NTC student teachers' challenges in engaging their pupils in philosophical inquiry, tensions which exist and feasible solutions. The summary focused on the main findings. This research's conclusions are also given. The main focus of this research's conclusion is on research questions indicated in Chapter 1 and how they have been answered by the research findings in Chapter 5 and 6. The recommendations for various stakeholders are given logically. These are based on this research's findings on the question on promoting philosophical inquiry and conclusions of the study. This Chapter also suggested related areas for further research based on the tensions identified in this study.

7.2 Summary of the findings

This qualitative research focused on the NTC student teachers' challenges in engaging pupils in philosophical inquiry and feasible solutions. This research viewed philosophical inquiry as a critical pedagogy, which is the use of philosophical skills during learning. This research has observed that some of the NTC student teachers on TP were not using this approach in their practice to promote critical and creative thinking. The absence of critical and creative thinking in the process of education can greatly compromise hope for both citizens and societies.

In Chapter 2, the research indicated that there is rapidly growing literature on philosophical inquiry as pedagogy (Daniel & Auriac, 2011; Fisher, 2013; Gaut & Gaut, 2012; Lone, 2012; Millet & Tapper, 2011; Wartenberg, 2014). This literature has shown that children are capable of philosophising. Philosophers such as Lipman (1980) believe that children should be taught philosophising as a stand-alone subject using novels as

stimuli. Literature made it clear that an inquiry-based pedagogy requires teachers to have high-level cognitive skills and ability to identify philosophical substances in the learner's responses or contributions (Lipman, 2003:53; Lucas, 2012; Fisher, 2013). This implies that, not every teacher is capable of engaging pupils in philosophical inquiry. It requires teachers who are philosophically oriented.

The research findings on the question on perceptions indicate that student teachers on TP have knowledge gaps on philosophical inquiry. Activities which require pupils to reproduce learned facts were equated to philosophical inquiry. However, the student teachers who had spent a term at the college after TP had a better conception of philosophising than those on TP. They referred to creative and critical thinking as processes involved in philosophising. Lack of clear understanding of philosophising seemed to have influenced their practice. Their practice was more of what Freire (1996:53) refers to as the banking concept of education. Their documents indicated that most of the student teachers are not philosophical and reflective in their practice. They had been consistent in asking simple recall questions for the four terms. This also shows student teachers' knowledge gap.

This study noted that both teacher educators and student teachers emphasised the importance of developing critical thinking in student teachers and pupils in response to the question on importance of critical thinking. Studies carried out in a number of schools indicated that engaging learners in critical thinking has a number of benefits such as cognitive development (Gaut & Gaut, 2012:2; Daniel & Auriac, 2011:415; Trickey, 2007; Benade, 2011:144). Major benefits that were pointed out in this study included but not limited to autonomous learning, enhancement of academic performance, ability to think clearly and rationally, presenting thoughts logically, enhancing communication, promoting creativity, helping to think outside the box and reflective thinking. This study's findings also indicated that critical thinking enhances solving problems and decision making in the classroom and in real life situations.

The research findings on the effectiveness of NTC teacher education suggest that the NTC curriculum covers all the aspects that would enable student teachers to be competent practitioners. However, the study revealed that the teacher education at NTC

is not effective enough to prepare student teachers adequately for TP. The major issue noted was the absence of effective critical pedagogy. Some of the lecturers focused more on covering content at the expense of developing skills. This, according to some teacher educators was attributed to the 2-5-2 model of teacher education which does not afford them adequate time to engage student teachers in philosophical inquiry. Torff (2005: 304) indicates that “the problem in teacher education is that the skills taught seem to be difficult to master in the provided time” The other reason given was the incompetence of some of the teacher educators and low level of thinking of some of the student teachers. The student teachers also cited the 2-5-2 model of teacher education as the reason their education is not very effective. They argued that it subdues them to a lot of pressure which compromises the quality of learning. The findings of the study reflected that although TOE focuses on critical thinking skills, ideas, theories and perspectives, not much is being done to afford student teachers the opportunity to practice philosophical inquiry as preparation for TP. The student teachers were greatly concerned that the absence of critical approach in the teaching of some of the PSB areas at NTC, greatly compromised their pedagogical practice.

Teacher educators and student teachers were in agreement on the feasibility of employing philosophical inquiry across curriculum. This study noted that both the teacher educators and student teachers agreed that philosophical skills could be applied in any subject. The student teachers claimed that they used the philosophical inquiry approach in subjects such as Mathematics, Art, Social Studies, Environmental Science among others. The findings clearly reflect that philosophical inquiry is not a subject but an approach to teaching. Scholarship on philosophy for children made it clear that philosophical inquiry focuses not on the discipline philosophy but on engaging pupils in applying skills such as reasoning, questioning, critical thinking and reflection (Murriss, 2012, Wartenberg, 2009:7; Fisher, 2008:18; Fisher, 2013:153). The student teachers on campus believed that as long as a subject requires critical thinking skills, that subject could be taught through inquiry. It was also indicated that philosophical inquiry could be applied to all subjects that are taught at college. The findings therefore, reflect that philosophical inquiry can be employed when teaching any subject because critical thinking skills are the vehicle through which content is understood.

The responses to the question on challenges of engaging pupils in philosophical inquiry indicated that, there are a number of challenges hindering the student teachers from engaging pupils in philosophical inquiry. These challenges can be classified into three categories, which are teacher education based challenges, student teacher's lack of skills and challenges in schools. Both the student teachers and teacher educators noted the absence of critical pedagogy in teacher education due to inadequate time to engage student teachers and incompetency of some of the lecturers. Seminars which afford the student teachers the opportunity to engage in inquiry-based learning are done after TP. Lack of peer teaching was also cited as a challenge. Peer-teaching is a platform through which student teachers apply critical pedagogy theories under the supervision of a lecturer. The findings also indicated that the teacher educators' clinical supervision seem not to focus on teaching pupils critical thinking. If clinical supervision is instrumental in assisting student teachers then it can be concluded that not much is being done to assist the student teachers to employ critical pedagogy.

The second category of challenges noted by this study is the lack of skills by student teachers to engage pupils. Some student teachers lacked critical and creative thinking skills. There was no indication of reflection in their thinking and teaching. The TP documents such as lesson plans and test records indicated that they gave the pupils low order questions. The study revealed that some student teachers lacked syllabus interpretation skills. The teacher educators attributed this competence gap to over-reliance on textbooks while student teachers believed that lack of skills was due to ineffective teacher preparation for TP. From lesson observations, it was noted that some of the student teachers were not able to ask thought provoking questions that would sustain a philosophical discussion. They gave pupils gap filling questions which required one-word answers. Low order questions are in line with the low order objectives. The study concluded that some student teachers were not able to engage their pupils in inquiry based learning because they had knowledge and competence gaps.

The last category had to do with schools. The findings revealed that some of the student teachers are attached to teachers who also lack inquiry skills. Some of the student teachers alleged that such mentors have a very insignificant contribution to their professional growth. This is in line with the view of The Sutton Trust (2013) that "poor mentoring can do more harm to the mentees than the absence of mentoring". They

further claimed that their mentors did not engage pupils in philosophical inquiry because the tests and exercises given require recalling. As a result, they focused more on covering content and in the process sacrificed the development of critical thinking skills. Some of the student teachers alleged that some mentors considered teaching critical thinking as a waste of time. It is important to note the dilemma that mentors face. They are expected to assist student teachers to develop inquiry skills which they themselves do not possess. Mentors are also products of the same teacher education and in some cases they were taught by the same lecturers who taught their mentees. It may not be fair to shelve all the blame on them. The other theme that emerged from the findings is that some mentors are not philosophically oriented. Apart from mentors' competence gaps, the student teachers believed that pupils' lack of confidence, poor command of the English language and shortage of textbooks made it difficult for them to engage pupils.

The NTC student teachers and teacher educators put forward a number of strategies that can be employed to promote the engagement of pupils in philosophical inquiry. This study suggested the need to cover lecturers', school heads' and mentors' knowledge and competence gaps through in-service education on critical thinking and critical pedagogy. These contribute greatly to the professional development of a student teacher. In-servicing them would mean that the student teachers would learn, be supervised and copy from competent practitioners. The use of philosophical inquiry as a teaching approach by both lecturers and mentors was viewed as a way of promoting the use of the same approach by student teachers.

One of the themes that emerged was the reduction in class size at college and in schools as a feasible solution to the challenges posed by large classes. The teacher educators and the student teachers believed that smaller classes at college and in schools are easy to manage and engage student teachers and pupils respectively. In small classes, teacher educators and student teachers can create opportunities for interactive learning situations. It was also suggested that the student teachers should be engaged in peer-teaching. Through peer-teaching, the student teachers will not only share content but will also put into practice theories of critical pedagogy. If that is done under the supervision or guidance of a lecturer, immediate feedback will be given. The student teachers learn more and improve through peer teaching as they discuss the lesson as a group. Student teachers also proposed that seminars in TOE should be

started before they go for TP. These activities will enable them to ask thought provoking questions and to reflect on their practice.

The student teachers proposed that teacher educators' TP supervision should focus more on the actual teaching than TP documents. While the importance of TP documents cannot be over-emphasised, it is prudent that lecturers' clinical supervision assists the student teachers in inquiry-based learning. Most of the supervision reports in student teachers' files never mention the issue of teaching pupils to think critically, even in cases where comments for other aspects would suggest that the student is not effective in teaching.

The other theme that emerged from the findings was a proposal for the adaption of the 3-3-3 model of teacher education. They believed that the 3-3-3 model would afford lecturers adequate time to develop critical thinking skills in student teachers before they go for TP. Also related to that was the suggestion by some lecturers that adequacy in student teachers' learning, research and acquisition of skills should not be measured by the amount or volume of notes. Possession of written material is not evidence of learning or acquisition of skills. The teacher educators suggested that assessment should focus on display of skills during TP and in examinations. The tension to be noted is that teacher educators expect student teachers to have critical thinking skills but their practice is not developing such skills. The challenge is not about the model that is adapted only, the issue of ability to develop skills in student teachers should be considered as well.

The findings of this study put forth the need for the provision of mentoring education to teachers in schools. The study maintains that one cannot become a mentor simply because he/she is a qualified teacher. Feldman (2013), as cited in Tokar (2013) identified good communication skills and reflection as primary personal qualities of good mentors. In other words, a mentor should be a reflective good communicator. The process of mentoring involves planning performance standards for the mentee, giving feedback and coming up with strategies for improvement. The research findings also suggested that mentors be supervised by heads of schools to make sure that they discharged their duties as per expected standards. The teaching of practical subjects

which are neglected by some mentors was encouraged. Both lecturers and student teachers believed that practical subjects stimulate inquiry based learning. By nature, practical subjects present opportunities for teachers to problematise education hence, developing problem solving skills in pupils.

Another theme that emerged on feasible solutions was the suggestion that student teachers should be creative and reflective in their practice. They should not over-rely on textbooks as this habit kills creativity. The student teachers should take into consideration the concept presented by Guillaumier (2014) that all of the ideas that one may think of have creative opportunities. This means that skills such as critical and creative thinking as well as reflection should be employed from the planning stage up to evaluation. The teacher educators put forward that student teachers and mentors need to have a positive attitude towards pupils. They argued that if they change their attitudes they would view them as inquirers and knowledge creators, so the class would become a community of inquiry. Student teachers and mentors should be critical and creative thinkers before they cause their pupils to be such.

7.3 Conclusions

A number of conclusions were drawn from the study findings to answer the research questions in Chapter 1. The first question focused on exploring the student teachers' perceptions on philosophising. The conclusions that were drawn from the findings are that, the student teachers' depth of understanding philosophising between the student teacher on campus and those on TP were different. Those on campus, who had spent a term at college after their TP, had a better perception of philosophising than those who were on TP. They viewed it as a cognitive process which involved critical thinking, questioning, analysing, reflecting, evaluating and solving problems. The student teachers on TP lacked a substantive concept of philosophising. They equated it to the mere process of answering questions as a group. However, both groups of student teachers were aware that the process of philosophising in teaching is a learner centred approach. The research findings indicated that the student teachers on TP seem to have limited intellectual abilities which underpin their perception of philosophising. Those on campus had a deep understanding of philosophising. This study concludes that those on campus have been exposed to a bit of learning and practice of critical pedagogy after

their TP. This means that pre-TP teacher education is not exposing student teachers adequately to the learning and practice of critical pedagogy, hence knowledge gaps.

The foregoing discussion leads further to the conclusion that if the student teachers on TP do not have a deeper understanding of philosophizing, then it is not easy to have philosophical inquiry as their pedagogic approach. Their knowledge of philosophising underpins their awareness of how to engage pupils in philosophical inquiry. Although both groups of student teachers acknowledged that the process is dialogical, those on TP seemed not to be aware of the need for critical thinking in the process. That seems to be the case because the findings from lesson observations indicated that group activities were not discussions of a give and take nature. The discussions were not what Fisher (2013:153) terms philosophical dialogue which promotes conceptual understanding of content. The questions required single word answers which were not subject for discussions. The conclusion is that those on TP are not aware of the critical processes of engaging pupils in philosophical inquiry such as making a class a community of inquirers.

Although, some of the student teachers were not able to explain clearly how they can engage pupils in philosophical inquiry, they were able to articulate the importance of critical thinking skills to primary school pupils in Zimbabwe. One of the research sub-questions focused on the importance of critical thinking skills to pupils. The conclusion that can be drawn from the findings is that student teachers learned about critical thinking in theory without being exposed adequately to pedagogy that promotes such kind of thinking. They mentioned the ability to learn, making sound decisions, development of communication skills, problem solving among others as the importance of critical thinking. Critical thinking was also viewed as very important to student teachers. If student teachers are expected to think critically in their studies, it means that there is a gap between what is expected and what the case is. The student teachers' TP documents and lessons observed reflected that they did not display this skill. This implies that, although both teacher educators and student teachers were aware of the importance of critical thinking, not much is being done to expose their student teachers and pupils respectively to activities that develop such skills. There is a gap in what they know and what they can do.

The other focus of the study was to delve into the effectiveness of the NTC teacher education's efforts to produce teachers who are philosophically oriented. The NTC pre-TP teacher education lacked a more critically oriented approach. The student teachers were not presented with adequate opportunities to learn and practice critical pedagogy. The findings from the student teachers suggested that the teacher educators' efforts were not very effective in empowering them to be critical teachers. The ineffectiveness of their efforts could be attributed to the shortage of time to create opportunities for meaningful learning experiences that promote the development of critical thinking skills. The practice of resorting to dictating notes without entertaining questions or contributions from learners by some of the teacher educators is an indication of lack of what Freire (1996:27) terms praxis. Some student teachers attributed this to lecturer incompetence. They also indicated that some lecturers have challenges in teaching syllabus interpretation, scheming and planning. The planning stage is very important as it gives the framework of the lesson content and how it is delivered. It therefore means that although there is little effort by some lecturers to equip student teachers for critical pedagogy, the efforts are not effective enough to develop competencies in student teachers to promote inquiry based learning.

Based on the findings from lesson observations, it can be concluded that it takes a philosophically oriented teacher education to produce critical teachers. Some of the student teachers' failure to engage their learners in philosophical inquiry suggests that their preparation did not only lack the effective teaching of inquiry-based approaches but also the dispositions to infuse it in their daily practice. If the lecturers' efforts were effective, the student teachers could have been competent in turning their classes into communities of inquiry. Instead of engaging pupils in high-level discussions of texts and issues, and problem solving, they relegate pupils to passive recipients of student teachers' 'the knowledge'. Some student teachers acknowledged that they themselves could not think critically. This study concludes that pre-TP teacher education was not very effective in empowering the student teachers for critical pedagogy. It seems more need to be done to make the student teachers more creative, reflective and thoughtful practitioners.

There has been an intellectual debate on whether philosophy should be taught as a stand-alone subject or to infuse philosophical skills in the teaching of other subjects

(Fisher, 2005:27; Fisher, 2008:18; Atkinson, (sa):89; Gaut & Gaut, 2012:2; Wartenberg, 2009:9; Murris, 2012). The findings of this research have shown that philosophical inquiry as a pedagogical approach can be employed effectively in any subject. Some of the skills involved in inquiring such as questioning, evaluation, thinking about one's thinking, problem solving, reflecting among others are the same skills used in studying other subjects. This is different from the Lipman's (1980) model of teaching philosophical skills as a subject through novels (Fisher, 2013:29). The feasibility of teaching philosophical skills through other subjects was well explicated by both lecturers and student teachers.

The research conclusions on the issue concur with growing literature on teaching thinking (Fisher, 2013:53; Gaut & Gaut, 2012:2). Philosophical skills can be developed through thinking critically over stimuli. From the findings, it can be concluded that subject content can be used as stimuli and subjects across curriculum become modes of thinking. Although the student teachers had challenges in engaging pupils, they were aware that for the learning of any subject to be effective, pupils should engage in thinking. The study concluded that the learning of any subject requires inquiry skills. Therefore, the study did not only establish the feasibility of philosophical skills through other subject areas but also the fact that failure to apply the skills renders learning a difficult process and a mere transfer of knowledge or facts.

One of the main focuses of the study was to establish NTC student teachers' challenges in engaging pupils in philosophical inquiry. One of the major themes on challenges was the lack of critical pedagogy in teacher education. It can be concluded that NTC pre-TP teacher education is not effective in equipping student teachers with relevant skills. Without adequate exposure to theory and practice of critical pedagogy, student teachers lack the expertise of exposing their own pupils. The study therefore concludes that the reason some of the teacher educators do not focus on teaching pupils critical thinking during supervision is that they do not include it in their teacher education.

The foregoing challenge was attributed to the competence gaps in some of the teacher educators' practice. Some of the teacher educators and student teachers reported that some of the teacher educators dictate notes and do not entertain questions. Similar

findings were found from a research carried out by Chand in India in 2015 on major problems and issues of teacher education. Chand's study indicated that one of the problems of teacher education was teacher educators' incompetency (Chand, 2015). A competent teacher educator does not read the contents or prepared notes continuously. Student retention rate is low when a lecture is characterised by reading prepared notes without any discussion or clarification of concepts with examples. The study made two conclusions, firstly the teacher educators who read notes continuously without posing questions, entertaining questions and clarifying concepts are not good teachers and do not know their content very well. Secondly, the student teachers employ the telling method because they were taught that way.

According to the research findings, the other challenge cited by teacher educators was that the student teachers enter college with a very low level of thinking. The same challenge led Lipman to introduce Philosophy for Children (Fisher 2013:27). Given the fact that teacher education for pre-service primary school teachers has a lot of content to be covered, there seems to be inadequate time for lecturers to start at the foundation level of developing philosophical skills. This study concluded that the challenge is that apart from the absence of critical pedagogy, the thinking level of some of the student teachers seemed not to match the standard and pressure of work expected at tertiary level.

This study also indicated that there were other challenges found in practicing schools. Some of the student teachers showed concern over poor mentoring skills. The findings highlighted that approaches to mentoring in some cases had impacted negatively on student teachers' professional development. Some of these mentors who lacked inquiry skills expected student teachers to conform to their own practice. One can conclude that the other challenge was that there was no learning on the job because conformity hinders the development of creativity as well as critical thinking. Mentors are also products of the same teacher education which is failing to develop inquiry skills in NTC student teachers.

It was also noted that classroom instruction was examination oriented. The main focus was to cover content than the development of skills. The findings indicated that in most

cases, classroom instruction was characterised by the acquisition of facts. Similar findings have also been found from a study carried out Kirkpatrick & Zang, (2011) in China with 43 high school students which indicated that examination oriented education suppress creativity. If tests and examinations are a way to measure the pupils' worth, then they should be carefully set considering the ultimate purpose of education. While the study is not against examinations, it seems clear to infer that the challenge lies with the contents and nature of examinations. All skills or knowledge can be tested. The study therefore concluded that the tests and examinations focused more on knowledge retention than thinking skills.

The other theme that emerged on challenges in engaging pupils was high teacher-pupil ratio. Most of the student teachers complained, not without reason, about engaging pupils when teaching large classes. Large classes make engagement, discussion and group activities more difficult (Garrett-Hatfield, 2016). Classes with 45 to 65 pupils are too large for effective engagement hence processes of teaching and learning are compromised. Findings from document analysis indicated that the teaching process was characterised by asking simple recall questions. It can be concluded that although the student teachers had challenges in engaging large classes, their major challenge was their incapacity to formulate thought provoking questions.

The pupils' low self-esteem was cited as hindrance to engaging learners in philosophical inquiry. The student teachers indicated that the pupils with low self-esteem lacked confidence so they were not active during learning. Scholars such as Shore (2016) indicate that students with low self-esteem have little or no motivation for learning. Since philosophical inquiry entails thoughtful participation by pupils, it means that employing critical pedagogy in classes of pupils with low self-esteem is difficult. However, findings from lessons observed indicated that very little was being done to restore pupils' self-esteem. It therefore, suggests that the challenge was more than what meets the eye. The student teachers had a challenge in both to engage them and to restore pupils' self-esteem in the process of engaging them.

This study also noted the third category of challenges. This category focused on student teacher competencies. Some of the student teachers had competence gaps in their

practice. They had challenges in interpreting syllabi. As a result, they over-relied on textbooks. Their planning lacked creativity. They set lower order objectives which focused on acquisition of content than development of thinking skills. Based on findings from document analysis and lesson observation, it can be concluded that some of the student teachers themselves did not have philosophical skills. This was identified as a major challenge because it was not easy for them to teach pupils skills which they themselves did not have. The study can conclude that some of the student teachers lacked competencies to engage themselves and their pupils in philosophical inquiry.

This study indicated that the NTC student teachers' challenges in engaging their pupils in philosophical inquiry could be met with success if the correct approach is employed. In every crisis lies opportunities to make things right. A number of feasible solutions were suggested by the study.

This study suggested the adaption of the 3-3-3 model of teacher education. The participants believed that, this model would afford teacher educators adequate time to engage student teachers in critical pedagogy. The three initial terms would be adequate enough to expose the student teachers to both theory and practice of critical pedagogy. The research findings also indicate that staff development workshops on critical thinking be held for the lecturers who do not have the skills. The study concluded that increasing teaching and learning time without developing lecturers' skills in critical thinking and using critical pedagogy would not produce the expected results. Empowering the teacher educators would mean empowering student teachers as well as pupils in schools. Most of the student teachers proposed that the teacher educators should focus more on the actual teaching than TP documents.

Although it is important that lecturers' clinical supervision assist in the actual teaching, the TP documents are equally important. Given the foregoing proposal, it can be inferred that there is a need to educate the student teachers effectively on the use and importance of TP documents. There is a need for lecturers to focus more on the how and why of TP documents in the instructional process. The student teachers seemed to believe in the effectiveness of peer-teaching and TOE seminars in equipping them with critical thinking skills. In view of this, a deduction can be made that these should

commence before TP and peer teaching should be done in all PSB areas. The study concluded that learning in smaller groups should be maximised in teacher education.

This study revealed that the challenges identified do not only provide opportunities for solutions to the challenges of engaging pupils in inquiry but also for making the whole school reflective and thoughtful. The suggestion by student teachers to provide in-service education for mentors and school heads on employing philosophical inquiry across the curriculum means that they realise the critical role played by the mentors and heads in their learning. This implies that the student teachers should be allocated to classes with competent mentors who are self-motivated so that they get quality assistance.

Based on the research findings the study concluded that examinations should test skills not recalling of facts. Examinations usually determine the nature of learning objectives and instructional processes. Since the education system seems to be examination oriented, then examination can be used to make classroom practice critical in nature. If examinations and in-class tests include higher order questions, the mentors would be compelled to employ critical pedagogy. Since mentors are role models, this would influence the student teacher to engage pupils in philosophical inquiry.

The suggestion to reduce class sizes was an indication that philosophical inquiry cannot be employed effectively in large classes. It might take time before the classes are reduced because of economic constraints in Zimbabwe. This is not to suggest that the banking process of education should continue. The study concluded that while the reduction of class sizes is beyond the mandate of the student teachers, at least they could assure that meaningful learning takes place by asking thought provoking questions than asking simple recall questions all the time.

The research findings also suggested a number of feasible solutions to student teachers' competence gaps. Firstly, the student teachers need to have a positive attitude towards pupils. From the findings, it can be concluded that their attitude influenced negatively the nature of their instructional process. Pupils should be viewed as knowledge creators who can inquire into any issue provided relevant opportunities are created. The deduction here is that the student teachers do not only need to change their attitudes

toward pupils but also to create opportunities for inquiry so that they can realise the ability of their pupils. Secondly, the study noted that student teachers should engage in reflection, creative and critical thinking in their instructional processes. It takes a critical teacher to realise the philosophical substance in their pupils' answers. This means that unless they become critical thinkers themselves, they cannot engage their pupils. All this can be possible if existing tensions and dilemmas in their education and practice are resolved.

7.3.1 Tensions and dilemmas for consideration

It should be noted that there are a number of challenges which need to be dealt with first for policy makers and teacher educators to set things right. The first difficulty is that the knowledge for practice which student teachers get at college before TP is not effective enough to develop inquiry skills they are expected to exhibit during TP. The tension exists between what teacher educators expect their students to do and what they are taught and experience during TP preparation. Most of their lectures were characterised by authoritarian transmission methods yet they are expected to use critical pedagogy. There is need to bridge this gap.

The other tension is caused by divergent values and beliefs about effective teaching between practicing schools and teachers' colleges. Practicing schools believe that giving pupils a lot of work to write is a measure of effective teaching, while teacher educators believe in acquisition of skills such as reasoning and critical thinking. A similar tension was acknowledged by Cochran-Smith, Villegas, Abrahams, Chavez-Moreno, Mills and Stern's (5015:111) indicate that research on teacher education revealed that, campus lessons emphasised progressive ways of teaching while schools practice promoted traditional ways of teaching. The NTC student teachers are in a dilemma in that they are caught in between two different perspectives of what effective teaching is. The college supervisors expect them to foster critical thinking and on the other hand the schools expect them to conform to their traditional practices which emphasise on covering more content at the expense of developing thinking. There is lack of what Cochran-Smith and Lytle (1999: 289) referred to as critical stance. There is tension between what they copy from their mentors and what their college supervisors expect. There is need to harmonise schools' and colleges' conception of effective teaching and learning.

The researcher observed that there is a tension between what teacher educators expect their student teachers to gain in schools and what they are actually gaining. The Teacher educators expect the NTC student teachers to learn as they practice, the conception of teacher learning referred to as knowledge in practice (Cochran-Smith & Lytle, 1999:262). Teacher educators expect mentors to assist student teachers learn teaching. However the issue to note here is that the mentors are products of the same teacher education which is not effective in producing philosophically oriented teachers. On the other hand some of the mentors believe that student teachers know better than them because their training is current. This tension leaves the student teacher in a difficult position, neither learning from practice nor knowing better. There is need for policy makers to think along considering an in-service programme for mentors and would be mentors.

There is also tension between the NTC student teacher awareness and their practice. What they think philosophical inquiry is and what they actually do in the classroom as inquiry is quite different. They seem to be aware that philosophical inquiry includes critical thinking and reasoning. However, what they practiced as inquiry was the traditional way of learning which was characterised by giving pupils simple recall questions. This tension seem to be evidence that their knowledge for practice was not very effective.

Parents and society at large expect teachers to develop problem solving skills and independent thinking in their pupils. They see education as an instrument that can be used to solve individual and societal problems. Pupils also expect their teachers to make learning interesting through inquiry and questioning. This is not what teachers and student teachers are doing in schools. Instead their pedagogy is making pupils passive recipients of information. It treats them like objects who cannot think for themselves. The expectations are not being met.

The insights on the tensions and dilemmas in which student teachers and teachers find themselves in can enable policy makers and teacher educators to make sound decisions on how to promote inquiry based teaching and learning.

7.4 Recommendations

Based on the foregoing findings and conclusions the research recommended the following for enhancement of quality teacher education. The research's recommendations are also in line with the research question.

1. What should be done to promote engagement of primary school pupils in philosophical inquiry?

7.4.1 Education policy makers in Zimbabwe

- This study recommends that policy makers consider adopting the 3-3-3 model of teacher education. The research findings have indicated that the current 2-5-2 model is posing many challenges to both teacher educators and student teachers during preparation for TP. The initial two terms are not adequate enough for effective teacher education. Employing critical pedagogy has not been possible given the fact that a lot of content need to be covered within a short period. The nature and quality of initial pre-service teacher education determines the standard and level of competency of the student teachers' practice. The 3-3-3 model would afford teacher educators and their student teachers adequate time to engage in philosophical inquiry.
- This study also recommends the educational policy makers to reduce the teacher-pupil ratio in primary schools to at most 30 pupils per class. This research's findings have indicated that large classes have not been easy to engage in philosophical inquiry. Instead of teaching, more effort was spent on maintaining discipline. The findings have indicated that individualising instruction and managing group activities was a difficult task. Quality education entails empowering the pupils to take charge of their learning. If quality pupil education and effective teacher education practice is to be achieved, policy makers should reduce class sizes for effective learning and practice.

7.4.2 Quality assurer: University of Zimbabwe, Department of Teacher Education

This research's findings indicated that the quality of teacher education is compromised because of too much pressure. Production of voluminous files of lecture and research

notes as assessment items compelled lecturers and student teachers to focus on giving and taking notes respectively at the expense of developing critical thinking skills. This study therefore recommends to the University of Zimbabwe, the Department of Teacher Education in particular, to assist the college in setting examinations which require student teachers to display expected skills. Mere possession of lecture and research notes is not evidence of effective teaching and learning. The teacher educators can dictate notes and student teachers can copy different sources without having learned or developed any critical skill.

7.4.3 Teacher educators: NTC

- Teacher educators should conscientise student teachers on the need to engage their pupils in philosophical inquiry as well as how to engage them.
- This study recommends that the teacher educators at NTC employ philosophical inquiry as a critical pedagogy in their teaching. Student teachers' limited understanding of this approach had a negative influence on their instruction process. It also recommends that the NTC staff development committee organise staff development workshops for teacher educators on theories and practice of critical pedagogy. The findings have indicated that some of the lecturers face difficulties in engaging student teachers in philosophical inquiry. This was identified as one of the major challenges, and it had serious implications to the recipients who in this case are the pupils. Empowering lecturers would mean empowering student teachers and pupils in primary schools. The other recommendation is the inclusion of seminar presentations and peer teaching as preparation strategies for TP. Some student teachers believe in the effectiveness of these approaches. Seminar presentation and peer teaching usually involve smaller groups which are ideal for inquiry-based learning.
- The teacher educators' TP supervision should also focus on how student teachers are teaching pupils critical thinking skills. Analysis of student teachers supervision reports indicated that in many cases, some of the lecturers never referred to teaching pupils to think even when the TP documents suggested the absence of such.

- It is the recommendation of this study that interviews for lecturers and student teachers recruitment should test critical thinking more than possession of knowledge. This study established that lecturers or student teachers without critical thinking skills cannot teach the skills they themselves do not have. This study also revealed that in as much as the teacher educators are expected to teach student teachers to think critically, lecturers expect them to enter college with some basics in critical thinking. The absence of such skills in the face of an overloaded programme compromises the quality of teacher education. This study made it clear that teacher educators need to be critical thinkers in order to empower their student teachers to engage their pupils in philosophical inquiry. Engaging learners in philosophical inquiry promotes the development of critical thinking in pupils. From the foregoing considerations, the study is justified to recommend to NTC to consider the level of thinking of the teacher educators and the student teachers when recruiting.
- NTC should organise in-service education for school heads and mentors on mentoring and critical pedagogy. They should be in-serviced on mentoring so that they provide quality mentoring services to the student teachers. Mentoring is very important for quality teacher education. It is therefore imperative that mentors know their importance and how to perform their role effectively (Bukari, 2015).
- This study indicated through student teacher TP documents that the presence of mentors in some classes was not contributing to professional development of mentees. Mentoring is more than affording a student teacher an opportunity to teach in the mentor's classroom. This study recommends that all mentors go through a mentorship education. Mentoring education programmes can go a long way in providing quality experiences to the student teacher.

7.4.4 The NTC practicing schools

The research findings have indicated that some of the student teachers were allocated to mentors who do not have inquiry skills. Heads of schools should allocate student

teachers to competent mentors. Therefore, most of these mentors were not even helpful to the student teachers apart from affording them opportunities to teach.

7.4.5 The NTC student teachers

Based on the research findings, this study recommends that student teachers view teaching beyond textbooks. They should be reflective and thoughtful in their practice. They should engage in the process of critical thinking from the planning stage to the instruction process. The findings indicated that student teachers do not engage in critical thinking. They over-relied on textbooks because they are not creative. Therefore, this study is recommending that NTC student teachers be creative and reflective in their practice.

7.5 Avenues for further research

The study uncovered tensions which exists in teacher education and practice that can be new areas for further research.

Further research can be carried out on the effective ways of capacitating teachers in practising schools to be competent mentors. Mentors play a crucial role in the practicing of student teachers; hence, the quality of their service has great influence on the professional development of the NTC student teachers. As it stands there is no collaboration with mentors in inquiry.

This research's findings revealed that some of the teacher educators do not have skills to engage student teachers effectively in philosophical inquiry. Some researches could be carried out on the effectiveness of teacher educator preparation and strategies of enhancing the quality of teacher educator's practice. Teacher educators play an important role in educating student teachers. This means that the effectiveness of teacher educator's practice determine the quality of teachers they produce.

Further study can be done on how to bridge the gap between traditional schools practice and contemporary views in teacher practice. Tension that exist between the two is hindering student teachers to grow professionally through knowledge of and in practice.

7.6 Concluding remarks

This Chapter has focused on the main thrust of the research findings and their implications, recommendations and avenues for further research. The research findings indicated a lack of philosophical skills among student teachers as the major challenge. This was attributed to lack of critical pedagogy in teacher education. A number of existing tensions have been highlighted so that they can be addressed to promote engagement of pupils. This study suggested a number of feasible solutions including exposing student teachers to the practical and theory of philosophical inquiry.

The researcher experienced a deeper understanding of the importance of research in teacher education and problem solving. There are certain practices that teacher educators take for granted because they lack an in-depth understanding of their impact on the recipients who are the student teachers and the pupils they teach. Teaching in colleges and teaching in schools is not the same. Dispositions necessary for teaching in schools are not enough for teaching teachers. Through this research, the researcher realised that teaching teachers requires knowledge of practice that is engaging in teacher education research that informs teacher education pedagogy. Without engaging in pedagogical research, teacher educators are likely not to grow in their practice. During the course of the study, the researcher realised that both lecturers and student teachers need to learn during practice and to learn about practice. This can enable teacher educators to improve or set right the present systems with a vision to make teacher education improve and produce competent teachers for schools.

The researcher also gained an understanding that possession of knowledge without necessary dispositions to practice critical thinking is like having 'the what' only of a discipline. The important disposition a teacher should have is the attitude to consider pupils as action oriented, epistemic players and not knowledge depositories. Through this research, the researcher came to the realisation that research in education does not only provide intellectual challenges but also critical thinking-in-practice. The researcher learned that through research, today's challenges could be turned into opportunities for development. This is in line with the Ministry of Higher and Tertiary Education, Science and Technology Development's main thrust of encouraging the learning of Science, Technology, Engineering and Mathematics (STEM). The lessons learned during the

study made the researcher realise that she needs to think systematically about her practice.

Based on her research experiences, the researcher realised that the call for contemporary education to develop critical thinking skills and inquiry in 'stemitised' education is an important opportunity for teacher educators to facilitate and participate in the transformation of Zimbabwe. This study was indeed a revelation to the researcher as she felt the transformative power of research in teacher education. It built her capacity not only to conduct research but also to engage in critical reflective practice.

8.0 REFERENCES

21st Century schools, 2010. Critical pedagogy. Retrieved from:

http://www.21stcenturyschools.com/Critical_Pedagogy.htm [accessed: 21.10.2014].

Ackerman, D. & Perkins, D.N. 2016. Integrating thinking and learning skills across curriculum. Retrieved from:

<http://www.ascd.org/publications/books/61189156/chapters/Integrating-Thinking-and-Learning-Skills-Across-the-Curriculum.aspx> [accessed: 15 October 2016].

Adams, L.A. & Callahan, T. 2014. Research ethics. University of Washington. Retrieved from: <http://depts.washington.edu/biotex/topics/resrch.html> [accessed: 20 April 2015].

Afana, Y., Liets, P. & Tobin, M. 2013. The relationship between school resources and grade 8 Mathematics achievement: a comparison of Palestinian, Authority, Israeli Hebrew and Israeli Arab schools. *Journal for Educational research online* 5(1): 59-89.

Akinpelu, J. 1981. *An introduction to philosophy of education*. London: MacMillan.

Anney, V.N. 2014. Ensuring the Quality of the Findings of Qualitative Research: Looking at Trustworthiness Criteria. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)* 5(2): 272-281 © Scholarlink Research Institute Journals, 2014 Retrieved from:

<http://jeteraps.scholarlinkresearch.com/articles/Ensuring%20the%20Quality%20of%20the%20Findings%20of%20Qualitative%20Research%20NEW.pdf> [accessed: 20 August 2015].

Aristotle, 350 BC. *Metaphysics*, (translated by Ross W.D 2004), London: Penguin Books.

Atkinson, N. [Sa] Philosophy for children. Unpublished work. Harare: University of Zimbabwe.

Atkinson, N.D. 1991. *Philosophy for the Teacher in Africa*. Harare: University of Zimbabwe.

Atkinson, P. & Coffey, A. 2004. Analysing documentary realities. In Silverman, D. *Qualitative research: theory, method and practice*. (2nd ed.). London: Sage Publications.

Baggini, J. 2016. State school pupils lack confidence – you won't fix that in the classroom. *The Guardian* 15 January 2016 Retrieved from:
<https://www.theguardian.com/commentisfree/2016/jan/15/state-school-pupils-confidence-lessons-personality-private-education> [accessed: 20 August 2016].

Bandiera, O., Larcinese, V. & Rasul, I. 2010. The Impact of Class Size on the Importance of University student. Retrieved from: voxeu.org/article/impact-class-size-performance-university-students [accessed: 17 August 2016].

Bascia, N. 2010. Reducing Class Size: What do we know? Retrieved from:
<http://www.cea-ace.ca/publication/reducing-class-size-what-do-we-know/> [accessed 13 June 2016].

Barrow, W. 2011. A dialogic exploration of philosophy for children as participatory tool in a primary classroom. Doctor of Philosophy in Educational Psychology to Newcastle University (Doctoral Thesis) Newcastle. Retrieved from:
<https://theses.ncl.ac.uk/dspace/bitstream/10443/1769/1/Barrow%2012%20%2812mnth%29.pdf> [accessed: 2 October 2016].

Barrow, W. 2010. Dialogic participation and the potential for philosophy for children. *Thinking skills and creativity*, 5(2): 61-69.

Bartel, M. 2014 Teaching creativity. Retrieved from:
<https://people.goshen.edu/~marvinpb/arted/tc.html>. [accessed: 10 August 2016].

Barnet, S. & Bedau, H. 2011. *Critical thinking, reading and writing: a brief guide to argument*. 7th ed. Boston: Bedford.

Baxter, P. & Jack, S. 2008. Qualitative case study methodology: study design and implementation for novice researchers. *The Qualitative Report* 13(4): 544-559 Retrieved from: <http://www.nova.edu/ssss/Qk13-4/baxter.pdf> [accessed: 26 June 2015].

Bell, J. 2003. *Doing your research project* . (5th ed.). Buckingham: Open University Press.

Bell, J. 1993. *Doing your research project: a guide for first time researchers in education and social science*. (3rd ed.). Buckingham: Open University Press.

Benade, L. 2011. Philosophy for children: A New Zealand School Based Action Research Case Study. *New Zealand Journal of Teachers' Work*. 8(2):141-155.

Bercaw, L.A. & Stooksberry, L.M. 2004. Teacher education, critical pedagogy and standards: an exploration of theory and practice. Retrieved from: <http://www.usca.edu/essays/vol122004/Bercaw.pdf> [accessed: 12 November 2014].

Berendzen, J.C. 2013. Max Horkheimer in *The Stanford Encyclopaedia of Philosophy*, Stanford: Stanford University. Retrieved from: <http://plato.stanford.edu/entries/horkheimer/> [accessed: 4 November 2015].

Berg, B. L. 2001. *Qualitative research methods for the Social Sciences*. (4th ed.). Boston: Allyn and Bacon.

Berkeley Graduate Student Instructor 2016. Asking effective questions. Retrieved from: <http://gsi.berkeley.edu/gsi-guide-contents/lab-sections-intro/effective-questions/> [accessed 15 October 2016].

Best, J.W. & Kahn, J.V. 1999. *Research in education*. (7th ed.). Boston: Allyn and Bacon.

Bird, A. 2010. The historical turn in the philosophy of science. In Psillos, S. & Curd, M. (eds.). *The Routledge Companion to Philosophy of Science*. London: Routledge.

Blackstone, A. 2015. Principles of sociological inquiry: qualitative and quantitative methods. Retrieved from:

http://catalog.flatworldknowledge.com/bookhub/reader/3585?e=blackstone_1.0-ch02_s01 [accessed: 16 August 2015].

Blackstone, A. 2015. Paradigms: theories and how they shape a researcher's approach. Retrieved from:

http://catalog.flatworldknowledge.com/bookhub/reader/3585?e=blackstone_1.0-ch02_s02 [accessed: 16 August 2015].

Bluemel, C. 2016. The importance of critical thinking. Retrieved from:

<http://online.essex.ac.uk/news-and-events/distance> [accessed: 12 June 2016].

Bogdan, R.C. & Biklen, S.K. 1992. *Qualitative research for education: an evaluation of theory and methods*. Boston: Allyn and Bacon.

Borghini, A. 2014. Skepticism: What can you doubt? Retrieved from: <http://philosophy.about.com/od/philosophical-Schools/a/Skepticism.htm> [accessed: 12 November 2014.]

Borg, W. R., Gall, J.P. & Gall, M.D. 1992. *Applying education research: a practical guide*. (3rd ed.). New York: Longman.

Boucher, D. & Kelly, P. 2009. *Political thinkers: from Socrates to the present*. (2nd ed.). Oxford: Oxford University Press.

Boundless.com, 2015. "Ethnomethodology." *Sociology*. Retrieved from:

<https://www.boundless.com/sociology/textbooks/boundless-sociology-textbook/social-interaction-5/understanding-social-interaction-50/ethnomethodology-315-10197/> [accessed: 17 August 2015].

Brandt, R. 1988. On Philosophy in the Curriculum: A Conversation with Matthew Lipman. *Educational Leadership*. 46(1), September: 34-37.

Braun, V. & Clarke, V. 2013. *Successful qualitative research: a practical guide for beginners*. London: Sage Publications Limited.

Brennen, A.M. 2000 Clinical Supervision. Retrieved from: <http://www.soencouragement.org/clinical-supervision-case-study.htm>. [accessed: 18 August].

Briggs, S. 2014. Why self-Esteem Hurts Learning But Self-Confidence does the opposite. Retrieved from: www.opencolleges.edu.au/informed/features/self-efficacy-and-learning/ [accessed: 18 August].

British Educational Research Association (BERA) and Royal Society for the Encouragement of the Arts, (RSA) 2014. The Role of research in Teacher Education: reviewing the evidence. Interim report of the BERA-RSA Inquiry. Retrieved from: <https://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-RSA-Interim-Report.pdf> [accessed: 15 August 2016].

Brookfield, S. 2009. The concept of critical reflection: promises and contradictions in *European Journal of Social Work*. 12(3): 293-304, September.

Brown, J.D. 2005.Characteristics of sound qualitative research. In *Shiken:JALT Testing & Evaluation SIG Newsletter* 9 (2):31-33 October Retrieved from: http://jalt.org/test/bro_22.html[accessed: 26 August 2015].

Bruner, J. S. 1957. *Going beyond the information given*. New York: Norton.

Bruner, J. S. 1960. *The process of education*. Cambridge, Mass: Harvard University Press.

Bukari, M.M. 2015. Exploring the role of Mentoring in the Quality of Teacher Training in Ghana. *International Journal of Learning and Development*, 5(1): 46-67.

Burgh, G. & Yorshansky, M. 2007. *Communities of inquiry: Politics, power and group dynamics:Educational Philosophy and Theory*. Oxford: Blackwell Publishing.

Burton, N., Brundrett, M. & Jones, M. 2008. *Doing your education research project*. London: Sage Publications Ltd.

Camhy, D. G. [Sa]. Teaching thinking-The practice of philosophy with children (p 31-47). Retrieved from:
www.rhodes.aegean.gr/tepaes/filosofia-eisai-edo/Anakinosis/Anakinosis3.pdf [accessed: 13February 2014].

Camhy, D. G. 2014. Global consciousness, complex thinking and the concept of the community of inquiry. Retrieved from:
<http://educazionedemocratica.org/?p=2321> [accessed: 21 February 2014].

Campbell, P.L.2011. *Peirce, Pragmatism and the right way of thinking*. New Mexico: Sandia National Laboratories.

Chand, D. 2015. Major problems and issues of teacher education. *International Journal of Applied Research* 1(4):350-353 Retrieved from:
<http://www.allresearchjournal.com/archives/2015/vol1issue4/PartD/1-7-149.pdf> [accessed: 13 September2016].

Cherry, K. 2014. Kohlberg's Theory of Moral Development: Stages of Moral Development. Retrieved from:
<http://psychology.about.com/od/developmentalpsychology/a/kohlberg.htm> [accessed: 07 May 2014].

Chick, N. 2016. Metacognition: thinking about one's thinking. Retrieved from:
<https://vanderbilt.edu/guides-sub-pages/metacognition/> [accessed: 13 July 2016].

Clark, D. (2015) Bloom's Taxonomy of learning domains. Retrieved from:
www.nwlink.com/~donclark/hrd/bloom.html [accessed: 21 June 2016].

Cline, A. 2014Why is Logic Important? Logical Arguments, Reasoning, and Critical Thinking. Retrieved from:

<http://atheism.about.com/od/logicalarguments/a/importance.htm> [accessed: 10 November 2014].

Cline, A. 2014. Introduction to logic and arguments: What is logic? What is an argument? Retrieved from:
<http://atheism.about.com/od/logicalarguments/a/introduction.htm> [accessed: 10 November 2014].

Cochran-Smith, M. & Lytle, S.L. 1999. Relationship of knowledge and practice: teacher learning in communities in *Review of Reason in Education*. 24(1):249-305

Cochran-Smith, M. Villegas, A.M. Abrahams, L. Chavez-Moreno, L. Mills, T. & Stern, R. 2015. Critiquing teacher preparation research: an overview of the field, part ii, in *Journal of Teacher Education* 66(2):109-121

Cohen D, & Crabtree B. 2006. Qualitative research guidelines Project. Retrieved from:
<http://www.qualres.org/HomeLinc-3684.html> [accessed: 20 August 2015].

Cohen, L., Manion, L. & Morrison, K. 2007. *Research methods in education*. (6th ed.). London: Routledge.

Cohen, L. Manion, L. Morrison K. & Wyse, D. 2010. *A guide to teaching practice*. (5th ed.). London: Routledge.

Collins, J. 1997. Barriers to Communication in Schools. A paper presented at the British Educational Research Association Annual Conference. September 11 University of York. Retrieved from: www.leeds.ac.uk/educol/documents/000000331.html [accessed: 26 June 2016].

Cottrell, S. 2011. *Critical thinking skills: developing effective analysis and argument* (2nd ed.). London: Macmillan Publishers Limited.

Cottrell, S. (2011). *Critical Thinking Skills: Developing effective analysis and argument*. Hampshire: Macmillan Publishers Ltd. Retrieved from: <http://www.amazon.co.uk/Critical->

Thinking-Skills-Developing-Effective/dp/0230285295_reader_0230285295. [accessed 16 March 2016]

Creswell, J.W. 2012. *Education research: planning, conducting and evaluating quantitative and qualitative research*. (4th ed.). Boston: Pearson.

Creswell, J. W. 2014. *Research design: International student edition*. California: SAGE Publications Inc.

Crookes, G. & Lehner, A. 1998. Reflections on an ESL critical pedagogy teacher education course. Retrieved from: http://www2.hawaii.edu/~crookes/crit_ped.html [accessed 17 July 2016]

Crossman, A. 2015. Critical Theory. Retrieved from: <http://sociology.about.com/od/Sociological-Theory/a/Critical-Theory.htm> [accessed: 15 October 2014].

Cunningham, B. 2016. The importance of self-esteem for kids with learning and attention issues. Retrieved from: <https://www.understood.org/en/friends-feelings/empowering-your-child/self-esteem/the-importance-of-self-esteem-for-kids-with-learning-and-attention-issue> [accessed: 17 July 2016].

Curtis, S.J. & Boulton, M.E.A. 1965. *A history of educational ideas*. London: University Tutorial Press Ltd.

Dana, N.F. & Yendol-Hoppey, D. 2014. *The Reflective educator's guide to classroom research: learning to teach and teaching to learn through practitioner inquiry* (3rd ed). Corwin Press. Retrieved from: https://www.amazon.co.uk/Reflective-Educators-Guide-Classroom-Research/dp/1412966574/ref=sr_1_8?s=books&ie=UTF8&qid=1451111111&sr=1-8. [accessed 06 January 2016].

Daniel, M-F. & Auriac, E. 2011. Philosophy, critical thinking and philosophy for children. *Educational Philosophy and Theory*. 43(5):415-433.

Dawn, S. & Spencer, L. 2003. The foundations of qualitative research, in Ritchie, J. & Lewis, J (eds.). *Qualitative research practice: a guide for Social Science students and researchers*. London: Sage Publications.

Definitions.net, 2015. Critical rationalism. Retrieved from: <http://www.definitions.net/definition/critical%20rationalism> [accessed: 14 February 2015].

Democratic education and the concept of power. 2007. *Critical and Creative Thinking* 15(1): 15-35. Retrieved from: <http://www.gifted.co.il/1.doc> [accessed: 12 March 2014].

Descartes, R. 1960. *A discourse on method and meditations (translated by Lofleur, I.J.)*. Indianapolis: Merrill.

DeVault, G. 2015. Establishing Trustworthiness in Qualitative Research. Retrieved from: <http://marketresearch.about.com/od/market.research.social.media/a/Establishing-Trustworthiness-In-Qualitative-Research.htm> [accessed: 26 August 2015].

Dewey, J. 1916. *Democracy and education: an introduction to the philosophy of education*. New York: Macmillan.

Dewey, J. 1933. *How we think*. New York: D.C. Heath.

Dewey, J. 1938. *Experience and education*. New York: Kappa Delta.

Dewey, J. 1953. *Essays in experimental logic*. New York: Dover.

Dewey, J. 1958. *Experience and nature*. New York: Dover

Dillon, A. 2014. Education in Plato's Republic. (A paper presented at the Santa Clara University Student Ethics Research conference, May 26, 2004) Retrieved from: http://www.scu.edu/ethics/publications/submitted/dillon/educationplato_republic.html [accessed: 06 November 2014].

Dillon, S. M. 2006. Descriptive decision making: comparing theory with practice. Retrieved from: <http://orsnz.org.nz/conf33/papers/p61.pdf> [accessed: 13 July 2016].

Dilthy, W. 1976. *Selected writings*. Cambridge: Cambridge University Press.

Edmunds, M.W. & Scudder, L. E. (2009) How To Make Sense of Qualitative Research Findings. Retrieved from: <http://www.medscape.com/viewarticle/712876> [accessed: 26 August 2015].

Educational System 2013. Pre-Service and In-Service training for quality improvement. Retrieved from: <http://educational-system.blogspot.com/2012/07/pre-service-and-in-service-training-for.html> [accessed: 13 July 2016].

Elliot, S. 2011. Making your qualitative data trustworthy. Retrieved from: <http://www.qualitative-researcher.com/focus-group/making-your-qualitative-data-trustworthy/> [accessed: 7 June 2015].

Ellis, A.K. 2013. *Exemplars of curriculum theory*. New York: Routledge

Elsworth, S. 2016. Do language barriers affect student performance in school? Retrieved from: <http://oureverydaylife.com/language-barriers-affect-student-performance-school-5911.html> [accessed: 13 July 2016].

Express and Star 2016. The importance of research for education's future. Express & Star Monday Aug 22, 2016. Retrieved from: www.expressandstar.com/education/2011/06/14/the-importance-of-research-educations-future/ [accessed: 24 August 2016].

Fani, T. [sa] Overcoming barriers to teaching critical thinking. International Conference, The Future of Education. Retrieved from: http://conference.pixel-online.net/edu_future/common/download/Paper_pdf/SOE07-Fani.pdf [accessed: 20 June 2016].

Field, G.C. 1913. *Socrates and Plato: a criticism of Professor A.E. Taylor's 'Varia Socratia'*. London: Oxford.

Fines, B.G. 2008. Peer teaching: roles, relationships and responsibilities. Retrieved from: <http://law2.umkc.edu/faculty/profiles/glesnerfines/bgf-ed1.htm> [accessed: 06 June 2016].

Fisher, R. 2003. *Teaching thinking: Philosophical enquiry in the classroom*. (2nd ed.). London: Continuum.

Fisher, R. 2005. *Teaching children to think*. (2nd ed.). Cheltenham: Nelson Thornes Ltd.

Fisher, R. 2008. *Teaching thinking: Philosophical enquiry in the classroom*. London: Continuum International Publishing Group.

Fisher, R. 2013. *Teaching thinking: Philosophical Enquiry in the classroom*. (4th ed.). London: Bloomsbury.

Flick, U. 2009. *An introduction to qualitative research*. (4th ed.) London: Sage Publications Limited.

Flick, U. 2014. *Introduction to qualitative research*. London: Sage Publications Limited.

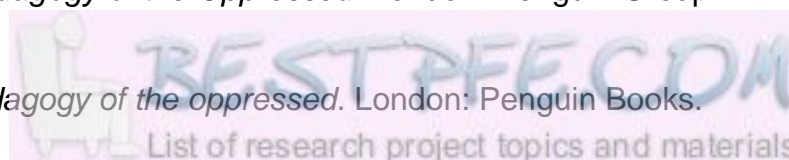
Forehand, M. 2014. Bloom's taxonomy. Retrieved from: [www.epltt.coe.uga.edu/index.php?title=Bloom's Taxonomy](http://www.epltt.coe.uga.edu/index.php?title=Bloom's_Taxonomy) [accessed: 14 January 2016].

Freeman, D.J. & Porter, A.C. 2015. Do textbooks dictate the content of Mathematics instruction in elementary schools. *American Educational Research Journal*. 1 (52):1185-1211.

Freire, P. 2014. *Pedagogy of commitment*. Boulder: Paradigm Publishers.

Freire, P. 1996. *Pedagogy of the Oppressed*. London: Penguin Group.

Freire, P. 1993. *Pedagogy of the oppressed*. London: Penguin Books.



Gagne, J. & Lenard, M. 2012. Smart class size policies for lean times. Retrieved from: http://publications.sreb.org/2012/12E02R_Smart_Class.bkmark.pdf. [accessed: 26 July 2016].

Garrett-Hatfield, 2016. The advantages and disadvantages of class sizes. Retrieved from: www.education.seattlepi.com/advantages-disadvantages-class-sizes-3194.html [accessed: 17 October 2016].

Gaut, B. & Gaut, M. 2012. *Philosophy for Young Children: A Practical Guide*. New York: Routledge.

Gazzard, A. 2012. Do you need to know Philosophy to teach Philosophy for Children? A comparison of two approaches. *Analytic Teaching and Philosophical Praxis*. 33(1):45-53. Retrieved from: http://www.viterbo.edu/uploadedFiles/Academics/Letters_and_Sciences/humanities/philosophy/ATP/Gazzard_on_Teaching_Philosophy.pdf [accessed: 29 January 2014].

Gerrig, R.J. & Zimbardo, P.G. 2010 *Psychology and life*. (19th ed.) Boston: Pearson Education, Inc.

Gill, P., Stewart, K., Treasure, E. & Chadwick, B. 2008. Methods of data collection in qualitative research: interviews and focus groups. Retrieved from: <http://www.nature.com/bdj/journal/v204/n6/full/bdj.2008.192.html> [accessed: 25 March 2015].

Golding, C. 2010. *'That's a better idea' philosophical progress for philosophy for children*. PhD Thesis, The University of Melbourne. Retrieved from: <https://minerva-access.unimelb.edu.au/handle/11343/35757> [accessed: 28 February 2014].

Gorard, S. Siddiqui, N. & See, B.H. 2015. Philosophy for children: SAPERE Evaluation Report and Executive Summary. Education Endowment Foundation. Retrieved from: https://educationendowmentfoundation.org.uk/public/files/Projects/EEF_Project_Report_PhilosophyForChildren.pdf [accessed: 23 August 2016].

Graves, K. 2000. *Designing Language Course: a guide for teachers*. Boston: Heinle Cengage Learning.

Gray, D. E. 2014. Doing research in the real world. Los Angeles: Sage Retrieved from: http://www.sagepub.com/sites/default/files/upm-binaries/58626_Gray_Doing_Research_in_the_Real_World.pdf#page=6 [accessed: 17 June 2015].

Greenfield, T.A. 1996. Gender, ethnicity, science achievement and attitudes. *Journal of Research in Science Teaching*, 33(8): 901-933.

Grim, B.J., Harmon, A.H. & Gromis, J.C. 2006. Focused group interviews as an innovative quanti-qualitative methodology: integrating quantitative elements into a qualitative methodology. *The Qualitative Report*. 11, 3: September 2006: 516-537. Retrieved from: <http://www.nova.edu/ssss/QR/QR11-3/grim.pdf> [accessed 16 June 2015]

Grix, J. 2004. *The foundations of research*. London: Palgrave MacMillan.

Groenke, S.L. & Hatch, J.M. (ed.) 2009. *Critical pedagogy and teacher education in the Neoliberal era*. Small Openings: Springer.

Guba, E. J. & Lincoln, Y.S. 1994. Competing paradigms in qualitative research. In Denzin, N.K. & Lincoln, Y.S. (eds.), *Handbook of qualitative research* (p105-117). London: Sage.

Guillaumier, G. 2014. Reflection as creative process. Retrieved from: <http://www.christinaguillaumier.org/2014/06/28/reflection-as-creative-process/> [accessed 29 August 2016].

Guion, L.A., Diehl, D.C. & McDonald, D. 2012. Triangulation: establishing the validity of qualitative studies. Retrieved from: https://www.researchgate.net/file.PostFileLoader.html?...asset_Key... [accessed 15 September 2016].

Hamilton, R. P. 2010. The contribution of philosophy to deliberative democracy. The Higher Education Academy: Subject Centre for Philosophical and Religious Studies.

Hannu, J. 2007. Child, Philosophy and Education: Discussing the intellectual sources of philosophy for children. PhD Thesis, University of Oulu. Retrieved from: <http://herkules.oulu.fi/isbn97895142855/isbn9789514285509.pdf> [accessed: 15 April 2013].

Harada, V.H. 2003. Empowered learning: fostering thinking across the curriculum. Retrieved from: <http://www2.hawaii.edu/~vharada/Empowered.pdf> [accessed 26 July 2016].

Hare, W. 2004. Open-minded inquiry: helping students assess their thinking. Retrieved from: www.criticalthinking.org/pages/open-minded-inquiry/579. [accessed: 30 September 2013].

Haviland, M. 2012. Encouraging Teachers to Teach Creativity. Retrieved from: <http://plpnetwork.com/2012/06/05/encouraging-teachers-teach-creativity/> [accessed: 15 August 2016].

Harvey, L., 2015, Social Research Glossary, Quality Research International, URL:<http://www.qualityresearchinternational.com/socialresearch/> [accessed: 21 August 2015].

Harvey, M. Coulson, D. Mackaway, J. & Winchester-Seeto, T., 2010. Aligning reflection in the cooperative education curriculum. *Asia Pacific Journal of Cooperative Education*, 11(3):137-152.

Hegel, G.W.F. [Sa]. *Hegel, the Letters*. (Translated by Butler, C.& Seiler, C. 1985) Bloomington: Indiana University Press.

Hegel, G.W.F. 1830. *Hegel's logic* (translated by William W. 2009), Pacifica: Marxists Internet Archive.

Hegel, G.W.F. 1975. *The phenomenology of mind* (translated by Baillie, J.B.) New York: Allen Unwin

Hegel, G.W.F.[Sa] *The Science of logic*. Cambridge: University Press.

Hennink, M.M. 2014. *Focus group discussions: understanding qualitative research*. Oxford: Oxford University Press.

Hesse-Biber, S.N. & Leavy, P.L. 2011. An invitation to qualitative research, in *The practice of qualitative research*. (2nd ed.).California: Sage Publications. Retrieved from: http://www.sagepub.com/upm-data/34087_chapter.pdf [accessed: 13 June 2015].

Hessong, R.E. & Weeks, T.H. 1991. *Introduction to the foundations of education*. New York: Macmillan Publishing Company.

Hicks, K. 2015. Why Creativity in the Classroom Matters more than ever. Retrieved from: www.edudemic.com/creativity-in-the-classroom [accessed: 17 May 2016].

Hidden Curriculum. 2014. In Abbott, S. (ed.) *The glossary of education reform*. Retrieved from: <http://edglossary.org/bloom-taxonomy> [accessed 21 June 2016]

Hine, G.S.C. 2013. The importance of action research in teacher education programs. *Issues in Educational Research*, 23 (2) 2013. Retrieved from: www.iier.org.au/iier23/hine.pdf. [accessed: 25 April 2016].

Hitchcock, G. & Hughes, D. 1995. *Research and the teacher: a qualitative introduction to school-based research*. London: Routledge.

Hogue, R. J. 2011. Axiology: what do you value in research? Retrieved from: <http://rjh.goingeast.ca/2011/11/17/axiology-what-do-you-value-in-research/> [accessed: 28 August 2015].

Horkheimer, 1947. *Eclipse of reason*. London: Continuum.

Horkheimer, 1982. *Critical theory*. New York: Seabury Press. Retrieved from: http://www.thirdworldtraveler.com/Zinn/CivilObedience_ZR.html [accessed: 13 October 2014].

Hume, D. 1975. *Inquiries concerning human understanding and concerning the principles of morals* (edited by Selby-Bigge & Nidditch, P. H.). Oxford: Clarendon Press.

Irzik, G. 2010. Critical rationalism. In Psillos, S. & Curd, M. (ed.). *The Routledge Companion to Philosophy of science*. London: Routledge.

Israel, M. & Hay, I. 2006. Private people, secret places: ethical research in practice. Retrieved from: www.colorado.edu/geography/foote/geog5161/notes/AA. [accessed: 15 November 2014].

Jacobs, M., Gawe, N. & Vikalisa, N.C.G. 2000. *Teaching-learning dynamics: a participative approach for OBE*. (2nd ed.). Sandton: Heinemann Higher and Further Education Pvt, Ltd.

Jamie, 2009. Great thinkers on self-education: Socrates. Retrieved from: <http://selfmadescholar.com/b/2009/06/02/great-thinkers-on-self-education-socrates/> [accessed: 10 September 2014.]

Jamison, W. 2007. Confidentiality in social science research. Worcester: Worcester Polytechnic Institute, Interdisciplinary and Global Studies Division. Retrieved from: <http://www.wpi.edu/Academics/Projects/confidentiality.html> [accessed: 23 March 2015]

Jarvis, P. 2010. *Adult education and lifelong learning: theory and practice*. New York: Routledge.

Jayapalan, N. 1999. *Plato*. New Delhi: Atlantic Publishers.

Jenkins, J. 2016. Class size: how does it affect learning? Retrieved from:

www.edutopis.org/discussion/class-size-how-does-it-affect-learning. [accessed: 17 August 2016].

Johnson, T.W. 1987. Philosophy for children and its critics: Going beyond the information given. *Educational Theory*. 37(1): 61-68

Johnson, T.W. 2013. Philosophy for children and its critics: Going beyond the information given. Retrieved from: <http://onlinelibrary.wiley.com/doi/10.1111/j.1741-5446.1987.00061.x/abstract> [accessed: 15 April 2013].

Kant, I. 1781. *Critique of pure reason (translated Smith, N.K.)*. London: MacMillan

Kellner, D. (ed.). 2007. *Art and Liberation: Collected papers of Herbert Marcuse vol.4* London: Routledge.

Kennedy, R. 2016. Why small class sizes work. Retrieved from: www.boardingschoolreview.com/blog/why-small-class-sizes-work. [accessed 17 August 2016].

Khan, Z. 2015. In-Service teacher training Education in India. Retrieved from: www.yourarticlelibrary.com/education/in-service-teacher-training-education-in-india/45258/ [accessed: 03 April 2016].

Kincheloe, J.L. 2010. *Knowledge and critical pedagogy: An introduction (Explorations of educational purpose 1)*. New York: Springer.

Kincheloe, J. L. 2008. *Critical pedagogy primer*. (2nd ed.). New York: Peter Lang.

King, N. & Horrocks, C. 2010. *Interviews in qualitative research*. London: Sage Publications Inc.

Kirkpatrick, R. & Zang, Y. 2011. The Negative Influences of Exam-Oriented Education on Chinese High School Students: Backwash from Classroom to Child. Retrieved from: <http://link.springer.com/article/10.1186/2229-0443-1-3-36> [accessed 20 August 2016].

Kitzinger, J. 1995. Qualitative research: introducing focus groups. Retrieved from: <http://www.bmj.com/content/311/7000/299> [accessed: 22 April 2015].

Kivi, R. 2015. How the 'learning disabled label affects students. Retrieved from: <http://www.brighthubeducation.com/special-ed-learning-disorders/97167-how-labels-affect-students-with-special-needs/> [accessed 20 August 2016].

Klement, K.C. [sa] Gottol Frege 1848-1925, in *Internet Encyclopaedia of Philosophy* Retrieved from: <http://www.iep.utm.edu/frege/#H2> [accessed 18 October 2016].

Klenke, K. 2008. *Qualitative research in the study of leadership*. Bingley: Emerald Group Publishers.

Knight, K. 2007. *Aristotelian Philosophy: Ethics and Politics*. Cambridge: Polity Press.

Knodt, J.S. 2008. *Nine thousand straws: teaching thinking through open-inquiry learning*. Westport: Libraries Unlimited.

Kochhar, S.K. 2011. *School Administration and Management*. New Delhi: Sterling Publishers (Private) Limited.

Kohlberg, L. 1981. *The philosophy of moral development*. New York: Harper & Row.

Konstantopoulos, S. 2008. Do small classes reduce the achievement gap between low and high achievers? Evidence from Project STAR. *The Elementary School Journal*. 108 (4). The University of Chicago. Retrieved from: www.sesp.northwestern.edu/docs/publications/191509590147f66b7286352.pdf. [accessed: 17 August 2016].

Kramer, K. P. & Gawlick, M. 2003. *Martin Buber's I and Thou practicing living dialogue*. New Jersey: Paulist Press.

Kurland, D. J. 2000. What is Critical Thinking? Retrieved from: www.criticalreading.com/inference_analysis.htm [accessed: 04 March 2014].

Krueger, R.A. & Casey, M.A. 2009. *Focus group: a practical guide for applied research*. (4th edition.) California: Sage Publications Inc.

Kurland, D.J. 2000. What is Critical Thinking? Retrieved from: www.criticalreading.com/inference_process.htm [accessed: 04 March 2014].

Kurland, D.J. 2000. What is Critical Thinking? Retrieved from: www.criticalreading.com/critical_thinking.htm [accessed: 04 March 2014].

LaBanca, F. 2010. Trustworthiness in qualitative research. Retrieved from: <http://problemfinding.labanca.net/2010/05/24/trustworthiness-in-qualitative-research/> [accessed: 07 March 2013].

Landauer, J. & Rowlands, J. 2001. Importance of philosophy: reason. Retrieved from: www.importanceofphilisophy.com/Epistemology-Reason.html. [accessed: 27 October 2015]

Learning Express Editors, 2010. *Reasoning skills success in 20 minutes a day*. (3rd ed.). New York: Learning Express.

Leijen, A., Valtna, K., Leijen, D.A. & Pedaste, M. 2012. How to determine the quality of students reflections. *Studies in Higher Education*, 37(2): 203-217

Lemmer, E.M. & Badenhorst, D.C. 1997. *Introduction to education for South African teachers: an orientation to teaching practice*. Cape Town: Kenwyn: Juta & Company Ltd.

Letseka, M. & Pitsoe, V. 2013. Reflections on assessment in Open Distance Learning (ODL): the case of the University of South Africa (UNISA). *Open Praxis*, 5(3):197-206 (2013), Retrieved from: <http://openpraxis.org/index.php/OpenPraxis/article/view/66/45> [accessed: 16 August 2016].

Liamputtong, P. 2011. *Focus group methodology: principle and practice*. London: Sage Publications Limited.

Lietz, C.A., Langer, CL. & Furman, R. 2006. Establishing trustworthiness in qualitative research in social work. Retrieved from:
<http://qsw.sagepub.com/content/5/4/441.abstract> [accessed: 27 March 2013].

Lipman, M. 2003. *Thinking in education*. (2nd ed.) Cambridge: Cambridge University Press.

Lipman, M. 1988. *Philosophy goes to school*. Philadelphia: Temple University Press.

Lipman, M. 1985. *Harry Stottlemeier's discovery: reasoning about reasoning*. Montclair: First Mountain Foundation.

Lipman, M. 1982. Philosophy for children. *Thinking: The Journal of Philosophy for Children*. 3(37).

Lipman, M. 1980. *Philosophy in the school*. Philadelphia: Temple University Press

Lipman, M., Sharp, A.M. & Oscanyan, F.S. 1980. *Philosophy in the classroom* 2nd ed. Philadelphia: Temple University Press.

Litchman, M. 2013. Ethical issues in qualitative research, in *Qualitative research in education*. (3rd ed.). London: Sage Publications. Retrieved from:
http://www.sagepub.com/upm-data/27011_4.pdf [accessed 23 June 2015].

Litosseliti, L. 2003. *Using focus groups in research*. London: Continuum.

Lombardo, J. 2016. The rational decision making model: steps and purpose in organisations. Retrieved from: <http://study.com/academy/lesson/the-rational-decision-making-model-steps-and-purpose-in-organizations.html> [accessed: 15 August 2016].

Lone, J. M. 2011. Questions and the community of philosophical inquiry. *Childhood and Philosophy*. 7(13):75-89.

Lone, J. M. 2012. Philosophy and Education: A gateway to inquiry. In Lone, J.M. and Israeloff, R. (ed.). *Philosophy and Education: Introducing philosophy to young people*. Newcastle: Cambridge Scholars Publishing.

Lone, J.M. 2012. Teaching Pre-College philosophy: The cultivation of philosophical sensitivity. In Lone, J.M. & Israeloff, R. (ed.). *Philosophy and Education: Introducing philosophy to young people*. Newcastle: Cambridge Scholars Publishing.

Lone, J.M. 2012. *The philosophical child*. Maryland: Rowman and Littlefield Publishers Inc.

Lone, J.M. & Israeloff, R. (ed.), 2012. *Introducing philosophy to young people*. Newcastle: Cambridge Scholars Publishing.

Longstaff. S. 2013. The unexamined life is not worth living. Retrieved from: www.newphilosopher.com/author/simon-longstaff [accessed: 19 July 2016].

Lucas, P. 2012. Critical reflection: What do we really mean? Retrieved from: http://acen.edu.au/2012conference/wp-content/uploads/2012/11/92_Critical-reflection.pdf [accessed: 15 February 2016].

Mackenzie, H.M. 1971. *Hegel's educational theory and practice*. New York: Haskell House Publisher Limited.

Mackenzie, N. & Knipe, S. 2006. Research dilemmas: paradigms, methods and methodology. Retrieved from: <http://www.iier.org.au/iier16/mackenzie.html> [accessed 17 October 2016].

Majoni, C. 2014. Critical evaluation of Teacher Education quality and the implications on teacher quality in Zimbabwe. Doctor of Philosophy in Educational Management to Zimbabwe Open University (Doctoral Thesis) Harare. Retrieved from: <http://www.lis.zou.ac.zw:8080/dspace/bitstream/0/182/1/MAJONI%20CUTHBERT.pdf> [accessed: 15 August 2016].

Mantzavinos , C. 2016. Hermeneutics. Stanford Encyclopaedia of Philosophy. Retrieved from: <http://plato.stanford.edu/entries/hermeneutics/> [accessed: 21 August 2016].

Markle, T., West, R.E. & Rich, P.J. 2011. Beyond transcription: technology, change and refinement of method. Retrieved from: www.qualitative-research.net/index.php/fqs/article/view/1564/3249 [accessed: 10 July 2015].

Marshall, C. & Rossman, G.B. 2011 *Designing qualitative research*. California: Sage Publications.

Mathis, W.J. 2016. The effectiveness of class size reduction. Retrieved from: <http://nepc.cdorado.edu/publication/research-based-options>. [accessed: 18 August 2016].

McCall, C.C. 2009. *Transforming thinking: philosophical inquiry in the primary and secondary classroom*. Oxon: Routledge.

McCarty, M. 2006. *Little big minds: sharing philosophy with kids*. New York: Penguin.

MCEEDYA, 2009. The 1999 Adelaide Declaration on National goals for schooling in the twenty-first century. Retrieved from: www.curriculum.edu.au/mceecdya/adelaide_declaration_1999_text,28298.html [accessed: 08 February 2014].

McLaren, P. 2016. *Life in Schools: an introduction to critical pedagogy in the foundations of Education*. New York: Routledge.

McLaren, P. & Kincheloe, J. L. (eds.) 2007. *Critical pedagogy: where are we now?* New York: Peter Lang.

McLaren, P. 1995. *Critical pedagogy and predatory culture: Oppositional politics in a postmodern era*. London: Routledge.

McLaren, P. 1997. *Revolutionary multiculturalism: Pedagogies of dissent for the new millennium*. Boulder: Westview Press.

- Mcleod, S. 2013. Kohlberg (Simply Psychology). Retrieved from: <http://www.simplypsychology.org/kohlberg.html> [accessed: 11 October 2014].
- Meagher, S. M. & Feder, E. K. 2010. The troubled history of Philosophy and deliberative democracy. *Journal of public Deliberation*, 6(1):1-17.
- Mehta, S. & Whitebread, D. 2014. Philosophy for Children and Moral Development in the Indian Context. Retrieved from: www.inter-disciplinary.net/ati/education/cp/cp1/mehta_paper.pdf [accessed: 15 June 2014].
- Merriam, S.B. 2009. *Qualitative research: a guide to design and implementation*. San Francisco: Jossey-Bass.
- Merriam, S.B. & Tisdell, E.J. 2015. Qualitative research: defining and designing (chapter 1). In *Qualitative research: a guide to design and implementation*. (4th ed.). London: John Wiley and Sons.
- Merriam Webster Dictionary 2015. Perception. Retrieved from: <http://www.merriam-webster.com/dictionary/perception> [accessed: 30 August 2016].
- Mertens, D.M. 2005. Quality Criteria in Qualitative Research. Retrieved from: [http://addingvalue.wceruw.org/Conferences/Meeting%20Quality Criteria in Qualitative Research.pdf](http://addingvalue.wceruw.org/Conferences/Meeting%20Quality%20Criteria%20in%20Qualitative%20Research.pdf) accessed 26/08/2015 [accessed: 22 August 2015].
- Michel, C. M. 2008. Implementing a Forensic Educational Package for Registered Nurses in Two Emergency Departments in Western Australia.
- Millet, S. & Tapper, A. 2011. Benefits of collaborative Philosophical Inquiry in Schools. *Educational Philosophy and Theory*. 44(5) Retrieved from: <http://pactiss.org/wp-content/uploads/2011/11/Millett-and-Tapper-2011-Benefits-of-Collaborative-Philosophical-Inquiry-in.pdf> [accessed: 13 January 2014].

Ministry of Education, Sport and Culture, 2006. *Primary School Mathematics Syllabus Grades 4-5*. Harare: Curriculum Development Unit.

Ministry of Education, Sport and Culture, 2000. *Primary School Home Economics Syllabus Grades 4-5*. Harare: Curriculum Development Unit.

Ministry of Primary and Secondary Education, 2013. *Primary School Computers Syllabus Grades 1-7*. Harare: Curriculum Development Unit.

Monks, J. & Schmidt, R. 2010. The impact of class size and number of students on outcomes in Higher Education. Retrieved from:
<http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1145&context=workingpapers> [accessed: 14 March 2016].

Morrow, S. L. 2005. Quality and Trustworthiness in Qualitative Research in Counselling Psychology. Retrieved from:
http://www.safranlab.net/uploads/7/6/4/6/7646935/quality_trustworthiness_2005.pdf
[accessed: 7 June 2015]

Moulton, J. 1997. How Do Teachers Use Textbooks: A review of the Research Literature. Africa Bureau Information Centre (ABIC) Retrieved from:
<http://textbookuse.pbworks.com/f/74textbooks.pdf> [accessed: 18 March 2016].

Murris, K. 2012. The Philosophy for children curriculum, narrativity and higher-order thinking. *Paper presented on 30 March at the Annual Conference, Philosophy of Education Society of Great Britain*, Oxford, New College.

Nascimento, P.A.M. 2008. School resources and student achievement: worldwide findings and methodological issues. *Educate~ Special Issue*, March 2008, pp 19-30
Retrieved from:
<http://www.educatejournal.org/index.php/educate/article/viewFile/146/151> [accessed: 20 September 2016].

The National Council of Teachers of English (NCTE). 2016. Retrieved from:

www.ncte.org/positions/statements/why-class-size-matters [accessed 15 August 2016].

Noddings, N. 2012. *Philosophy of education*. (3rd ed.). Colorado: Westview Press.

Nyerere J.K. 1967. Education for self-reliance. Retrieved from:

http://www.swaraj.org/shikshantar/resources_nyerere.html [accessed 20 November 2016].

OBG Community. 2010. Karl Popper and critical rationalism. Retrieved from: <http://ogb-community.blogspot.com/2010/11/karl-popper-and-critical-rationalism.html> [accessed: 12 October 2014].

Ok, A. & Toy, B. Y. 2011. Reflections of prospective teachers toward a critical thinking-based pedagogical course: A case study. *International Journal of Human and Social Sciences*, 6 (1):46-54 Retrieved from: https://www.academia.edu/1136817/Reflections_of_Prospective_Teachers_Toward_a_Critical_Thinking-Based_Pedagogical_Course_A_Case_Study [accessed: 16 March 2014].

O'Riordan, N. 2013. Swimming against the tide: the implementation of philosophy for children in the primary classroom. Doctor of Education, The University of Hull (Doctoral Thesis) Hull. Retrieved from: <https://hydra.hull.ac.uk/assets/hull:8603a/content> [accessed 18 November 2015].

Owu-Ewie, C. 2009. *Enhancing the Thinking Skills of Pre-service Teachers: A case study of Ghana Teacher Training College*. New Jersey: VDM Verlag.

Ozmon, H. A. 2012. *Philosophical Foundations of Education*. (9th ed.) Boston: Pearson Education Inc.

Ozmon, H.A. 2011. *Philosophical foundations of education*. (9th ed.). Upper Saddle River: Pearson.

Park, J. 1963. *Selected readings in the philosophy of education*. (2nd ed.). New York: The Macmillan Company.

Parker, K.A, 2001. The spirit of two communities” Charles S. Pierce and Josiah Joyce on scientific and religious community. Retrieved from:
<http://agora.phi.gvsu.edu/kap/AAR2001/csp-jr.community.pdf> [accessed 17 June 2015].

Patton, M.Q. 2002. *Qualitative research and evaluation methods*. (3rd ed.). Thousand Oaks: Sage.

Paul, R. 2004. The state of critical thinking today. Retrieved from:
<http://www.criticalthinking.org/pages/the-state-of-critical-thinking-today/523>. [accessed 07 August 2016].

Paul, R., Elder, L. & Bartell, T. 2013. A brief history of the idea of critical thinking. Retrieved from: <http://www.criticalthinking.org/pages/a-brief-history-of-the-idea-of-critical-thinking/408> [accessed 25 January 2014].

Paulter, R. 2016. The death of textbooks. Retrieved from: <https://talk.chalk.com/the-death-of-the-textbook/> [accessed 07 August 2016].

Peirce, C.S. 1971. *Philosophy and human nature*. New York: New York University Press.

Perraton, H. 2010. Teacher Education: the role of open and distance learning. Retrieved from:
http://dspace.col.org/bitstream/handle/11599/290/Teacher_Education_Role_ODL.pdf?sequence=1&isAllowed=y [accessed 07 August 2016].

Philimore, J. and Goodson, L. 2004. *Qualitative research in tourism: ontologies, epistemologies and methodology*. London: Routledge. Retrieved from:
<https://books.google.co.uk/books?id=bgypAss8IU4C&printsec=frontcover#v=onepage&q&f=false> [accessed: 21 August 2015].

Piaget, J. 1932. *The moral judgement of the child*. New York: Harcourt Brace & World

Pinnock, H., 2009. *Steps towards learning: a guide to overcoming language barriers in children's education*. London: Save the Children. Retrieved from:
<https://www.resourcecentre.savethechildren.se/sites/default/files/documents/1754.pdf>
[accessed: 16 August 2016].

Pitsoe, V. J. 2013. Teacher attrition in South Africa: trends, challenges and prospects. *Journal of Social Science*, 36(3): 309-318 (2013). Retrieved from:
[http://www.krepublishers.com/02-Journals/JSS/JSS-36-0-000-13-Web/JSS-36-3-000-13-PDF-Abst/JSS-36-3-309-13-1394-Pitsoe-V-J/JSS-36-3-309-13-1394-Pitsoe-V-JITx\[8\].pmd.pdf](http://www.krepublishers.com/02-Journals/JSS/JSS-36-0-000-13-Web/JSS-36-3-000-13-PDF-Abst/JSS-36-3-309-13-1394-Pitsoe-V-J/JSS-36-3-309-13-1394-Pitsoe-V-JITx[8].pmd.pdf) [accessed 20 August 2016].

Plato, 1941. *The Republic (translated by Jawett, D.)*. New York: Modern Library.

Plato and Grube, G.M.A, 2002. *Five dialogues: Euthyphro, Apology, Crito, Meno and Phaedo (18th ed.)*. Indianapolis: Hacket Publishing Company.

Plymouth University 2011. Learning settings Retrieved from:
https://www.plymouth.ac.uk/uploads/production/document/path/1/1712/Lectures_and_Seminars.pdf [accessed 12 August 2016].

Popper, K.R. 1968. *The logic of scientific discovery*. London:Hutchinson.

Punch, K.J. & Oancea, A. 2014. *Introduction to the research methods in education*. (2nd ed.) London: SAGE Publications Limited.

Preble, L. 2016. Teachers Must Encourage Student Creativity. Retrieved from:
www.teachhub.com/teaching-creativity. [accessed 12 September 2016].

Presley, S. 2016. What is independent thinking? Retrieved from:
<http://www.rit.org/essays/independentthink.php> [accessed 07 August 2016].

Psillos, S. & Curd, M. 2010. *The Routledge Companion to Philosophy of science*. London: Routledge.

Rafe, C. 2014. Conclusion of misreading Popper. Retrieved from: <http://www.criticalrationalism.net/2014/04/26/conclusion-of-misreading-popper/> [accessed: 16 November 2014].

Rao, P.S.R.S. 2000. *Sampling methodologies with applications*. Boca Raton: Chapman and Hall CRC.

Reeve, C.D.C. 2004. *Plato-Republic*. Indianapolis: Hackett Publishing Company.

Reflective practice. 2014. Retrieved from: www.studymode.com/essays/Reflective-Practice-616924.html [accessed: 30 June 2014].

Ritchie, J., Lewis, J. & McNaughton Nicholas, C.M. 2014. *Qualitative research practice: a guide for social science students and researchers*. London: Sage Publications Limited.

Ritchie, G. 2016. The importance of teacher research to the classroom teacher in definition of teacher education. Retrieved from: <https://gse.gmu.edu/research/tr/tr-definition>. [accessed 17 August 2016].

Rohlf, M. 2014. Stanford Encyclopaedia of Philosophy: Immanuel Kant. Retrieved from: <http://plato.stanford.edu/entries/kant> [accessed: 26 October 2014].

Russell, B. 1961. *History of Western philosophy and its connection with political and social circumstances from the earliest times to the present day*. London: Routledge.

SAGE research methods. 2013. Focus group as qualitative research: planning and research design for focus group. Retrieved from: http://www.uk.sagepub.com/gray3e/study/chapter18/Bookchapters/Planning_and_designing_focus_groups.pdf [accessed: 21February 2015].

The Sage encyclopaedia of qualitative research methods. Vol.1 Thousand Oaks, Sage Publications. pp.440-441 Retrieved from: <http://oro.open.ac.uk/11518/> [accessed: 23 June 2015].

SAPERE, 2010. Get young minds racing. Retrieved from: www.sapere.org.uk [accessed: 23 February 2014].

SAPERE, 2013. Philosophy for Children, Colleges Communities. Retrieved from: www.sapere.org.uk [accessed: 17 January 2014].

Sarroub, L.K. & Quadros, S. 2015. Critical pedagogy in classroom discourse. Retrieved from: <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1155&context=teachlearnfacpub> [accessed 16 January 2016].

Saunders, M.N., Lewis, P. & Thornhill, A. 2016. *Research methods for business students 7th ed.* London: Pearson.

Schiro, M.S. 2012. *Curriculum theory: conflicting visions and concerns (2nd ed.)*. London: SAGE Publications.

Schjelderup, A. 2009. Learning science through philosophical dialogue. *Furhang Journal*. 22(69):1-14.

School Improvement Network 2016. Retrieved from: www.school.improvement.com/voe/class-size-and-student-achievement-results/?pr=class-size-survey. [accessed 07 August 2016].

Schutt, R. 2011. *Investigating the social world: the process and practice of research (7th ed.)*. Thousand Oaks: Sage Publications.

Scotland, J. 2012. Exploring the Philosophical Underpinnings of Research: Relating Ontology and Epistemology to the Methodology and Methods of the Scientific,

Interpretive, and Critical Research Paradigms in English Language Teaching; 5,(9)
2012 Retrieved from:
<http://www.ccsenet.org/journal/index.php/elt/article/viewFile/19183/12667> [accessed:
12 July 2015].

Scott, G. A. 2000. *Plato's Socrates as educator*. New York: State University of New York Press.

Sensig, T. 2011. *Qualitative research: a multi-methods approach to projects for Doctor of Ministry Theses*. Eugene: Wipf and Stock Publishers.

Shenton, A.K. 2004. Strategies for ensuring trustworthiness in qualitative research projects. *Education for information*, (22): 63-75.

Shenton, A. K. 2004. Strategies for ensuring trustworthiness in qualitative research projects. Retrieved from: www.crec.co.uk/docs/Trustworthypaper.pdf [accessed: 17 November 2015].

Shore, K. 2016. The students with low self-esteem. Retrieved from:
http://www.educationworld.com/a_curr/shore/shore059.shtml [accessed 15 October 2016].

Singh, A. 2014. 10 reasons why practical Education is more important than theoretical. Retrieved from: <http://listdose.co/10-reasons-practical-education-more-important-theoretical/> [accessed 07 May 2016].

Smith, M.K. 2011. The functions of supervision. Retrieved from:
<http://inferd.org/mobi/the-functions-of-supervision/> [accessed 18 November 2016].

Smith, J.A., Flowers, P. & Larkin, M. 2009. *Interpretive phenomenological analysis: Theory, method and research*. London Sage Publications Inc.

Smyth, J. 2011. *Critical pedagogy for social justice*. New York: Continuum International Publishing Group.

Spark Notes, 2014. Sparknote on Immanuel Kant (1724-1804). Themes, ideas and arguments. Retrieved from: <http://www.sparknotes.com/philosophy/kant/themes.html> [accessed: 21 November 2014].

Stanovich, P.J. & Stanovich, K.E. 2010. Using research and reason in Education: How teachers can use scientifically based research to make curricular and instructional decisions. Retrieved from: https://www.nichd.nih.gov/publications/pubs/Pages/using_research_stanovich.aspx [accessed 07 May 2016].

Strand, T. 2005. Peirce on education: nurturing the first rule of reason. *Studies in Philosophy and Education* (24) : 309-316.

Stumpf, S.E. & Fieser, J. 2012 *Philosophy: History and Readings*. (8th ed.). New York: McGraw-Hill Companies.

Taisier, M.A. & Robert, O.M. 1999. *Civil wars in Africa: roots and resolution*. London: McGill-Queens University Press.

Taylor, B., Sinha, G. & Ghoshal, T. 2006. *Research methodology: a guide for researchers in management and social sciences*. New Delhi: Piti Learning Private Limited.

Taylor, J.L. 2012. Think again: a philosophical approach to teaching continuum. Retrieved from: www.bloomsbury.com/uk/think-again-9781441121066 [accessed 15 June 2016].

Taylor, W. 2016. Teacher Education. Encyclopaedia Britannica Inc. Retrieved from: <https://www.britannica.com/topic/teacher-education>. [accessed 15 August 2016].

Teaching Times, 2014. What is Philosophy for children, What is a 'community of enquiry' and how can they develop creative and critical thinking skills? Retrieved from: <http://www.teachingtimes.com/kb/53/philosophy-for-children.htm> [accessed: 09 June 2014].

The Sutton Trust 2013. Poor mentoring can be worse than no mentoring, new teachers' toolkit reveals. Retrieved from: <http://www.suttontrust.com/newsarchive/poor-mentoring-can-worse-mentoring-new-teachers-toolkit-reveals/> [accessed 16 September 2016].

The Herald 23 October 2016. Retrieved from: <http://www.herald.co.zw/textbook-shortage-impacts-negatively-on-education/> [accessed: 23 October 2016].

The P4C Co-operative 2013. Benefits of P4C. Retrieved from: <http://p4c.com/benefits-p4c>. [accessed: 05 April 2013].

The University of Tennessee, 2016. Informed consent. Retrieved from: <https://www.utc.edu/research-integrity/institutional-review-board/informedconsent/> [accessed 16 November 2016].

The University of Zimbabwe 2015. *The University of Zimbabwe Handbook for quality assurance in associate teachers' colleges*,. Harare: The Department of Information, Protocol and Public Relations.

Thompson, C. 2011. Thinking across the curriculum: process over output. *International Journal of Humanities and Social Science* 1(9), 2011 Retrieved from: <http://www.ijhssnet.com/journals/Vol.1.No.9.Special.Issue.July.2011/1.pdf> [accessed 16 September 2016].

Tittle, P. 2011. *Critical thinking: an appeal to reason*. New York: Routledge.

Tokar, S. 2013. Study Examines Qualities of Good and Bad Mentoring Relationships. Retrieved from: <https://www.ucsf.edu/news/2013/01/13390/study-examines-qualities-good-and-bad-mentoring-relationships> [accessed 23 August 2016].

Topping, K.J. & Trickey, S. 2007. Collaborative Philosophical enquiry for School Children: Cognitive Effects at 10-12 years. *British Journal of Educational Psychology*. 4, (77):271-288.

Torff, B. 2005. Getting it wrong on threats to teacher quality. *Phi Delta Kappan*. 87(4):302-305

Trickey, S. 2007. Promoting social and cognitive development in school: An evaluation of 'thinking through philosophy' Research paper delivered on June 17 at The 13th International Conference on Thinking, Norrkoping, Sweden. Retrieved from: <http://www.ep.liu.se/ecp/021/vol1/026/?ecp2107026pdf> [accessed: 29 February 2013].

Ulug, M, Ozden, M.S. & Eryilmaz, A. 2011. The effects of teachers' attitudes on students' personality and performance. Retrieved from: https://www.researchgate.net/publication/271889744_The_Effects_of_Teachers'_Attitudes_on_Students'_Personality_and_Performance [accessed 14 July 2016].

UNESCO 2007. Philosophy: A school of freedom, Paris, UNESCO. Retrieved from: http://portal.unesco.org/shs/en/ev.php_URL_ID=12633&URL_DO=DO_TOPIC&URL_SECTION=201.html [accessed: 12 February 2014].

Unite for Sight. 2015. Module 6: The importance of research. Retrieved from: <http://www.uniteforsight/research-methodology/module6>. [accessed 3 June 2016].

Vansieleghem, N. & Kennedy, D. (ed.) 2011. What is philosophy for children, what is philosophy with children-After Matthew Lipman? *Journal of Philosophy of Education* 45(2) :171-182.

Vansieleghem, N. & Kennedy, D. (ed.) 2012. *Philosophy for children in transition: Problems and prospects*. Southern Gate: Wiley-Blackwell.

Velasquez, M. 2011. *Philosophy: a text with readings*. Boston: Wadsworth Cengage Learning.

Virginia Commonwealth University, School of Education. 2015. Foundations of education. Retrieved from: www.soe.vcu.edu/departments/pages/foundations-of-education/ [accessed 16 June 2016].

Vygotsky, L.S. 1978. *Mind in society: the development of higher psychological processes*. Cambridge: Harvard University Press

Vygotsky, L.S. 1986. *Thought and Language*. (2nd ed.). Massachusetts: The Massachusetts Institute of Technology.

Wallace, V.L& Husid, W.N. 2011. *Collaborating for inquiry-based learning: school librarians and teachers' partner for student achievement*. California: Libraries Limited.

Wallendorf, M. & Belk, R.W. 2013 Assessing trustworthiness in naturalistic consumer research. Retrieved from:
<http://www.acrwebsite.org/search/view-coference-proceedings.aspx?id=12177>
[accessed: 17 April 2013].

Ward, T. 2013. A history of critical education theory. Retrieved from:
www.tonywardedu.com/critical-education-praxis [accessed: 16 April 2014].

Wartenberg, T.E. 2009. *Big Ideas for little kids: Teaching philosophy through children's literature*. Lanham: Rowman and Littlefield.

Wartenberg, T.E. 2014. *Big Ideas for little kids: Teaching philosophy through children's literature*. Lanham: Rowman and Littlefield.

Watts, J.H. 2008. Integrity in qualitative research. In Given, L.M. (ed.) *The Sage Encyclopaedia of qualitative research methods*, Vol. 1. Thousand Oaks: Sage Publications. Retrieved from:
<http://www.stiba-malang.com/uploadbank/pustaka/RM/QUALITATIVE%20METHOD%20SAGE%20ENCY.pdf> [accessed: 15 August 2015].

Wax, D. 2008. 10 skills you need to succeed at almost anything. Retrieved from: www.lifehack.org/articles/featured/10-skills-you-need-to-succeed-at-almost-anything.html. [accessed 16 June 2016]

What's the big idea? [Sa]. Retrieved from: http://whatsthebigideaprogram.com/?page_id=30 [accessed: 15 March 2014].

White, D.A. 2005. *The examined life: advanced philosophy for kids*. Waco: Prufrock.

Whitehurst, G. J. R. & Chingas M. [accessed 18 March 2016]2016. Class size: what research says and what it means for state policy. Retrieved from: <https://www.brookings.edu/research/class-size-what-research-says-and-what-it-means-for-state-policy/> [accessed 26 August].

Willis, J.W., Jost, M. & Nilakanta, R. 2007. *Foundations of qualitative research: Interpretive and critical approaches*. California: Sage Publications Inc.

Wittgenstein, L. 1961. *Tractus logico philosophicus* (translated by Pears, D. F. & McGuinness, B.F.). London: Routledge & Kegan Paul

Worley, P. 2011. *The If machine: Philosophical enquiry in the classroom*. London: Continuum International Publishing Group.

Yara, P.O. & Otieno, K.O. 2010. Teaching/learning resources and academic performance in Mathematics in secondary schools in Bondo District of Kenya. *Asian Social Science* 6(12) Retrieved from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.657.505&rep=rep1&type=pdf> [accessed 16 September 2016].

Yin, R.K. 2009. *Case study research: Design and methods. Applied social research methods series v.5*. California: Sage Publications Inc.

Yin, R.K. 2011. *Qualitative research from start to finish*. New York: The Guilford Press.

Yukino Z.M. 2016. The importance of examination. Retrieved from: <https://www.wattpad.com/2801238-the-importance-of-exam>. [accessed 16 August 2016].

Zinn, H. 1970. The problem is civil obedience. Retrieved from: http://www.thirdworldtraveler.com/Zinn/CivilObedience_ZR.html [accessed: 13 October 2014].

Zyngier, D. 2014. Class size and academic results, with a focus on children from culturally, linguistically and economically disenfranchised communities. Retrieved from: <https://journal.anzsorg.edu.au/publications/9/EvidenceBase2014Issue1.pdf>. [accessed: 13 June 2016]

APPENDIX A: RESEARCH ETHICS CLEARANCE CERTIFICATE



COLLEGE OF EDUCATION RESEARCH ETHICS REVIEW COMMITTEE

19 August 2015

Ref #: 2015/08/19/53295773/22/MC
Student #: Ms CT Zimbithi
Student Number #: 53295773

Dear Ms Zimbithi

Decision: Ethics Approval

Researcher

Ms CT Zimbithi
Tel: +263 773 086 686
czimbithi@gmail.com

Supervisor

Prof V.J Pitsoe
College of Education
Department of Educational Leadership and Management
Tel: +2712 429 4436
pitsovi@unisa.ac.za

Proposal: Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions

Qualification: D Ed in Philosophy of Education

Thank you for the application for research ethics clearance by the College of Education Research Ethics Review Committee for the above mentioned research. Final approval is granted for 2 years.

For full approval: The application was reviewed in compliance with the Unisa Policy on Research Ethics by the College of Education Research Ethics Review Committee on 19 August 2015.

The proposed research may now commence with the proviso that:

- 1) The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
- 2) Any adverse circumstance arising in the undertaking of the research project that is



University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the College of Education Ethics Review Committee. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.

- 3) The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.

Note:

The reference number **2015/08/19/53295773/22/MC** should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the College of Education RERC.

Kind regards,



Dr M Claassens
CHAIRPERSON: CEDU RERC
mcdtc@netactive.co.za



Prof VI McKay
ACTING EXECUTIVE DEAN



University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

APPENDIX B: LETTER OF PERMISSION TO DO STUDIES FROM THE MINISTRY OF HIGHER AND TERTIARY EDUCATION, SCIENCE AND TECHNOLOGY DEVELOPMENT

All official communications should be addressed to:
"The Secretary for Higher & Tertiary Education
Telephones: 795891-5, 796441-9, 730055-9
Fax Numbers: 792109, 728730, 703957
E-mail: thesecretary@mhet.ac.zw
Telegraphic address: "EDUCATION"



Reference:

MINISTRY OF HIGHER AND TERTIARY
EDUCATION, SCIENCE AND
TECHNOLOGY DEVELOPMENT
P. BAG CY 7732
CAUSEWAY

20 March 2015


STAFF CONFIDENTIAL

The Principal
Nyadire Teachers' College

SEEKING PERMISSION TO STUDY: ZIMBITI CLEMENTINE E.C NO: 0132420 J AND
TSVARAYI PATSON: E.C NO: 0853395 C: UNISA AND KWAZULU NATAL UNIVERSITIES:
INTAKE TYPE: ONLINE STUDIES

Reference is made to your letter dated 9 March 2015 on the above subject matter,
Please be advised that since the programmes do not interfere with college activities
members should proceed with their studies.

Your cooperation is greatly appreciated.


Munjoma. C. (Miss)
Human Resources Assistant
FOR: PERMANENT SECRETARY
/cm

Cc File



APPENDIX C: LETTER OF PERMISSION FROM THE PRINCIPAL OF NYADIRE TEACHERS' COLLEGE



P.O BOX 210
MUTOKO
ZIMBABWE

PHONE: 0779917804/0779917802

myarugwe@gmail.com

www.nyadireteacherscollege.ac.zw

18 December 2015

Miss C.T Zimbiri
Nyadire Teachers' College
P.O Box 210
Mutoko

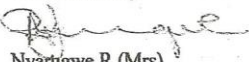
Dear Miss Zimbiri

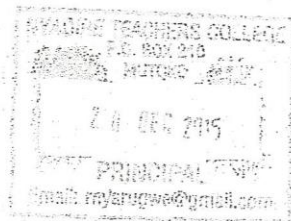
RE: AUTHORITY TO CARRY OUT A PHD RESEARCH AT NYADIRE TEACHERS' COLLEGE

Following your request to carry out a research at Nyadire Teachers' College, in fulfilment of PHD studies, permission is hereby granted to conduct your research titled "Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in Philosophical inquiry and feasible solutions". This will entail interaction with Nyadire Teachers' College lecturers, students on campus and those on Teaching Practice. Please ensure that this process does not interfere directly or indirectly with the functions of the lecturers or the activities of students on Teaching Practice. It is also expected that the terms of reference and ethical conduct governing such research will be strictly observed.

We wish you all the best of luck in your studies.

Yours faithfully


Nyarugwe R (Mrs)
Principal



APPENDIX D: A LETTER OF PERMISSION FROM MINISTRY OF PRIMARY AND SECONDARY EDUCATION

*All communications should be addressed to
"The Secretary for Primary and Secondary
Education"
Telephone: 799914 and 705153
Telegraphic address : "EDUCATION"
Fax: 791923*



Reference: C/426/3 Mash East
Ministry of Primary and
Secondary Education
P.O Box CY 121
Causeway
Harare
ZIMBABWE

12 January 2016

Zimbiti Clementine Tichaona
Nyadire Teachers College
P. O. Box 210
Mutoko

**RE: PERMISSION TO CARRY OUT RESEARCH IN MASHONALAND EAST
PROVINCE: MUTOKO DISTRICT: KATSUKUNYA; TSIKO; MUREWA
DISTRICT: MUCHINJIKE; ZARANYIKA; MUDZI DISTRICT: KARONGA
AND UZUMBA-MARAMBA-PFUNGWE DISTRICT: MUSANHI;
MATORAHEMBE AND CHITIMBE PRIMARY SCHOOLS**

Reference is made to your application to carry out a research in the above mentioned schools in Mashonaland East Province on the research title:

**"CHALLENGES FACED BY STUDENT TEACHERS OF NYADIRE TEACHERS'
COLLEGE IN ENGAGING PUPILS IN PHILOSOPHICAL INQUIRY AND FEASIBLE
SOLUTIONS"**

Permission is hereby granted. However, you are required to liaise with the Provincial Education Director Mashonaland East, who is responsible for the schools which you want to involve in your research.

You are required to provide a copy of your final report to the Secretary for Primary and Secondary Education.


E. Chinyowa

Acting Director: Policy Planning, Research and Development
For: SECRETARY FOR PRIMARY AND SECONDARY EDUCATION
cc: PED – Mashonaland East Province
r/jamkwala2016

APPENDIX E: LETTER OF PERMISSION FROM PROVINCIAL EDUCATION DIRECTOR (PED), MASHONALAND EAST PROVINCE

Reference: P/Zimbabwe T.C

E. C. No.: 01324205

All communications should be addressed to
"The Provincial Education Director
Mashonaland East Province"
Telephone: 0279-24811/4 and
24792
Telex :
Fax: 079-24791



Ministry of Primary & Secondary Education
Mashonaland East Province
P.O. Box 752
Marondera
Zimbabwe

18/01/16

Mr./Mrs./Miss Zimbabwe Clementine T
Nyadure Teacher's College
P.O. Box 210, Mutoko

PERMISSION TO CARRY OUT RESEARCH IN SCHOOL FOR EDUCATIONAL

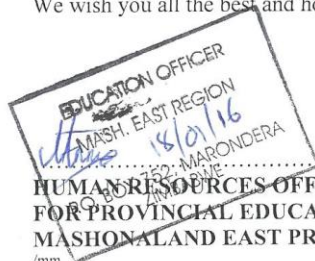
PURPOSES: MR/MRS/MISS Zimbabwe T.C E. C. NO. 01324205

STUDENT I. D. 5329573 student HEAD/TEACHER AT UNISA SCHOOL

Reference is made to your minute dated 12 January 2016

Please be advised that permission has been granted that you carry out research work in our schools. You are accordingly being asked to furnish the Ministry with information about your findings so that we share the knowledge for the benefit of the system as well as our nation at large.

We wish you all the best and hope to hear from you after completing your project work.



HUMAN RESOURCES OFFICER – DISCIPLINE
FOR PROVINCIAL EDUCATION DIRECTOR
MASHONALAND EAST PROVINCE

APPENDIX F: LETTER FROM PED STAMPED BY THE MUREWA DISTRICT EDUCATION OFFICER AND SCHOOL HEADS

Reference: P/Zimbibi T.C

E. C. No.: 01324205

All communications should be addressed to
"The Provincial Education Director
Mashonaland East Province"
Telephone: 0279-24811/4 and
24792
Telex :
Fax: 079-24791



Ministry of Primary & Secondary Education
Mashonaland East Province
P.O. Box 752
Marondera
Zimbabwe

18/01/16

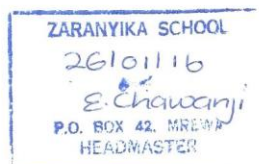
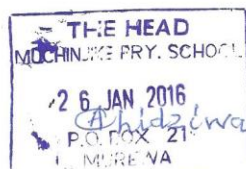
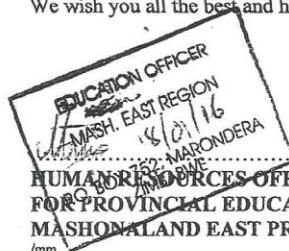
Mr./Mrs./Miss Zimbibi Clementine T
Nyadwe Teacher's College
P.O. Box 210, Mutoko

PERMISSION TO CARRY OUT RESEARCH IN SCHOOL FOR EDUCATIONAL
PURPOSES: MR/MRS/MISS Zimbibi T. C E. C. NO. 01324205
STUDENT I. D. 53245773 STUDENT HEAD/TEACHER AT UNISA SCHOOL

Reference is made to your minute dated 12 January 2016

Please be advised that permission has been granted that you carry out research work in our schools. You are accordingly being asked to furnish the Ministry with information about your findings so that we share the knowledge for the benefit of the system as well as our nation at large.

We wish you all the best and hope to hear from you after completing your project work.



APPENDIX G: LETTER FROM PED STAMPED BY THE UMP DISTRICT EDUCATION OFFICER AND SCHOOL HEADS

Reference: P/zimbiti T.C

E. C. No.: 01324205

All communications should be addressed to
"The Provincial Education Director
Mashonaland East Province"
Telephone: 0279-24811/4 and
24792
Telex :
Fax: 079-24791



Ministry of Primary & Secondary Education
Mashonaland East Province
P.O. Box 752
Marondera
Zimbabwe

18/01/16

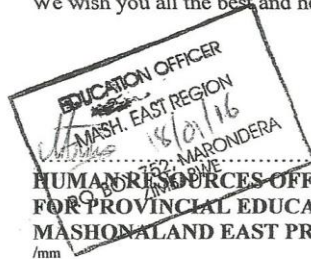
Mr./Mrs./Miss Zimbite Clementine T
Nyadure Teacher's College
P.O. Box 210, Mutoko

PERMISSION TO CARRY OUT RESEARCH IN SCHOOL FOR EDUCATIONAL
PURPOSES: MR/MRS/MISS Zimbite T.C E. C. NO. 01324205
STUDENT I. D. 53295773 student HEAD/TEACHER AT UNISA SCHOOL

Reference is made to your minute dated 12 January 2016

Please be advised that permission has been granted that you carry out research work in our schools. You are accordingly being asked to furnish the Ministry with information about your findings so that we share the knowledge for the benefit of the system as well as our nation at large.

We wish you all the best and hope to hear from you after completing your project work.



HUMAN RESOURCES OFFICER - DISCIPLINE
FOR PROVINCIAL EDUCATION DIRECTOR
MASHONALAND EAST PROVINCE

U.M.P. DISTRICT
P.O. BOX 630, MUTAWATAWA

19 JAN 2016

THE EDUCATION INSPECTOR
MINISTRY OF PRIMARY & SEC. EDUCATION
C. Jengedza



APPENDIX H: LETTER FROM PED STAMPED BY THE MUTOKO DISTRICT EDUCATION OFFICER AND SCHOOL HEADS

Reference: P/Zimbite T.C

E. C. No.: 01324205

All communications should be
addressed to
"The Provincial Education Director
Mashonaland East Province"
Telephone: 0279-24811/4 and
24792
Telex :
Fax: 079-24791



Ministry of Primary & Secondary Education
Mashonaland East Province
P.O. Box 752
Marondera
Zimbabwe

18/01/16

Mr./Mrs./Miss Zimbite Clementine T
Nyadire Teacher's College
P.O. Box 210, Mutoko



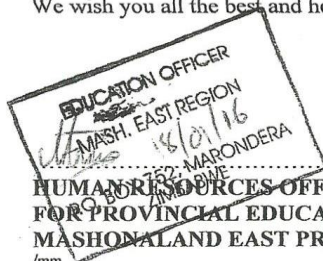
Permitted
and granted

PERMISSION TO CARRY OUT RESEARCH IN SCHOOL FOR EDUCATIONAL
PURPOSES: MR/MRS/MISS Zimbite T.C E. C. NO. 01324205
STUDENT I. D. 53295773 HEAD/TEACHER AT UNISA SCHOOL

Reference is made to your minute dated 12 January 2016

Please be advised that permission has been granted that you carry out research work in
our schools. You are accordingly being asked to furnish the Ministry with information
about your findings so that we share the knowledge for the benefit of the system as well
as our nation at large.

We wish you all the best and hope to hear from you after completing your project work.



HUMAN RESOURCES OFFICER - DISCIPLINE
FOR PROVINCIAL EDUCATION DIRECTOR
MASHONALAND EAST PROVINCE



APPENDIX I: LETTER FROM PED STAMPED BY THE MUDZI DISTRICT EDUCATION OFFICER AND SCHOOL HEADS

Reference: P/zimbati T.C

E. C. No.: 01324205

All communications should be addressed to
"The Provincial Education Director
Mashonaland East Province"
Telephone: 0279-24811/4 and 24792
Telex :
Fax: 079-24791



Ministry of Primary & Secondary Education
Mashonaland East Province
P.O. Box 752
Marondera
Zimbabwe

18/01/16

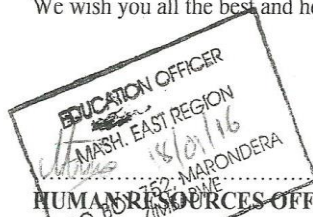
Mr./Mrs./Miss Zimbati Clementine T
Nyadire Teacher's College
P.O. Box 210, Mutoko

PERMISSION TO CARRY OUT RESEARCH IN SCHOOL FOR EDUCATIONAL
PURPOSES: MR/MRS/MISS Zimbati T.C E. C. NO. 01324205
STUDENT I. D. 53295773 HEAD/TEACHER AT UNISA SCHOOL

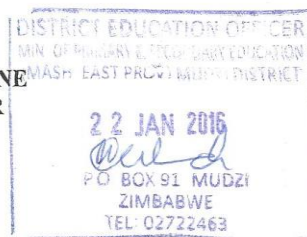
Reference is made to your minute dated 12 January 2016

Please be advised that permission has been granted that you carry out research work in our schools. You are accordingly being asked to furnish the Ministry with information about your findings so that we share the knowledge for the benefit of the system as well as our nation at large.

We wish you all the best and hope to hear from you after completing your project work.



HUMAN RESOURCES OFFICER – DISCIPLINE
FOR PROVINCIAL EDUCATION DIRECTOR
MASHONALAND EAST PROVINCE



**APPENDIX J: A LETTER REQUESTING PERMISSION FROM THE MINISTRY OF
HIGHER AND TERTIARY EDUCATION, SCIENCE AND TECHNOLOGY
DEVELOPMENT TO CONDUCT RESEARCH AT NYADIRE TEACHERS' COLLEGE**

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

15 October 2015

The Permanent Secretary
Ministry of Higher and Tertiary Education, Science and Technology Development
6th Floor
New Government Complex
P.O. Box CY 7732
Causeway
ATTENTION: Director Human Resources

Dear Sir/Madam

**RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT NYADIRE
TEACHERS' COLLEGE.**

I, Zimbiti Clementine Tichaona am doing research with Pitsoe V.J., a professor in the Department of Leadership and Management towards a Doctor of Education at the University of South Africa (UNISA). I am requesting for permission to carry out a study entitled '*Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions*' at Nyadire Teachers' College.

The aim of the study is to find challenges faced by student teachers in engaging learners in philosophical inquiry as well as ways of overcoming them.

Nyadire Teachers' College has been selected because that is where the researcher observed the problem and that is where she works, so she can have an in-depth study of the problem.

The study will entail conducting individual interviews with 10 lecturers and eight student teachers on attachment who will also be observed teaching. I will also collect data through analysing running documents of the eight student teachers on teaching practice. Letters seeking permission to observe students teaching in schools in Mashonaland East province will be written to the Ministry of Primary and Secondary Education. I will conduct five focus group discussions with students who are on campus during on Saturdays. It will also involve one lecturer from the Theory of Education department who will moderate five focus group interviews each with eight participants

The benefits of this study are to improve student teachers' practice, develop thinking skills in the learners they teach, highlight challenges in teaching critical thinking through philosophical inquiry and find feasible solutions and also to improve teacher education towards a critical pedagogy.

There are no potential risks. The research data collection procedures for this study were approved by the College of Education Research Ethics Review Committee of UNISA on the 19th of August 2015 (see attached copy of research ethics clearance certificate Ref # : 2015/08/19/53295773/22/MC).

If you have questions about this study please ask me. My contact number is +263-773086686 and my e-mail is czimbiti@gmail.com

Feedback procedure will entail writing a summary of research findings to the participants (student teachers) and the institution.

Thank you in advance

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Zimbiti'.

Zimbiti Clementine Tichaona

The Researcher

APPENDIX K: A LETTER REQUESTING PERMISSION FROM THE PRINCIPAL TO CONDUCT RESEARCH AT NYADIRE TEACHERS' COLLEGE

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

15 October 2015

Mrs R. Nyarugwe
Nyadire Teachers' College
Administration Block, Principal's Office
Cell: +263 773 478 328
E-mail address: rnyarugwe@gmail.com

Dear Mrs Rosemary Nyarugwe

**RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT NYADIRE
TEACHERS' COLLEGE.**

I, Zimbiti Clementine Tichaona am doing research with Pitsoe V.J., a professor in the Department of Leadership and Management towards a Doctor of Education at the University of South Africa. I am requesting for permission to carry out a study entitled *Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions* at your institution.

The aim of the study is to find challenges being faced by student teachers in engaging learners in philosophical inquiry as well as ways of overcoming them.

Your institution has been selected because that is where the researcher observed the problem and that's where she works so she can have an in-depth study of the problem.

The study will entail interviewing lecturers and student teachers as well as observing student teachers on attachment teaching. I will conduct focus group interviews with students who are on campus. It will also involve one lecturer from Theory of Education department who will moderate the focus group interviews

The benefits of this study are to improve student teachers' practice, develop thinking skills in the learners they teach, highlight challenges in teaching critical thinking through philosophical inquiry and find feasible solutions and also to improve teacher education towards a critical pedagogy.

There are no potential risks. The research data collection procedures for this study were approved by the College of Education Research Ethics Review Committee on the 19th of August 2015 (see attached copy of research ethics clearance certificate Ref # : 2015/08/19/53295773/22/MC).

If you have questions about this study please ask me. My contact number is +263-773086686 and my e-mail is czimbiti@gmail.com

Feedback procedure will entail writing a summary of research findings to the participants (student teachers) and the institution.

Tank you in advance

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Zimbiti'.

Zimbiti Clementine Tichaona

The Researcher

APPENDIX L: A LETTER REQUESTING PERMISSION FROM THE MINISTRY OF PRIMARY AND SECONDARY EDUCATION TO CONDUCT RESEARCH IN EIGHT PRIMARY SCHOOLS IN MASHONALAND EAST PROVINCE

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

18 January 2016

The Permanent Secretary
Ministry of Primary and Secondary Education
Ambassador House, 88 Kwame Nkrumah
Corner Kwame Nkrumah and Sam Nunjoma
Harare
Tel: 263-4-734071/4, 734051

Dear Sir/Madam

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN PRIMARY SCHOOLS IN MASHONALAND EAST PROVINCE.

I, Zimbiti Clementine Tichaona am doing research with Pitsoe V.J., a professor in the Department of Leadership and Management towards a Doctor of Education at the University of South Africa. I am requesting for permission to carry out a study in your schools entitled *Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions*.

The aim of the study is to find challenges faced by student teachers in engaging learners in philosophical inquiry or critical thinking as well as ways of overcoming them.

Data will be collected through:

- interviewing eight student teachers on teaching practice as well as observe them teaching; (in primary schools).
- document analysis of teaching practice documents for the eight teachers; (in primary schools).
- conducting individual interviews with 10 lecturers (at College).
- conducting five focus group interviews with 40 student teachers on campus on (at College).

Your schools in Mashonaland East Province have been selected because that is where most of the student teachers from Nyadire Teachers' College are deployed for teaching

practice and the selected participants for the study are teaching in this province in schools indicated below. I am therefore requesting your permission to collect data in these schools. The collection of data will entail interviewing student teachers as well as observing them teaching their pupils and analysing their documents. Observations will be done during normal learning hours.

Identified student teachers' for interviews, observations and document analysis are in the following primary schools

SCHOOL	DISTRICT
Muchinjike	Murewa
Zaranyika	Murewa
Musanhi	Uzumba-Maramba-Pfungwe
Matoranhembe	Uzumba-Maramba-Pfungwe
Chitimbe	Uzumba-Maramba-Pfungwe
Katsukunya	Mutoko
Karonga	Mudzi

The benefits of this study are to improve student teachers' practice, develop thinking skills in the learners they teach, highlight challenges in teaching critical thinking through philosophical inquiry and find feasible solutions and also to improve teacher education towards a critical pedagogy.

There are no potential risks. The research data collection procedures for this study were approved by the College of Education Research Ethics Review Committee of UNISA on the 19th of August 2015 and permission to carry out a study was also granted by your office (see attached copy of research ethics clearance certificate Ref # : 2015/08/19/53295773/22/MC and letter of permission from the Ministry of Higher and Tertiary Education, Science and Technology Development and the Principal of Nyadire Teachers' College).

If you have questions about this study please ask me. My contact number is +263-773086686 and my e-mail is czimbiti@gmail.com

Feedback procedure will entail writing a summary of research findings to the participants (student teachers) and the institution.

Thank you in advance

Yours sincerely



Zimbiti Clementine Tichaona

APPENDIX M: A LETTER REQUESTING PERMISSION FROM THE PROVINCIAL EDUCATION DIRECTOR TO CONDUCT RESEARCH IN EIGHT PRIMARY SCHOOLS IN MASHONALAND EAST PROVINCE

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

12 January 2016

The Provincial Education Director
Ministry of Primary and Secondary Education
P. O. Box 752
Marondera

Dear Sir/Madam

RE: REQUEST TO CONDUCT A RESEARCH IN EIGHT PRIMARY SCHOOLS IN MASHONALAND EAST PROVINCE.

I, Zimbiti Clementine Tichaona am doing research with Pitsoe V.J., a professor in the Department of Leadership and Management towards a Doctor of Education at the University of South Africa. I am requesting for to carry out a study in your schools entitled ***Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions***. Permission for the study has been given by the Ministry of Higher and Tertiary, Science and Technology Development and the Ethics Committee of the College of Education, UNISA. The Ministry of Primary and Secondary Education granted the permission to collect data in your schools.

The aim of the study is to find challenges faced by student teachers in engaging learners in philosophical inquiry or critical thinking as well as ways of overcoming them.

Data will be collected through:

- **interviewing eight student teachers on teaching practice as well as observe them teaching their pupils (in primary schools).**
- **document analysis of teaching practice documents for the eight student teachers (in primary schools).**

Your schools in Mashonaland East Province have been selected because that is where most of the student teachers from Nyadire Teachers' College are deployed for teaching

practice and the selected participants for the study are teaching in this province in schools indicated below.

SCHOOL	DISTRICT
Muchinjike	Murewa
Zaranyika	Murewa
Musanhi	Uzumba-Maramba-Pfungwe
Matoranhembe	Uzumba-Maramba-Pfungwe
Chitimbe	Uzumba-Maramba-Pfungwe
Katsukunya	Mutoko
Tsiko	Mutoko
Karonga	Mudzi

The benefits of this study are to improve student teachers' practice, develop thinking skills in the learners they teach, highlight challenges in teaching critical thinking through philosophical inquiry and find feasible solutions and also to improve teacher education towards a critical pedagogy.

There are no potential risks. The research data collection procedures for this study were approved by the College of Education Research Ethics Review Committee of UNISA on the 19th of August 2015 and the certificate reference number is Ref:#2015/08/19/53295773/22/MC.

If you have questions about this study please ask me. My contact number is +263-773086686 and my e-mail is czimbiti@gmail.com

Feedback procedure will entail writing a summary of research findings to the participants (student teachers), the institution and the Ministry of Primary and Secondary Education.

Thank you in advance

Yours sincerely,



Zimbiti Clementine Tichaona (The Researcher)

**APPENDIX N: A LETTER REQUESTING PERMISSION FROM THE DISTRICT
EDUCATION OFFICER TO CONDUCT RESEARCH IN TWO PRIMARY SCHOOLS IN
MUTOKO DISTRICT**

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

20 January 2016

The District Education Officer
Mutoko District

Dear Sir/Madam

**RE: REQUEST TO CONDUCT A RESEARCH AT AND
PRIMARY SCHOOLS IN MUTOKO DISTRICT**

I, Zimbiti Clementine Tichaona am doing research with Pitsoe V.J., a professor in the Department of Leadership and Management towards a Doctor of Education at the University of South Africa. I am requesting to carry out a study in your school, Karonga Primary, entitled ***Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions.*** Permission to carry out the study has been given by the Ministry of Higher and Tertiary, Science and Technology Development and the Ethics Committee of the College of Education, UNISA. The Ministry of Primary and Secondary Education granted the permission to collect data in your schools (see attached letters from the Head office and Provincial Education Director - Mashonaland East Provincial office).

The aim of the study is to find challenges faced by student teachers in engaging learners in philosophical inquiry or critical thinking as well as ways of overcoming them.

Data will be collected through:

- interviewing student teachers on teaching practice as well as observe them teaching their pupils (in primary schools).
- document analysis of teaching practice documents for the eight student teachers (in primary schools).

Your district has been selected because that is where some of the student teachers from Nyadire Teachers' College who are participants in this study are deployed for teaching practice

The benefits of this study are to improve student teachers' practice, develop thinking skills in the learners they teach, highlight challenges in teaching critical thinking through philosophical inquiry and find feasible solutions and also to improve teacher education towards a critical pedagogy.

There are no potential risks. Observations will be done during normal learning hours. The research data collection procedures for this study were approved by the College of Education Research Ethics Review Committee of UNISA on the 19th of August 2015 and the certificate reference number is Ref:#2015/08/19/53295773/22/MC.

If you have questions about this study please ask me. My contact number is +263-773086686 and my e-mail is czimbiti@gmail.com

Feedback procedure will entail writing a summary of research findings to the participants (student teachers), Nyadire Teachers' College and the Ministry of Primary and Secondary Education

Thank you in advance

Yours sincerely,



Zimbiti Clementine Tichaona

The Researcher

APPENDIX O: A LETTER REQUESTING PERMISSION FROM THE HEAD TO CONDUCT RESEARCH AT A PRIMARY SCHOOL

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

20 January 2016

The Head
..... Primary School
..... District

Dear Sir/Madam

RE: REQUEST TO CONDUCT A RESEARCH AT KARONGA PRIMARY SCHOOL IN MUDZI DISTRICT

I, Zimbiti Clementine Tichaona am doing research with Pitsoe V.J., a professor in the Department of Leadership and Management towards a Doctor of Education at the University of South Africa. I am requesting to carry out a study at your school, Karonga Primary, entitled ***Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions.*** Permission for the study has been given by the Ministry of Higher and Tertiary, Science and Technology Development and the Ethics Committee of the College of Education, UNISA. The Ministry of Primary and Secondary Education Head office, Provincial Education Director- Mashonaland East Provincial office and the District Education officer, Mudzi, granted the permission to collect data in your school (see attached letter)

The aim of the study is to find challenges faced by student teachers in engaging learners in philosophical inquiry or critical thinking as well as ways of overcoming them.

Data will be collected through:

- interviewing student teachers on teaching practice as well as observe them teaching their pupils (in primary schools).
- document analysis of teaching practice documents for the eight student teachers (in primary schools).

Your school has been selected because that is where one of the student teachers from Nyadire Teachers' College who is a participant in this study is deployed for teaching practice

The benefits of this study are to improve student teachers' practice, develop thinking skills in the learners they teach, highlight challenges in teaching critical thinking through philosophical inquiry and find feasible solutions and also to improve teacher education towards a critical pedagogy.

There are no potential risks. Observations will be done during normal learning hours. The research data collection procedures for this study were approved by the College of Education Research Ethics Review Committee of UNISA on the 19th of August 2015 and the certificate reference number is Ref:#2015/08/19/53295773/22/MC.

If you have questions about this study please ask me. My contact number is +263-773086686 and my e-mail is czimbiti@gmail.com.

Feedback procedure will entail writing a summary of research findings to the participants (student teachers), Nyadire Teachers' College and the Ministry of Primary and Secondary Education

Thank you in advance

Yours sincerely,



Zimbiti Clementine Tichaona

The Researcher

APPENDIX P: A LETTER REQUESTING PARENTAL CONSENT FOR PARTICIPATION OF A MINOR IN A RESEARCH PROJECT

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

24 January 2016

Dear Parent

RE: REQUEST FOR YOUR CONSENT FOR PARTICIPATION OF YOUR CHILD IN A STUDY.

Your child is invited to participate in a study entitled Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions. I am undertaking this study as part of my doctoral research at the University of South Africa (UNISA). The purpose of the study is to come up with feasible solutions to challenges that are faced by student teachers of Nyadire Teachers' College in teaching philosophical skills and the possible benefits of the study are the improvement of Nyadire Teachers' College students practice and thinking skills in children. The permission to carry out the study at your child's school was given by the head of the school. I am asking permission to include your child in this study because he/she belongs to the grade which my study is focusing on. I expect to have 39 other children from his/her class.

If you allow your child to participate, I shall request him/her to

- Attend lessons as usual
- Take part in a class discussion

I will observe your child and other children engaging in all these activities. His or Her class will be observed in about three lessons staggered over a month

Any information that is obtained in connection with this study and can be identified with your child will remain confidential and will only be disclosed with your permission. His or her responses will not be linked to his or her name or your name or the school's name in any written or verbal report based on this study. Such a report will be used for research purposes only.

There are no foreseeable risks to your child by participating in the study. Your child will receive no direct benefit from participating in the study; however, the possible benefits to education are improvement of his/her teacher's practice and your child's thinking skills. Neither your child nor you will receive any type of payment for participating in this study.

Your child's participation in this study is voluntary. Your child may decline to participate or to withdraw from participation at any time. Withdrawal or refusal to participate will not affect him/her in any way. Similarly you can agree to allow your child to be in the study now and change your mind later without any penalty. The study will take place during regular classroom activities with the prior approval of the school and your child's teacher. However, if you do not want your child to participate, an alternative activity will be available.

In addition to your permission, your child must agree to participate in the study and you and your child will also be asked to sign the assent form which accompanies this letter. If your child does not wish to participate in the study, he or she will not be included and there will be no penalty. The information gathered from the study and your child's participation in the study will be stored securely on a password locked computer in my locked office for five years after the study. Thereafter, records will be erased.

The research data collection procedures for this study were approved by the College of Education Research Ethics Review Committee of UNISA on the 19th of August 2015 and the certificate reference number is Ref:#2015/08/19/53295773/22/MC.

If you have questions about this study please ask me or my study supervisor, Prof V.J. Pitsoe Department of Leadership and Management, College of Education, University of South Africa. My contact number is+263 773086686 and my e-mail is czimbiti@gmail.com. The e-mail of my supervisor is pistov@unisa.ac.za. Permission for the study has already been given by District Education Officer for Mutoko

You are making a decision about allowing your child to participate in this study. Your signature below indicates that you have read the information provided above and have decided to allow him or her to participate in the study. You may keep a copy of this letter.

Name of child: -----

Sincerely

_____	_____	_____
Parent/guardian's name (print)	Parent/guardian's signature:	Date:
_____	_____	_____
Researcher's name (print)	Researcher's signature	Date:

APPENDIX Q: A LETTER REQUESTING ASSENT FROM A PRIMARY SCHOOL PUPIL

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

18 May 2015

Dear

RE: REQUEST FOR YOUR ASSENT TO PARTICIPATE IN A RESEARCH PROJECT

Hello. My name is Clementine T. Zimbiti. I am writing this letter to request you to participate in a study on problems faced by trainee teachers from Nyadire Teachers College in teaching thinking. The aim of the study is to find ways that teachers can use to teach you thinking skills better.

In this letter I am going to explain what I would like you to do if you agree to participate in this study. You will be learning with your classmates. You will participate in class discussions. I will be sitting in your classroom during the lessons. Nothing bad will happen to you because of your participation in this study. You will not be given anything but you will improve your thinking.

Your participation is a secret between you and me. I will not write or tell people your name. You can choose not to participate if you do not want. You are free to stop participating at any time without any punishment. You need to talk to your parents about participating before signing the form. I will write a letter to your parent(s)/guardian(s) asking them to give you permission to participate. I will give one of the signed form to your parent(s)/guardian(s)

If you decide to be part of my study, you will be asked to sign the form on the next page. If you have any other questions about this study, you can talk to me or you can have your parent or another adult call me at +263 773 086 686 or email me at czimbiti@gmail.com .Do not sign the form until you have all your questions answered and you are sure of what I would like you to do.

Yours Sincerely



Researcher: Zimbiti Clementine Tichaona

Phone number: +263 773 086 686

Do not sign written assent form if you have any questions. Ask your questions first and ensure that someone answers those questions.

WRITTEN ASSENT

I have read this letter which asks me to be part of a study at my school. I have understood the information about the study and I know what I will be asked to do. I am willing to be in the study.

_____	_____	_____
Learner's name (print)	Learner's signature	Date
Date		

_____	_____	_____
Witness's name (print)	Witness's signature	Date

(The witness is over 18 years old and present when signed.)

_____	_____	_____
Parent/guardian's name (print)	Parent/guardian's signature:	Date:

_____	_____	_____
Researcher's name (print)	Researcher's signature:	Date
Date:		

APPENDIX R: A LETTER REQUESTING A LECTURER'S CONSENT TO PARTICIPATE IN AN INTERVIEW

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

18 October 2015

Dear

RE: A REQUEST FOR YOUR PARTICIPATION AS AN INTERVIEWEE IN A RESEARCH PROJECT.

This letter is an invitation to consider participating in a study I, Zimbiti Clementine Tichaona, am conducting as part of my research as a doctoral student entitled Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions, at the University of South Africa (UNISA). Permission for the study has been given by the Principal of Nyadire Teachers' College and the Ethics Committee of the College of Education, UNISA. I have purposefully identified you as a possible participant because of your valuable experience and expertise related to my research topic.

I would like to provide you with more information about this project and what your involvement would entail if you should agree to take part. The importance of philosophical skills and thinking critically in education is substantial and well documented. Student teachers on teaching practice are facing challenges in engaging their pupils in philosophical inquiry. It is important therefore, to find out challenges faced so as to come up with feasible solutions. In this interview I would like to have your views and opinions on this topic. This information can be used to improve teacher education, teachers' practice and pupils thinking skills.

Your participation in this study is voluntary. It will involve an interview of approximately 20 minutes in length to take place in a mutually agreed upon location at a time convenient to you. You may decline to answer any of the interview questions if you so wish. Furthermore, you may decide to withdraw from this study at any time without any negative consequences.

With your kind permission, the interview will be audio-recorded to facilitate collection of accurate information and later transcribed for analysis. Shortly after the transcription has been completed, I will send you a copy of the transcript to give you an opportunity to confirm the accuracy of our conversation and to add or to clarify any points. All information you provide is considered completely confidential. Your name will not appear

in any publication resulting from this study and any identifying information will be omitted from the report. However, with your permission, anonymous quotations may be used. Data collected during this study will be retained on a password protected computer for 5 years in my locked office. There are no known or anticipated risks to you as a participant in this study. The research data collection procedures for this study were approved by the College of Education Research Ethics Review Committee of UNISA on the 19th of August 2015 and the certificate reference number is Ref #: 2015/08/19/53295773/22/MC.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact me at +263 773 086 686 or by e-mail at czimbiti@gmail.com.

.I look forward to speaking with you very much and thank you in advance for your assistance in this project. If you accept my invitation to participate, I will request you to sign the consent form which follows on the next page.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Zimbiti', with a stylized flourish at the end.

Zimbiti Clementine Tichaona

CONSENT FORM

I have read the information presented in the information letter about the study, Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions in education. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and add any additional details I wanted. I am aware that I have the option of allowing my interview to be audio recorded to ensure an accurate recording of my responses. I am also aware that excerpts from the interview may be included in publications to come from this research, with the understanding that the quotations will be anonymous. I was informed that I may withdraw my consent at any time without penalty by advising the researcher. With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Participant's Name (Please print): _____

Participant Signature: _____

Researcher Name:(Please print)_____

Researcher Signature:_____

Date:_____

APPENDIX S: A LETTER REQUESTING A STUDENT TEACHER'S CONSENT TO PARTICIPATE IN AN INTERVIEW AND TO BE OBSERVED TEACHING

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

26 November 2015

Dear

RE: A REQUEST FOR YOUR PARTICIPATION AS AN INTERVIEWEE AND TO TEACH PUPILS UNDER OBSERVATION

This letter is an invitation to consider participating in a study I, Zimbati Clementine Tichaona, am conducting as part of my research as a doctoral student entitled Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions, at the University of South Africa (UNISA). Permission for the study has been given by the Principal of Nyadire Teachers College, the District Education Officer of Mutoko and the Ethics Committee of the College of Education, UNISA. I have purposefully identified you as a possible participant because of your valuable experience and expertise related to my research topic.

I would like to provide you with more information about this project and what your involvement would entail if you should agree to take part. The importance of philosophical skills and thinking critically in education is substantial and well documented. Student teachers on teaching practice are facing challenges in engaging their pupils in philosophical inquiry. It is important therefore, to find out challenges faced so as to come up with feasible solutions. In this interview I would like to have your views and opinions on this topic. This information can be used to improve teacher education, teachers' practice and pupils thinking skills.

Your participation in this study is voluntary. It will involve an interview of approximately 20minutes in length to take place in a mutually agreed upon location at a time convenient to you. I will also be requesting to observe you whilst teaching your class. You may decline to be observed even to answer any of the interview questions if you so wish. Furthermore, you may decide to withdraw from this study at any time without any negative consequences.

With your kind permission, the interview and the lessons to be observed will be audio-recorded to facilitate collection of accurate information and later transcribed for analysis. Shortly after the transcription has been completed, I will send you a copy of the transcript to give you an opportunity to confirm the accuracy of our conversation, what transpired during the lessons observed and to add or to clarify any points. All information you provide is considered completely confidential. Your name will not appear in any publication resulting from this study and any identifying information will be omitted from the report. However, with your permission, anonymous quotations may be used. Data collected during this study will be retained on a password protected computer for five years in my locked office. There are no known or anticipated risks to you as a participant in this study. The research data collection procedures for this study were approved by the College of Education Research Ethics Review Committee of UNISA on the 19th of August 2015 and the certificate reference number is Ref:#2015/08/19/53295773/22/MC.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact me at +263 773 086 686 or by e-mail at czimbiti@gmail.com.

I look forward to speaking with you very much and thank you in advance for your assistance in this project. If you accept my invitation to participate, I will request you to sign the consent form which follows on the next page.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Zimbiti', with a stylized flourish at the end.

Zimbiti Clementine Tichaona

CONSENT FORM

I have read the information presented in the information letter about the study, Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions in education. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and add any additional details I wanted. I am aware that I have the option of allowing my interview and lessons to be audio recorded to ensure an accurate recording of my responses and lesson activities respectively. I am also aware that excerpts from the interview may be included in publications to come from this research, with the understanding that the quotations will be anonymous. I was informed that I may withdraw my consent at any time without penalty by advising the researcher. With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Participant's Name (Please print): _____

Participant Signature: _____

Researcher Name:(Please print)_____

Researcher Signature:_____

Date:_____

APPENDIX T: A LETTER REQUESTING A LECTURER'S CONSENT TO MODERATE FOCUS GROUP INTERVIEWS

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

16 October 2015

Dear

RE: A REQUEST FOR YOUR PARTICIPATION AS A MODERATOR OF FOCUS GROUP INTERVIEWS IN A RESEARCH PROJECT.

This letter is an invitation to consider participating in a study I, Zimbiti Clementine Tichaona, am conducting as part of my research as a doctoral student entitled Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions, at the University of South Africa (UNISA). Permission for the study has been given by the Principal of Nyadire Teachers' College and the Ethics Committee of the College of Education, UNISA. I have purposefully identified you as a possible moderator because of your valuable experience and expertise in moderating discussions in research as well as your knowledge of my research topic.

I would like to provide you with more information about this project and what your involvement would entail if you should agree to take part. The importance of philosophical skills and thinking critically in education is substantial and well documented. Student teachers on teaching practice are facing challenges in engaging their pupils in philosophical inquiry. It is important therefore, to find out challenges being faced so as to come up with feasible solutions. In these interviews I would like you to elicit participants' views and opinions on this topic. This information can be used to improve teacher education, teachers' practice and pupils thinking skills.

Your participation in this study is voluntary. It will involve moderating five focus group interviews each with eight participants who will be student teachers of Nyadire Teachers' College on campus. Each interview will be one hour in length and will take place at the College campus at a time convenient to you and other participants involved. You will use a focus group interview guide which I constructed. We will discuss more about the guide, the focus of the research and the interview proceedings if you volunteer to participate in this study. You will be paid as per government rates. Furthermore, you may decide to withdraw from this study at any time without any negative consequences.

With your kind permission, the interviews will be audio-recorded to facilitate collection of accurate information and later transcribed for analysis. Shortly after the transcription has been completed, I will send you a copy of the transcript to give you an opportunity to confirm the accuracy of the discussions and to add or to clarify any points. All information that you and the discussants will provide will be considered completely confidential. Your name will not appear in any publication resulting from this study and any identifying information will be omitted from the report. However, with your permission, anonymous quotations may be used. Data collected during this study will be retained on a password protected computer for 5 years in my locked office. There are no known or anticipated risks to you as a participant in this study. The research data collection procedures for this study were approved by the College of Education Research Ethics Review Committee of UNISA on the 19th of August 2015 and the certificate reference number is Ref:#2015/08/19/53295773/22/MC.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact me at +263 773 086 686 or by e-mail at czimbiti@gmail.com.

I look forward to have you as a moderator during focus group interviews and thank you in advance for your assistance in this project. If you accept my invitation to participate, I will request you to sign the consent form which follows on the next page.

Yours sincerely



Zimbiti Clementine Tichaona



CONSENT FORM

I have read the information presented in the information letter about the study, Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and add any additional details I wanted. I am aware that I have the option of allowing the focus group interviews to be audio recorded to ensure an accurate recording of the discussions. I am also aware that excerpts from the discussion may be included in publications to come from this research, with the understanding that the quotations will be anonymous. I was informed that I may withdraw my consent at any time without penalty by advising the researcher. With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Participant's Name (Please print): _____

Participant Signature: _____

Researcher Name:(Please print)_____

Researcher Signature:_____

Date:_____

FOCUS GROUP/INTERVIEW ASSENT AND CONFIDENTIALITY AGREEMENT

I _____ grant consent/assent that the information I share during the group discussions (focus group interviews) may be used by the researcher, Zimbiti Clementine T, for research purposes. I am aware that the group discussions will be digitally recorded and grant consent/assent for these recordings, shared in the group discussions to any person outside the group in order to maintain confidentiality.

Participant's Name (Please print): _____

Participant Signature: _____

Researcher's Name: (Please print): _____

Researcher's Signature: _____

Date: _____

APPENDIX U: A LETTER REQUESTING A STUDENT TEACHER'S CONSENT TO PARTICIPATE IN A FOCUS GROUP INTERVIEW

Nyadire Teachers' College
Administration Block Room 5
P.O. Box 210
Mutoko

18 October 2015

Dear

RE: A REQUEST FOR YOUR PARTICIPATION AS AN INTERVIEWEE IN A FOCUS GROUP INTERVIEW

This letter is an invitation to consider participating in a study I, Zimbiti Clementine Tichaona, am conducting as part of my research as a doctoral student entitled Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions, at the University of South Africa (UNISA). Permission for the study has been given by the Principal of Nyadire Teachers' College and the Ethics Committee of the College of Education, UNISA. I have purposefully identified you as a possible participant because of your valuable experience and expertise related to my research topic.

I would like to provide you with more information about this project and what your involvement would entail if you should agree to take part. The importance of philosophical skills and thinking critically in education is substantial and well documented. Student teachers on teaching practice are facing challenges in engaging their pupils in philosophical inquiry. It is important therefore, to find out challenges being faced so as to come up with feasible solutions. In this interview I would like to have your views and opinions on this topic. This information can be used to improve teacher education, teachers' practice and pupils thinking skills.

Your participation in this study is voluntary. It will involve participation in a group discussion approximately 1 hour in length to take place in a mutually agreed upon location at a time convenient to all group participants. The group will be made up of 8 student teachers who taught the same grade of the three grades 4, 5 and 6 during teaching practice. Other participants will be the moderator and the researcher will be an

observer. You may decline to answer any of the interview questions if you so wish. Furthermore, you may decide to withdraw from this study at any time without any negative consequences.

With your kind permission, the interview will be audio-recorded to facilitate collection of accurate information and later transcribed for analysis. Shortly after the transcription has been completed, I will send you a copy of the transcript to give you an opportunity to confirm the accuracy of the discussion and to add or to clarify any points. All information you provide is considered completely confidential. Your name will not appear in any publication resulting from this study and any identifying information will be omitted from the report. However, with your permission, anonymous quotations may be used. Data collected during this study will be retained on a password protected computer for five years in my locked office. There are no known or anticipated risks to you as a participant in this study. The research data collection procedures for this study were approved by the College of Education Research Ethics Review Committee of UNISA on the 19th of August 2015 and the certificate reference number is Ref:#2015/08/19/53295773/22/MC.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact me at +263 773 086 686 or by e-mail at czimbiti@gmail.com.

.I look forward to speaking with you very much and thank you in advance for your assistance in this project. If you accept my invitation to participate, I will request you to sign the consent form which follows on the next page.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Zimbiti', with a stylized flourish at the end.

Zimbiti Clementine Tichaona

FOCUS GROUP/INTERVIEW ASSENT AND CONFIDENTIALITY AGREEMENT

I _____ grant consent/assent that the information I share during the group discussions (focus group interviews) may be used by the researcher, Zimbiti Clementine T, for research purposes. I am aware that the group discussions will be digitally recorded and grant consent/assent for these recordings, shared in the group discussions to any person outside the group in order to maintain confidentiality.

Participant's Name (Please print): _____

Participant Signature: _____

Researcher's Name: (Please print): _____

Researcher's Signature: _____

Date: _____

CONSENT FORM

I have read the information presented in the information letter about the study, Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and add any additional details I wanted. I am aware that I have the option of allowing the focus group interviews to be audio recorded to ensure an accurate recording of the discussions. I am also aware that excerpts from the interview may be included in publications to come from this research, with the understanding that the quotations will be anonymous. I was informed that I may withdraw my consent at any time without penalty by advising the researcher. With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Participant's Name (Please print): _____

Participant Signature: _____

Researcher Name:(Please print)_____

Researcher Signature:_____

Date:_____

APPENDIX V: INTERVIEW GUIDE FOR STUDENT TEACHERS ON TEACHING PRACTICE

PARTICIPANT: ----- (Code)

SCHOOL:----- (Code)

VENUE -----

Establishing Rapport – Hello!. My name is Clementine T. Zimbiti. I am studying for a Doctor in Education Degree in Philosophy of Education with University of South Africa. My research title is Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions.

Purpose – I would want to ask you some questions on challenges that you are facing in engaging your pupils in philosophical inquiry as a practicing teacher. The interview will be audio-taped and I will be taking notes when necessary so as to capture everything that you are going to say. Feel free to respond to the questions that I will be asking. Your name will not be attached to any of your responses.

Motivation – I hope to use this information to find the challenges that you faced in engaging pupils in philosophical inquiry and feasible solutions. This information will enable policy makers, curriculum planners in Zimbabwe and teacher educators at Nyadire Teachers' College to have a relook at primary school curricula and teacher education in line with critical pedagogy respectively.

Time – The interview should last about 20 minutes. Are you free to respond to some questions?

Interview questions

1. What is your understanding of engaging learners in philosophical inquiry during learning?
2. Are you aware that you should engage your pupils in philosophical inquiry?
3. Do you engage your learners in philosophical inquiry when teaching them in various subjects?

4. What is the importance of teaching philosophical skills to primary school learners?
5. Explain the challenges you are facing in teaching philosophical skills or thinking skills.
6. To what extent do these challenges affect the teaching of thinking in all the subjects you teach?
7. How can these challenges be overcome.

Conclusion

Thank you very much for your time and contributions. I guarantee full confidentiality of the information you gave me. Would you like a summary of the results of the study? This will be available when the research is completed.

APPENDIX W: INTERVIEW SCHEDULE FOR LECTURERS

Lecturer:----- (Code)

Department: ----- (Code)

Venue: -----

Date: -----

Establishing Rapport -- Hello. My name is Clementine Zimbiti. I am studying for a Post Higher Degree in Philosophy of Education with University of South Africa. My research title is Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions. You are welcome to this interview.

Purpose – I would want to ask you some questions on how you are preparing your student teachers to be philosophically oriented in their practice. I observed that Nyadire Teachers' College students faced challenges in engaging their pupils in philosophical inquiry as practicing teachers. The interview will be audio-taped and I will be taking notes where and when necessary so as to capture everything that you are going to say. Feel free to respond to the questions that I will be asking. Your name will not be attached to any of your responses.

Motivation – I hope to use this information to find the challenges that student teachers of Nyadire Teachers College faced in engaging pupils in philosophical inquiry and feasible solutions. This information will enable policy makers, curriculum planners in Zimbabwe and teacher educators at Nyadire Teachers' College to have a relook at primary school curricula and teacher education.

Time – The interview should last about 20 minutes. Are you free to respond to some questions?

Interview questions

1. What do you understand by philosophical skills?
2. How important are philosophical skills to your students?

3. What is it that you are doing in your department to make sure that your students are philosophically oriented?
4. How effective are your efforts in enabling your student teachers to be reflective teachers?
5. From your teaching practice supervision experience, what challenges do your students face in engaging their learners in critical thinking?
6. To what extent do you employ critical pedagogy in your teaching/lectures?
7. What can be done to overcome these challenges?

Conclusion -- Thank you very much for your time and responses. I guarantee full confidentiality of the information you gave me. Would you like a summary of the results of the study? This will be available when the research is completed.

APPENDIX X: FOCUS GROUP DISCUSSION GUIDE FOR STUDENT TEACHERS ON CAMPUS

Research title: Challenges faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions

Moderator: ----- (Code)

Group number: -----

Number of Participants: -----

Venue: -----

Observer: Zimbiti Clementine Tichaona (The researcher)

Preliminary discussion

- a. Establishing Rapport
- b. Introductions
- c. Purpose –
- d. Motivation –
- e. Ground rules
- f. Confidentiality –
- g. Time –

Group interview questions

1. What is your understanding of philosophical inquiry?
2. Were you aware that you were expected to engage your pupils in philosophical inquiry?
3. What is the importance of teaching philosophical skills at primary school level?
4. How do you engage learners in a philosophical inquiry?
5. What challenges did you face in engaging your learners in a philosophical inquiry?
6. How did you address or try to address these challenges?
7. What do you think should be done to address the challenges?
8. To what extent were the lectures you attended before teaching practice effective in imparting you with skills to employ critical pedagogy in your practice?

Closing -- Is there anything else you think would be helpful for the researcher to have a better understanding of the challenges you faced in engaging your pupils in philosophical inquiry during your teaching practice.

Thank you very much for your participation. I hope that all of you will take what we have been discussing very confidential. You will receive a summary of the findings when the research has been completed.

APPENDIX Y: NON-PARTICIPANT OBSERVATION GUIDE FOR LESSONS

LESSON OBSERVATION

Establishing Rapport -- Hello. My name is Clementine T. Zimbiti. I am studying for a Doctor of Education Degree in Philosophy of Education with the University of South Africa. My research title is 'Challenges being faced by student teachers of Nyadire Teachers' College in engaging pupils in philosophical inquiry and feasible solutions'.

Purpose and procedure – I would want to observe you teaching your pupils. The purpose of this observation is to find how you engage your pupils in philosophical inquiry, challenges and feasible solutions. I will write the observations on the schedule which will not be accessed by anyone else. I will also use an audio recorder to record your lesson. Feel free to teach your pupils as usual. Your name will not be attached to the observations recorded.

Motivation – I hope to use this information to find the challenges that you faced in engaging pupils in philosophical inquiry and feasible solutions. This information will enable policy makers, curriculum planners in Zimbabwe and teacher educators at Nyadire Teachers' College to have a relook at primary school curricula and teacher education.

Confidentiality – All that I will observe will be confidential. It will not be shared with anyone. It is for research purposes only. No actual name will be attached to observation comments. These will be kept as confidential as possible. If you are not comfortable to be observed or about confidentiality of information you are free to withdraw without any penalty.

Pre-observation - Before you start teaching, may you provide me with information on the following –your pupils' grade, number of pupils, the subject you want to teach, the lesson topic and lesson objectives.

STUDENT TEACHER	(Code)
SCHOOL	(Code)
GRADE	
NUMBER OF PUPILS	
DATE	
TIME	
SUBJECT	
LESSON TOPIC	
LESSON OBJECTIVES	

FOR STUDENT TEACHER		
Looking for	Observation/Descriptive field notes	Reflective field notes
1.PLANNING <ul style="list-style-type: none"> Is there evidence that the lesson was well planned? What is it? 		
2.PEDAGOGY <ul style="list-style-type: none"> Ability to engage pupils in philosophical inquiry – Philosophical dialogue, education for democracy, problem solving 		

3.QUESTIONING TECHNIQUE <ul style="list-style-type: none"> Is the teacher asking lower order, higher order, thought provoking questions, simple recall questions 		
4.CLARITY <ul style="list-style-type: none"> The teacher's ability to simplify and explain concepts clearly. 		
5.LEARNING ENVIRONMENT <ul style="list-style-type: none"> Is it a creative climate? Describe. Is there psychological safety and psychological freedom? Describe Ability to adapt to learners' needs. Does the teacher promote an atmosphere of intellectual give and take? How? 		
6.CLASS MANAGEMENT SKILLS <ul style="list-style-type: none"> With-itness, sitting arrangement – community of inquiry, accommodating every learner 		
PUPILS		
LOOKING FOR	Observation/Descriptive field notes	Reflective field notes
1.ENGAGEMENT		

<ul style="list-style-type: none"> ▪ in the community of inquiry and participation 		
2.EXPRESSION <ul style="list-style-type: none"> ▪ Freedom to express their opinions, ability to articulate ideas 		
3.REASONING <ul style="list-style-type: none"> ▪ Ability to raise questions, to understand and think deeply about other learners' contributions, critique other learners' contributions. ▪ Evidence of critical thinking in the learners' responses-making use of reason and logic 		
4.RESPECT Respecting each other's point of view		
5.PROBLEM SOLVING SKILLS <ul style="list-style-type: none"> ▪ Decision making ▪ Ability to solve challenges and problems which require critical thinking. 		
Looking at	Observation/Descriptive field notes	Reflective field notes
The teacher		
Unexpected occurrences		
Pupils		
Unexpected occurrences		

Ending observation

Thank you very much for allowing me to observe your lesson. I guarantee full confidentiality of what I have observed. I will request to observe another lesson again sometime. Would you like a summary of the results of the study? This will be available when the research is completed

