

**CHALLENGES OF USING ACTION RESEARCH AS A TEACHING AND LEARNING
STRATEGY: A CASE OF A COLLEGE OF PRIMARY TEACHER EDUCATION IN
ZIMBABWE**

by

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DECLARATION

I, Buyisani Dube, hereby declare that:

CHALLENGES OF USING ACTION RESEARCH AS A TEACHING AND LEARNING STRATEGY: A CASE OF A COLLEGE OF PRIMARY TEACHER EDUCATION IN ZIMBABWE

is my own work and that it has not been submitted for any degree or examination purpose in any other institution or university, and that all the sources I have used and quoted have been indicated and acknowledged by means of complete references.

.....

B. Dube

.....

Date

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Finally, I am most grateful to God for the life and energy to engage in this research and to the UNIVEN community for the opportunity and financial support to see me through the study.

DEDICATION

This thesis is dedicated to:

- my parents, Mrs Virginia Mthimkhulu-Dube, for her motherly care and support in raising me up and the late Mr Benoni Mgwede Dube, who remained resolute in the need for my education and intellectual growth throughout his life, and
- My family members and daughter, Sandisiwe.

ABSTRACT

The study examined challenges that confront lecturers and student teachers at colleges of primary teacher education in Zimbabwe in the use of action research as a teaching and learning strategy. The study focused on lecturer competency, personal dispositions of students towards mastery of action research skills and institutional challenges. The mixed methods research design was used in this study. A combination of the two research approaches exhibits complementary strengths and non-overlapping weaknesses of the techniques, methods and processes involved. *Purposive* sampling technique was employed to choose one principal and 9 heads of departments while simple random sampling was used to select 140 student teachers. Qualitative data was generated through interviews, observation and documentary analysis. A survey was administered to obtain quantitative data. Thematic analysis was employed to analyse narrative data. Statistical Package for Social Sciences (SPSS) version 24 was used for statistical information. It was established that student teachers have limited practical experience in action research prior to proceeding on teaching practice as well as weak communication skills to support its conduct. The study recommends that lecturers should cater for the characteristics and experiences of student teachers when planning and delivering lectures in order to improve their acquisition of action research skills.

Key terms: Teacher education, action research, teaching strategy, colleges of primary education, 2-5-2 model of teacher training, teaching practice.

LIST OF ACRONYMS

DTE	Department of Teacher Education
TP	Teaching Practice
SCT	Social Cognitive Theory
MoHTESTD	Ministry of Higher and Tertiary Education, Science and Technology Development
HOD	Head of Department
POC	Principal of College
PS	Professional Studies
PSC	Professional Studies Syllabus C
PSD	Professional Studies Department

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CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

Primary teacher education institutions in Zimbabwe have embraced action research as part of their core curricular activities (Chivore, Mavundutse, Kuyayama-Tumbare, Gwaunza & Kangai, 2015:19). This component of the curriculum occupies a crucial position in the presentation and awarding of diplomas by the Department of Teacher Education (DTE) of the University of Zimbabwe to which eleven primary teachers' colleges are affiliated. The focus of this study is on action research that student teachers engage in, particularly in establishing measures for its success as a teaching and learning strategy. The enquiry is premised on the rationale that sound teaching and learning with a deeper involvement of students in investigation helps to boost their knowledge and teaching competences.

Action research employs action techniques in the process of devising a solution to a problem. It involves using a systematic method of planning, implementing, evaluating and reflecting on action taken (Gay & Airasian, 2003:15; Rawlinson & Mary, 2004:9; Stringer, 2007:3; Bruce, 2009:248). The approach strives to address problems that are context specific (Welman, Kruger & Mitchell, 2012:25). The concern may be on teaching of literacy and numeracy (Somekh & Zeichner, 2009:19) or improving student interaction in the classroom. Action research is a collaborative method to test new ideas and implement actions aimed at improving practice (Freebody, 2004:86; Rock & Wilson, 2005:78; Wilson, 2009:189). At its core, action research is an orientation towards understanding how change in one's practice can be of shared benefit with a community of practitioners. This study examined challenges that confront lecturers and student teachers at colleges of primary teacher education in using action research as a teaching and learning strategy.

The inclusion of research programmes and activities in higher education is a growing phenomenon the world over (Healey, Jenkins & Hensel, 2010:89) and relates to

current systems of formal education which require students to produce original and creative documents (Chibaya & Ziso, 2001:197). Research prepares students teachers for the modern academic world where the knowledge of inquiry and evaluation is of growing importance (Brew, 2001:144). Brew and Jewell (2012:52) note that research fosters the "creation of professionals capable of critical and creative thought".

Research evidence reveals the personal and professional gains that accrue to student teachers as a result of engaging in action research. The development and improvement in new knowledge and skills, critical thinking, confidence and problem-solving competencies are some of the positive results of action research practice. Research based learning provides students with experiences involved in inquiry and prepares them for further professional studies (Brew & Jewell, 2012:51). However, the workload of student teachers, requisite knowledge and institutional structures, the long hours of work required to make accurate observations and keep detailed notes and difficulties in achieving desired results frustrate the endeavour.

In Zimbabwe, all primary teacher education institutions follow the 2-5-2 model of teacher education in which pre-service teachers spend the first two terms (thirty-two weeks) at college being taught theory of education, academic subjects and research methods. In the second phase, students proceed to teaching practice where they are expected to combine theory with practice for five terms (eighty weeks) and finally return to college for revision and examinations for two terms (thirty-two weeks). This teacher training model is referred to as the 2-5-2 model (Mswazie & Gamira, 2011:112). The duration of the programme is three years and uses the traditional method adopted by conventional teacher education colleges (Kangai & Bakaliya, 2011:128). It is during the eighty weeks of teaching practice that student teachers have to do and complete action research. This study examines challenges that confront lecturers and student teachers at colleges of primary teacher education in using action research as a teaching and learning strategy.

The critical value of action research in primary teacher education and the teaching profession in general cannot be overemphasized. The competencies in research

practice that teachers acquire during pre-service training puts them in the right stead to deal with emergent classroom concerns. Action research links research with practice and action with reflection (Freebody, 2004:86; Punch, 2005:135; Reason & Bradbury, 2007:1; Johnson, 2012:20). This feature of action research provides teaching practitioners with hands on experience which further enhances knowledge development and instructional delivery. Those in possession of action research experience are capable of using logical reasoning to address issues of concern and become continuous learners in the process (Mills, 2011:46).

The action research theory that student teachers are exposed to during their first residential phase of training is intended to provide adequate grounding for them to practice that knowledge. Essential knowledge and skills needed to carry out an inquiry, and especially the understanding of action research as a collaborative and participatory process are pertinent for successful investigation (Bruce, 2009:247; Johnson & Christensen, 2008:12). The process also fosters reflective thinking in student teachers which is an important factor in quality instructional delivery and research outputs. This makes the expertise of colleagues to be shared even in the teaching of hard concepts.

Studies provide evidence of action research in the fields of Engineering, Nursing, Social Services and Education, but few known researchers has taken place in Higher Education and in primary teacher training institutions in particular (Barnard, de Luca & Jinrui, 2015:938; Bobrakov, 2014:80; Kulcu, 2014:186). This perceived dearth of activity in the area motivated this study, with the intention of closing the perceived gap in research and knowledge. It is pertinent that implementation of action research as a teaching strategy be examined in order to explicate challenges that confront lecturers and student teachers in using action research as a teaching and learning strategy.

1.2 STATEMENT OF THE PROBLEM

The use of action research as a strategy to investigate, improve practice and solve problems has increased in recent times. This has resulted in all colleges of primary teacher education in Zimbabwe being mandated to infuse action research practice in

their curriculum (Chivore *et al.*, 2015:19). While the theory and practice of action research is conducted in conjunction with other programme components, it is expected that the combined contributions of critical stakeholders, inclusive of principals, lecturers, student teachers and school-based mentors will make the endeavour feasible. It is also hoped that such institutions enrol candidates with the potential to use available resources to research and then use the results thereof in teaching and learning. Prince, Felder and Brent (2007:283) support research in teaching, stating that it illuminates essential course content and that there is a strong relationship between research and teacher performance.

However, evidence suggests that action research is either not well taught or not fully understood by student teachers at the selected college under study. The use of this approach revealed feedback problems which were noticed in weak research skills, lesson presentations and project write ups that attracted low grades, raising questions about the appropriateness of this methodology in enhancing student knowledge and understanding of the curriculum in primary teacher education. In view of this, the study examined challenges that confront lecturers and student teachers at colleges of primary teacher education using action research as a teaching and learning strategy.

1.3 PURPOSE OF THE STUDY

This study examined challenges that confront lecturers and student teachers at colleges of primary teacher education in using action research as a teaching and learning strategy. It is hoped that a model that enhances the use of action research as a teaching and learning strategy would be developed. The objectives of the study were to:

- 1.3.1 Determine the views of student teachers on the use of action research as a teaching and learning strategy.
- 1.3.2 Explore the nature of the action research curriculum that is provided to student teachers at colleges of primary teacher education.

- 1.3.3 Examine the competency of lecturers in enabling student teachers to teach using action research as a teaching strategy.
- 1.3.4 Establish challenges that lecturers and student teachers encounter in employing action research as a teaching and learning strategy.

1.4 RESEARCH QUESTIONS

The primary research question posed was: What challenges confront lecturers and student teachers at colleges of primary teacher education in using action research as a teaching and learning strategy? The following subsidiary questions are raised:

- 1.4.1 How do student teachers view action research as a teaching and learning strategy?
- 1.4.2 What is the nature of action research curriculum that is provided to student teachers at colleges of primary teacher education?
- 1.4.3 How competent are lecturers in enabling student teachers to teach using action research as a teaching strategy?
- 1.4.4 What challenges do lecturers and student teachers encounter in employing action research as a teaching and learning strategy?

1.5 THEORETICAL FRAMEWORK

A theoretical framework refers to the philosophical underpinnings of the study (Mackenzie & Knipes, 2006:1). It is the philosophical basis on which the study is conducted and provides a link between theoretical aspects and practical components of the study. The theoretical framework provides lenses through which research is viewed, and offers justification for the choices of methodologies and methods used to answer research questions for the study (Mertens, 2005:7). The decisions and direction undertaken at every stage of the research process are guided by a set of ideas that are held about the phenomena of interest (Herek, 2011:39). The theoretical framework, therefore, guides the research and connects the researcher to the existing body of knowledge (Labaree, 2013:1). The methodologies must also relate to the plan of action for the research as well as targeted outcomes.

The selected research methods are the techniques or procedures used to generate and analyse data as directed by some stated research questions. The theoretical framework reveals the methods, methodology, theoretical perspective and the epistemology underpinning the research study (Crotty, 1998:7). Theoretical perspective refers to the researcher's underlying assumptions about the world and its social life while epistemology is concerned with knowledge and how it is obtained.

According to Sharon and Ravitch (2011:39), theoretical framework or idea context refers to the actual ideas and beliefs that one holds about the phenomena being studied, whether these are written down or not. It is a system of concepts, beliefs, assumptions, expectations and theories that guide and support a research endeavour (Robson, 2011:62). Miles and Huberman (1994:18) view a conceptual framework as a discourse that "*explains, either graphically or in narrative form, the main things to be studied-the key factors, concepts, or variables and the presumed relationships among them*".

A theoretical framework guides the logic of what the researcher is doing in a dissertation or thesis (Simon & Goes, 2011:1). A good theory can guide every aspect of a research study from the stating of research questions, problem statement, discussing the results of data analysis to making conclusions. This theoretical framework presents a defensible rationale for doing research and assists the reader to understand the perspective of the researcher (Simon & Goes, 2011:1). It assures the reader that the suggested research is not based on personal guesses, but instead rests on established theory and scientific facts sourced from credible studies. Research, ideally rests on a defined world view which is built from logical reasoning which reflects the researcher's understanding and the direction of the study. Therefore, it is critical that the theory that guides the study be clearly presented. In the following sub-section the researcher discusses the relevance to the study of the social cognitive theory.

This study was underpinned by the social cognitive theory which draws from the social learning theory (McInerney & McInerney, 2002:140). The social cognitive theory is the view that people learn new knowledge, skills and behaviour in a social

context and that much of what is learned takes place through observation or watching (Mowry, 2013:3). This is a dynamic framework which explains human learning in terms of a reciprocal interplay among the personal, behavioural and environmental influences in learning settings (Woolfolk, 2014:429). This theory was conceived in Figure 1.1:

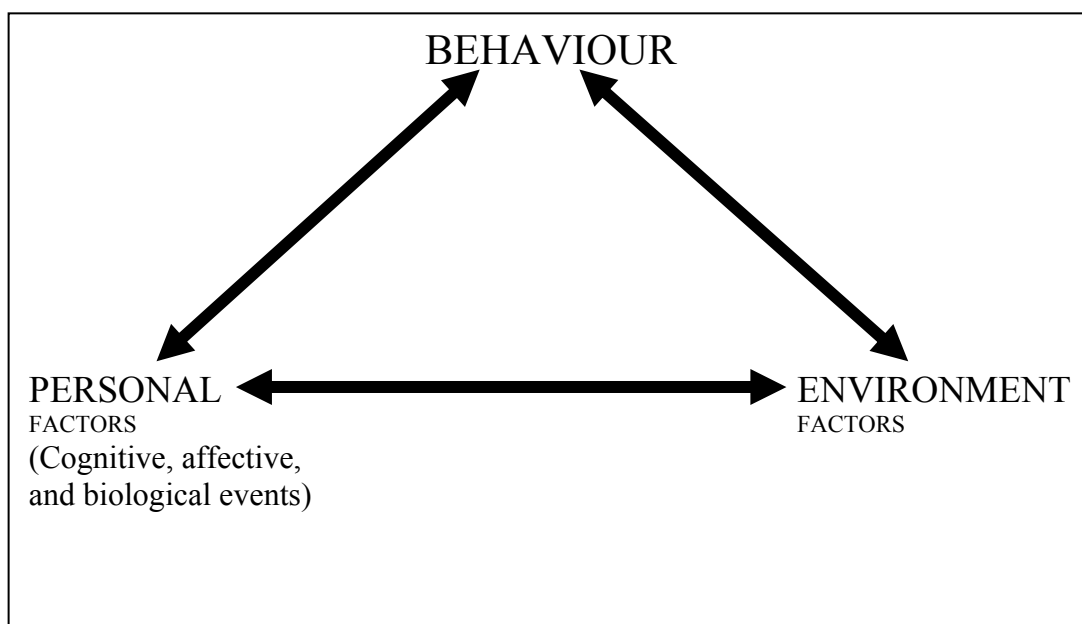


Figure 1.1: The Social Cognitive Theory (Adapted from Pajares *et al.*, 2002:169). **Overview of Social Cognitive Theory and Self-efficacy.** Greenwich, JAI Press).

Figure 1.1 shows the mutual relationship among the environment, behaviour and personal factors in learning contexts. The personal factors, in the form of cognitive, affective (emotional) and biological factors include self-efficacy, goal setting, reflective thinking, attributions, making judgements and self regulation such as planning, monitoring and managing challenges (Glanz, 2003:169). Lecturers, teaching strategies and materials, and college structures constitute the environment. Behaviour factors cover the amount of effort, persistence and commitment that students exhibit as they work on given tasks. The basic principle of the social cognitive theory, therefore, presents the factors of behaviour, person and environment as impacting each other to mediate human learning. This study used the assumptions of the social cognitive theory to examine challenges that confront lecturers and student teachers in using action research as a teaching and learning

strategy. The description of action research as a general concept and as a teaching strategy is given below.

1.6 CONCEPT OF ACTION RESEARCH

Action research is an approach aimed at improving practice. It involves in-depth understanding of the situation in which change is desired and devising mechanisms for bringing about that change. Action research is composed of self reflective cycles of planning, acting, observing and reflecting (Freebody, 2004:86; Kemmis & McTaggart, 2000:564). It is a cyclical and continuous process (Rawlinson & Little, 2004:9). This reflects the fact that people usually work towards solutions to their social and organizational problems in cyclical ways (Punch, 2009:136). The change agent works collaboratively with the people for whom change is needed to collect data about the problem of concern, analyse the data, craft options, implement actions for change and then evaluate them. Action research is situation or context driven and aimed at putting into action the outcomes of the investigation. This implies that the designed processes to modify a situation are unique to particular contexts.

Figure 1.2 shows the cycles of action research, which are made up of the stages involving observing, reflecting, planning and acting. These stages are, however, not used as a rigid structure but overlap in practice. The process moves back and forth through the first cycle which may also be repeated if a greater overall understanding of a particular issue or question is not found. This process is relevant to this current study which examined challenges that confront lecturers and student teachers at colleges of primary teacher education in Zimbabwe in using action research as a teaching and learning strategy.

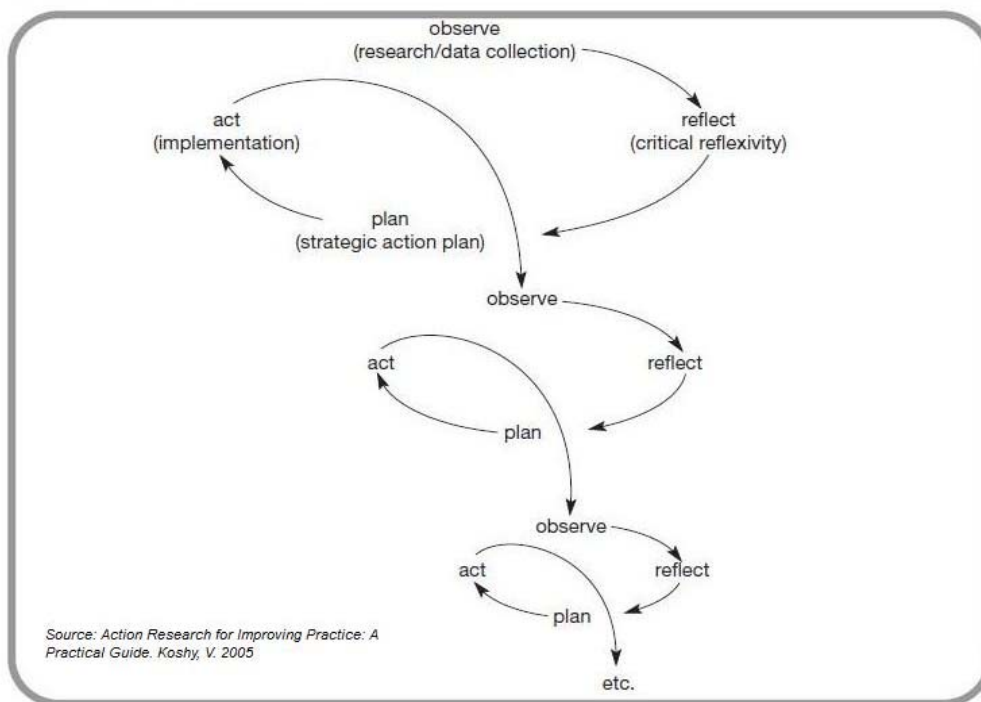


Figure 1.2: O' Leary's Cycles of Action Research. (Adapted from Koshy, 2005:8). **Action Research for Improving Practice: A Practical Guide.** London, Paul Chapman.

1.7 ACTION RESEARCH AS A TEACHING STRATEGY

Action research exists in education as there is always room for the teaching and learning of others. Many teaching methods are found in the classrooms but action research works well because the cycle offers opportunities for learner independence and reflection (Parpala & Lindblom-Ylänne, 2007:256). Action research routines guide teachers to select and organise teaching content and to take cognizant of learner characteristics and abilities. Its principles are similar to the way people investigate and address every day issues and problems. Norton (2009:69) views the process as composed of phases of problem identification, analysis, acting, evaluation and modifying the way things are done to correct the situation. Teachers, therefore, pass through notable phases in their instructional processes of planning, teaching and assessment or evaluation. It is the continuous evaluation that goes through these stages which creates reflective thinkers in teachers (Merkler, 2012:26). The use of the action research strategy immediately breeds engaging and creative learning on the part of student teachers. This presents student teachers with a chance to learn to explore topics by themselves instead of always relying on the

knowledge provided in lectures. In using the action research routine to investigate issues, students start by focusing on the problem or topic, plan how to address it, collect relevant data, analyse the data and act on the data to address the problem. The action stage includes deciding on a method of presenting feedback or reporting findings. This is followed by a reflective evaluation process to check on the strengths and gaps in addressing the question or problem. The outcome of the study can lead to the cyclic process beginning afresh if the desired results are not achieved in the initial cycle.

1.8 DEFINITION OF TERMS

This section defines key terms according to how the researcher intended them to be understood and not necessarily in accordance with dictionary meanings.

1.8.1 Action Research

Action research is a systematic approach which provides teachers with the means to incorporate many elements involved in the learning of students and to organise their work so that they achieve the demanding task of teaching. Action research pertains the interventions made to alter practice or improve understanding and the systematic collection of the evidence of the effects of those changes (Freebody, 2004:86; Wilson, 2009:189). In this study, action research refers to a teaching strategy which is used to improve student teaching and learning.

1.8.2 Teacher Education

Teacher education refers to the system of imparting new knowledge, skills and attitudes to pre-service teachers. Venkataiah (2011:3) states that teacher education is a process of inculcating both the theoretical base as well as the practicum, focusing on the development of teacher competencies and skills. It involves formal and informal activities and experiences that enable one to work as part of the educational profession and to deliver duties effectively (Jangaiah & Sabu, 2011:163). This study focused on formal training which takes place in conventional institutions

involving the passing on of valuable skills in the meeting of students and lecturers, which leads to cognitive change in the former.

1.8.3 Action Research Policy

Giventer (2008:32) views policy as a statement of intended actions. It is a set of ideas about what has been agreed on by a group of people or a defined organization. This study was informed by college policy and guidelines on action research practice as enunciated by the Zimbabwean Ministry of Higher and Tertiary Education, Science and Technology Development, Department of Teacher Education (DTE) and College policy documents (Chivore *et al.*, 2015:19).

1.8.4 Colleges of Primary Education

Colleges of primary education denote institutions providing training to pre-service teachers that are destined to teach in primary schools (Lingam, 2012:4). These are concerned with the preparation of teachers to function in elementary learning institutions (Jangaiah & Sabu, 2011:148). The colleges recruit mainly post O-level students who are then taken through a wide curriculum to cover the subject areas provided in the primary schools in Zimbabwe.

1.8.5 The 2-5-2 Model of Teacher Training

In this case, the 2-5-2 model refer to the training system in which student teachers spend two terms at college, then proceed for five terms on teaching practice and finally use the last two terms of training at college revising and preparing for examinations (Mswazie & Gamira, 2011:112; Samkange, 2015: 522).

1.8.6 Teaching Strategy

Teaching strategy refers to methods or techniques for imparting knowledge and skills to student teachers (Monaghan, 2007:4). Teaching strategies are tactics used by the instructor to promote independent learning (Kay, Sattler-Weber & King, 2005:1).

Student involving methods are preferred for modern classes as these make students active participants in the learning process.

1.8.7 Teaching Practice

This is the period when student teachers in colleges practice in-class teaching to translate theory into practice (Kunakahakudyiwe, 2012:76). Ngara, Ngwarai and Ngara (2013:1) view teaching practice as a professional teacher development stage in which pre-service teachers are provided an opportunity to apply the knowledge and theories learned on campus to the real classroom. In this study, teaching practice denoted a phase involving the implementation of the theory that students acquired during their initial residential segment.

1.9 RESEARCH DESIGN AND METHODOLOGY

This section addresses the research design and methodology which were considered suitable for this study.

1.9.1 Research Design

Taylor (2000:80) describes research design as the plans and strategies that are developed in order to seek, explore and discover answers to research questions. It is concerned with the way in which the entire research is planned and managed until results are reported (Haefel, Gardner & Vogt, 2012:V). This research adopted the mixed methods design. Mixed methods design involves the combined use of both quantitative and qualitative methodologies within the same study (Jupp, 2006:176; Creswell, 2012:12). The mixed methods research enhances the analysis of the research topic and the production of rich research outcomes (Lichtman, 2013:105). This design was suitable for this study as it allowed the integration of methods, techniques, procedures and perspectives in examining challenges that confront lecturers and student teachers at colleges of primary teacher education in using action research as a teaching and learning strategy. The sub-items provided below highlight the methodology used to answer the research question.

1.10 RESEARCH METHODOLOGY

Research methodology is a systematic way of showing how research is carried out for the purpose of gaining knowledge (Rajasekar, Philominathan & Chinnathambi, 2013:5). It is the procedure by which people who conduct research describe, explain and make predictions about the phenomena under investigation. This section presents the methods that were employed in the collection of research data. The study used both the quantitative and qualitative methods.

1.10.1 Quantitative Methods

Quantitative methods involve the collection of data in numerical form for analysis (Jupp, 2006: 250). The study employed a survey method of using questionnaires to collect data from participants. This tool is valuable as it enables the soliciting of opinions and numerical information that is crucial to understand the phenomena under study (Johnson & Christenson, 2008:176). Questionnaires permitted the researcher to obtain data from a large target group while also maintaining anonymity and objectivity. Questionnaires were administered to final year students to obtain numerical data for the study.

1.10.2 Qualitative Methods

Interviews, documentary analysis and observation were used to generate data for the purpose of triangulation. Triangulation is the principle of strengthening the validity of the findings of a study through the use of many methods, sources or agents (Wilson, 2009:120).

1.10.2.1 Interviews

Interviews are methods of data collection, information or data gathering that involve asking a series of questions. They represent a meeting or dialogue between people where personal and social interaction occur (Jupp, 2006:157). Interview schedules consisting of self-developed questions were adopted to generate relevant research data from face-to-face encounters with participants for the study. This method was

ideal as it allowed for the clarification of questions, probing and use of non-verbal cues for in-depth data generation. It is a powerful method for understanding others (Punch, 2004:175).

1.10.2.2 Documentary analysis

Document analysis involves the detailed examination of documents produced across a wide range of social practices, taking a variety of forms from the written word to the visual image (Jupp, 2006:79). This source of data is stable, reliable and accessible for future reference. College research policy document, course outlines, teaching guides and lesson plans were reviewed using a checklist to gather evidence relating to challenges of using action research as a teaching and learning method in primary teacher education.

1.10.2.3 Observation

Observation involves the systematic viewing of people's actions and recording, analysing and interpreting of their behaviour (Gray, 2009:397). Observation enables the researcher to gather data on the following: the physical setting (in this case, the classroom environment and its setting), human setting (in this case, organization of people and their characteristics), interactional setting (interactions that take place, formal and informal, planned and unplanned, verbal and non-verbal) and the programme setting (in this case, the resources and their organisation) (Cohen, Manion & Morrison, 2000:305). In this study, an observation schedule was used to gather information on the way in which lecturers delivered instruction to students and the interactions that took place. The organisation of students in the classroom and the provision of resources were also observed in examining challenges of using action research as a teaching and learning strategy.

1.11 SAMPLING PROCESS

The sampling process involves the choice of the population and the determination of the sampling procedures and the sizes of the samples.

1.11.1 Population

A population is a group of people the researcher is interested in and from which a sample is taken (Hanslam & McGarty, 2003:213). It is the total collection of all individuals about which the researcher wishes to make specific conclusions (Welman, Kruger & Mitchell, 2012:52). The population for this study comprised heads of departments, the college principal and final year student teachers in the selected college of primary teacher education in Zimbabwe.

1.11.2 Sampling Procedures

Sampling procedures involve techniques that researchers use to select groups from the wider population (Jupp, 2006:271). The choice of a research design determined the selection of sampling procedures that were used. This part covers the sampling techniques that relate to the mixed methods design used in this study.

1.11.2.1 Quantitative sampling procedures

The participants who responded to questionnaires were selected through simple random sampling technique. This is a process of selecting a sample in such a way that all individuals in the defined population have an equal and independent chance of being selected for the sample (Teddlie & Fen, 2007:79). Simple random technique prevented a biased choice of participants that would have influenced the establishment of predetermined results. A list of final year students was used to select the desired sample for the study.

1.11.2.2 Qualitative sampling procedures

A *purposive* (judgmental) sampling technique was used for a qualitative sample. In purposive sampling, the researcher uses expert judgment to decide on people to be included in the sample frame in relation to certain traits (Burton, Brundrett & Jones, 2014). The purposively sampled individuals possess valuable knowledge that helps to address the research problem. One college of primary teacher education in a town in Zimbabwe constituted the case of study. This is in line with Punch (2005:144) who views a case study as a detailed study of social phenomena in its context, in order to

reveal its unique characteristics. Participants for the study were identified purposively. The principal and heads of departments were the foci of qualitative sampling as they were believed to possess rich information about the action research curriculum and its use as a teaching and learning strategy.

1.11.3 Sample

Johnson and Christensen (2008:223) define a sample as a subset of cases drawn from a population. Two samples were constituted from quantitative and qualitative domains:

1.11.3.1 Quantitative sample

The quantitative sample comprised 140 final year student teachers who had been exposed to the teaching and practice of action research activities at college and during teaching practice.

1.11.3.2 Qualitative sample

The qualitative sample comprised 1 college principal and 9 lecturing heads of departments.

1.12 DATA ANALYSIS

Data were analysed thematically and through the Statistical Package for Social Sciences (SPSS) software. The thematic analysis analysed the qualitative data and involves organising data into codes and themes prior to analysis and interpretations. Quantitative data were analysed through the SPSS, version 24 where responses of participants were reduced to statistical data in the form of numbers, percentages and mean scores.

1.13 VALIDITY AND RELIABILITY OF QUANTITATIVE DATA

This section constitutes the basis for judging the findings of the research as credible for use in decision making.

1.13.1 Validity

Validity determines whether a particular instrument measures what it is intended to measure or the truthfulness of the results (Cohen, Manion & Morrison, 2002:105). Validity in this study was ensured through pre-testing of the questionnaire instrument to enable participants to give appropriate responses to set items.

1.13.2 Reliability

Reliability is the extent to which results are constant over time, represent the total population under study and can be reproduced under a similar methodology (Joppe, 2000:1). This study clearly outlined the details of the research methodology to enhance the reliability of the findings.

1.14 TRUSTWORTHINESS OF QUALITATIVE DATA

This concept relates to the rigour of a research study that generates trust and confidence in the findings and conclusions made. The four criteria for a trustworthy study include credibility, transferability, dependability and confirmability (Shenton, 2004: 64).

1.14.1 Credibility is the extent to which research outcomes are judged to be reasonable, accurate and believable (McMillan & Schumacher, 2010:102). In this study credibility was realised through the use of multiple sources of information for the verification of data. Denzin and Lincoln (2000:5) stress that the use of multi-methods and simple triangulation in a single study is a strategy that adds value, rigour and breadth.

1.14.2 Transferability is the degree to which research results can be applied to other similar contexts (Gay & Airasian, 2003:246; Leedy & Omrod, 2014:105). This was achieved through random sampling of the student group and providing rich descriptions of the phenomena of study to show its relevance to other colleges of primary teacher education.

1.14.3 Dependability is the extent to which results are consistent over time and reflect the views of participants rather than those of the researcher (Joppe, 2000:1). This was achieved through proper selection of information rich participants and the research sites.

1.14.4 Confirmability is the investigator's concern for objectivity (Shenton, 2004:71). This study used member checking to ensure the contamination of researcher bias and prejudice were reduced.

1.15 DELIMITATION OF THE STUDY

The study was conducted in Matabeleland Southern Province, which is a region in the southern part of Zimbabwe. The area borders Matabeleland North and Bulawayo provinces to the north, Midlands province to the North West and the countries of South Africa and Botswana to the south. The college lies along the Bulawayo-Beitbridge main road, about 125 kilometres from Bulawayo and 196 kilometres from the town of Beitbridge. Its immediate catchment area covers the seven districts of insiza, Matobo, Mangwe, Bulilima, Gwanda, Beitbridge and Esigodini as shown in the map below.



Figure 1.3: The Map of Matabeleland South Province in Zimbabwe. (Adapted from www.maphill.com/Zimbabwe/Matabeleland-south/simple-maps/silver-style map. Accessed 24 September 2015).

1.16 ETHICAL CONSIDERATIONS

The researcher sought permission for field entry from the Zimbabwean Ministry of Higher and Tertiary Education, Science and Technology Development. Once permission had been granted, personal visits were made to conduct face-to-face interviews, analyse documents, observe lessons and administer questionnaires.

The study ensured that those who participated in its processes did so with informed consent and that they had the right to withdraw participation at any stage. The information obtained from respondents was treated with due confidentiality. Interviewees were coded to conceal their identities. The dignity and integrity of participants were respected. Leedy and Omrod (2014:107) posit that individuals should not be exposed to harm that is above that which they receive in day to day lives or be asked to participate in a research that may result in violation of ethical or moral standards. Finally, the study conformed to the ethical principles as outlined in the institution's Handbook for Higher Degrees of the University of Venda.

1.17 SIGNIFICANCE OF THE STUDY

The study was significant in that it provided a unique body of knowledge on the challenges of using action research as a teaching and learning strategy in colleges of primary teacher education in Zimbabwe. The research reinforced the adoption of progressive teaching approaches that encouraged collaboration and reflection for better outcomes by both lecturers and student teachers. It is also hoped that the inquiry would provide substantive benefit to communities and pupils who are the ultimate reason for the education system. Policy makers everywhere would manage to make informed decisions on the use of action research in enhancing teaching and learning in the primary school system. The researcher acquired and improved on research skills and benefited academically through interacting with individuals highly placed in academe. Most importantly, it is hoped that the study will improve the research that student teachers produce, enrich instructional competencies and contribute knowledge to propel effective use of action research as a teaching and learning strategy in primary teacher education.

1.18 RESEARCH OUTLINE

The thesis is organized into six chapters as indicated below:

Chapter One consists of the background to the problem which encompasses the statement of the problem, purpose of the study, research questions, hypotheses, objectives, as well as the definition of concepts.

Chapter Two constitutes literature review on theories and concepts of learning as they relate to the use of action research as a teaching approach.

Chapter Three reviews literature related to the historical developments of action research and the nature of its teaching in colleges of primary teacher education curriculum. The competency of lecturers in delivering action research knowledge to student teachers for their own teaching discourse is also be reviewed. The chapter also presents challenges that lecturers and student teachers encountered when using action research as a teaching and learning strategy.

Chapter Four highlights the research paradigm selected in as far as it impacts on the design and methodology of the study. It also discusses and justifies the population, sampling procedures, data collection and analysis.

Chapter Five presents an analysis and interpretation of the generated data.

Chapter Six provides a summary of the study, conclusions and recommendations.

1.19 CONCLUSION

This chapter articulated the introduction and background to the study. The statement of the problem articulated the central issue of concern in the study and exposed the gap which the treatise endeavoured to clog. The purpose of the study which hinged on an examination of the challenges that confront lecturers and student teachers in using action research as a teaching and learning strategy was also highlighted. The objectives of the study focused on the views of student teachers on the use of action research, the nature of the action research curriculum, competency of lecturers and the encountered challenges, and these were further aligned to the research questions. Social cognitive theory was briefly presented as the framework that guided the processes and procedures of the study. Mixed methods design was also discussed and related to the aspects of the study in regard to the population, sampling process, data collection and presentation of results. The chapter further established the delimitation of the study as well as the ethical considerations which were observed, particularly in data collection and reporting of findings.

CHAPTER TWO

SOCIAL COGNITIVE THEORY

2.1 INTRODUCTION

This chapter focuses on the theoretical framework that underpins this study and provides the lens through which this investigation was viewed. An exposition of the theoretical framework as a concept and its essence in the study is to be made. The social cognitive theory which borrows its major concepts from the social learning theory on the functioning of human behaviour is also reviewed in relation to challenges of using action research as a teaching and learning strategy.

2.2 SOCIAL COGNITIVE THEORY

This is a psychological model of behaviour that states that learning occurs in a social context. It is founded on the framework of causation (Bandura, 1989:2) and accounts for the social origin of human thought and action. The basic premise is that people do not only learn from personal experiences, but that observing the behaviours of others and their results influences the learning process. Learning by observation is a form of social learning. According to Bandura (2006:169), learning takes place through observation of other people's behaviours, attitudes and consequences of those behaviours. People acquire new behaviours from others who may be more knowledgeable, experienced and authoritative in their environment including siblings, friends, peers, parents and teachers (Usher & Pajares, 2009:90). As people observe a model performing a behaviour, and witness its results, they remember the sequence of events and use that information to direct their own future actions.

Groenendijk, Janssen, Rijlaarsdam and van den Bergh (2011:1) contend that observation has a positive effect on motivation, process and performance. An exposure to performance especially if it is new and unique, motivates observers to enquire about it and emulate it. Students learn from their peers by watching, interpreting and evaluating how they go about carrying out activities. In formal

education, learning by observation has been effective, particularly, in the development of creative skills (Willamson, Jaswal & Meltzoff, 2010:57). It is expected that students in teacher education should parade critical, creative and independent thinking abilities as they work on problems, projects and participate in classroom discussions. Classroom presentations, peer-teaching and micro-teaching presents contexts where learning by observation of the work of peers is expected.

Cherry (2014:2) notes that Bandura (1977) argues that learning by observation heightens the role of a model which performs and from which behaviour is viewed, emulated and tried out. Three types of models that are useful in the social learning process entail the live model, symbolic model and a verbal instructional model. **A live model** concerns an individual whose behaviour is performed and observed in real life. **Symbolic model** relates to a real or fictional character that influences an observer's behaviour and is represented in books, movies or other learning platforms. Various settings such as those involving the use of video tapes of humans and cartoons, and audiotapes are critical in skills acquisition (Graig, Vanlehn, Gadgil & Micki (nd:1). The **verbal instructional model**, on the other hand, involves descriptions and explanations of behaviour that are available for observation. In this vein, Reason and Bradbury (2001:18) emphasise the importance of language in the construction and representation of reality. In direct interaction with lecturers, student teachers can observe behaviours, traits and characteristics for modelling while they also learn from listening to a tutour conversing with a tutee. The use of learning materials inclusive of sampled work of other students, in this case, action research reports and technology based media is an important component of learning by observation.

While people learn and reproduce behaviour by observing others (Bandura, 2002:273), observing a model can also trigger the observer to engage in behaviour he or she has already learned. In learning a behaviour, individuals do not just depend on trying out ideas and making judgements on levels of success and failure in the process. Learning processes naturally should take cognizant that human beings ideally learn by replicating actions of others. Willamson, Jaswal and Meltzoff (2010:57) view imitation as an early ability of human development which allows

people to acquire skills and behaviours from models in their culture. Research has established that adults duplicate or imitate the rules, organisation and strategy which they observe when other people tackle tasks, rather than reproducing actual actions as children do (Willamson, Jaswal & Meltzoff, 2010:57). This means that student teachers will not copy the exact behaviour of a lecturer or use his/her speech verbatim but the general structure of the presentation. In the teaching of action research, the student teachers will copy the principles and guidelines which they will subsequently use to conduct action research.

2.3 THE SUB-FUNCTIONS OF OBSERVATION

Learning by observation hinges on four sub-functions of attention, retention, production and motivation which are presented in this section.

2.3.1 Attention determines what is selectively observed among the modelling influences and what information is extracted from the on-going modeled events (Bandura, 2001:272). A host of factors influence what is modeled. These include the cognitive skills, preconceptions and value preferences of the observers. The salience, attractiveness and functional value of the modeled activities also play an essential part. The nature of human interactions determines the types of models to which people have ready access and this may further prop up modelling.

2.3.2 Retention is another sub-function of observational learning. It refers to the ability to remember. People are influenced by observed events if they remember them. This is also the issue of cognitive representation process which refers to the observer's own mental structuring of the behaviour in terms of its identity, cause, effect or consequences (Weinman, Petrie, Moss-Morris & Horne, 2015:3). Bandura 2001:272) posits that it involves an active process of transforming and restructuring information conveyed by the modeled events into rules and conceptions for memory representation. It is supported by symbolic transformations of modeled information into memory codes and the rehearsal of the coded information (Bandura, Grasec & Menlove, 1966:502). The representational activities are influenced by

preconceptions and affective status. This relates to recall, which also pertains a reconstruction rather than just retrieval of registered events.

2.3.3 Production of behaviour involves translation of symbolic conception into appropriate courses of action. What is conceived is then put into action and regularly checked for its appropriateness. Modification of behaviour is done to ensure close correspondence between conception and action. Converting conception into action also requires employment of both transformative and generative practices (Bandura, 2001:274). Performance of an activity concerns ability to generate the skill and to be able to adapt the action into given situations or environments. Translating conception into action rarely achieves mastery at the first instance. This implies that guided practices, with repetitions are key to the improvement and perfection of a performance. Performances are perfected by corrective adjustments during behaviour production (Bandura, 2001:274). A person can react either positively or negatively to an event as detected by past experiences and nurturing processes. In the context of this study, student teachers need close guidance from lecturers as they grapple with applying the principles of action research in responding to or addressing teaching and learning challenge.

2.3.4 Motivation is also a crucial aspect of observational learning. The social cognitive theory concedes that not all observed behaviour is performed, but that only portions of observed events get to be acted upon. The performance of observed behaviour rests on three types of motivators. These are direct, vicarious and self-produced. People are likely to engage in a modelled behaviour if it brings them valued outcomes (Bandura, 2001:274). The outcome of performances seen in other people influence the performance of modelled patterns in much the same way as directly experienced consequences. Individuals derive motivation from successes of people who are similar to themselves but are discouraged when they observe negative repercussions from the acted behaviours. The personal standards that people set for themselves also act as an important source of incentive motivation. People tend to perform actions from which they derive self satisfaction and personal worth (Bandura, 2001:274).

2.4 THE TRIADIC RECIPROCITY OF THE SOCIAL COGNITIVE THEORY

The social cognitive theory is based upon the triadic reciprocal interaction of factors in the psychological framework of human learning and behaviour. According to Groenendijk, Janssen, Rijlaarsdam and van den Bergh (2011:2), learning is envisaged to occur through a reciprocal interaction between behaviour, environment and cognitive influences. Bandura (2001:266; 2006:165) posits that behaviour, cognition and other environmental elements all operate as interacting determinants that influence each other bidirectionally. In this case behaviour, environment and cognitive circumstances interact with each other in the same way as the points of a triangle. This implies that while social systems are the product of human activity, these in turn help to guide, shape and regulate human behaviour which also varies from person to person (Bandura, 2006:165).

Reciprocal causation, however, does not imply that the three sources of influence carry the same weight and that their influences occur synchronistically. This speaks to the fact that some sources of influence can be stronger than others in practice. In some instances, a period of time can elapse before a causal factor can exert its influence and initiate reciprocal effects (Bandura, 1989:3). A case of students who are late bloomers may be a case in point. In the use of action research as a teaching strategy, the student teacher naturally will experience unequal influences from the three elements that mediate the quality of human functioning. It is, however, important that attention is paid to the contribution of these to an individual's effort to achieve desired targets.

2.4.1 Person-behaviour Factor

The interaction of person and behaviour determinants of learning indicates the interplay between thought, affect and action. The levels of distress, beliefs, moods, goals, self-perceptions and interests influence the mind and give direction to behaviour. Beliefs that people hold and feelings they harbour affect actions and related thoughts. The implication of this to classroom practice is that these affective influences assist in shaping the learning styles with which students' approach

learning and the amount of effort that they put to their own work. Learning styles are the characteristic ways of receiving and processing information which involve the cognitive, affective and psychological dimensions (Felder & Brent, 2005:57). Individuals likewise, receive, process information and behave differently as detected by their unique composition. It has to be considered also that learning takes place in the social context within which the student teachers exist and which naturally exerts its pressures. This interconnectivity of factors led Munakata, Casey and Diamond (2004:122) to question the extent to which genetic and environmental forces intertwine to shape the brain, mind and behaviour.

The mental process is crucial for success to occur in the desired learning behaviour. It is generally referred to as the cognitive process. Bandura (2002) says cognitive process is the learners' own thought or mental processes and self-beliefs about whether or not they can learn and perform what they are observing. Bandura (2001:267) advances that:

Cognitive consideration determine which environmental events will be observed, what meaning will be conferred on those, whether they leave any lasting effects, what emotional impact and motivating power they will have, and how the information they convey will be organised for future use (Bandura, 2001:267).

These are emergent brain activities that exert determinative influence (Bandura, 2001:3). In the modelling of cognitive processes, the expert model externalises internal activities (Groenendijk, Janssen, Rijlaarsdam & van den Bergh, 2011:2). What is processed in the mind is availed to novice learners through various ways which can include the spoken and acted word. Strategic knowledge is provided to students who later transform it in a way in which they understand its meaning and use. On the use of action research as a teaching and learning strategy, student teachers will spot the externalised behaviours of their lecturers, which would be reflections from their mental skills, to interpret questions, search for data, organise ideas and present them in effective ways.

It is, however, important to realise that the competence level of the model (teachers) is key in determining the effectiveness of learning by observation (Groenendijk,

Janssen, Rijlaarsdam & Van den Bergh, 2011:4). According to Morris (2008:3), students do not have to just watch performances but need help and guidance to select what knowledge, skills or attitudes to focus on as they prepare for further learning. Structure has to be provided to enable the observer to engage in selective observation of what is relevant and desired (Morris, 2008:2). While teachers are expected to provide the best for copying by their students, they have to contend with the fact that students bring to class different backgrounds and experiences which have to be accommodated in the teaching and learning discourse. These differences take many forms which may involve the aspirations of their parents, home language, entry qualifications and learned social skills.

The personal factor encompasses the biological properties of the organism. Physical structure and sensory systems affect behaviour and impose constraints on capabilities. The sensory systems and brain structures are, in turn, modified by behavioural experiences (Kolb, Mychasinik & Gibb, 2014:1722). Bandura (2002:272) states that human nature can be shaped directly and vicariously as determined by the biological aspect. The biological potentials of people influence the environment just as the environment has the potential to influence humanity biologically.

Kolb, Mychasinik and Gibb (2014:1720) state that brains that are exposed to various environmental situations develop in quite different ways. People are able to learn and adapt their behaviour to given environment because of neural systems in the body which are responsible for making people pay attention and deal with abstract knowledge. Bodily make-up and information processing systems enable people to use symbols, forethought, evaluate, reflect and use symbolic communication (Bandura, 2001:4). Using their intelligence, people are able to control, transform and create a habitable social space and shape their lives (Bandura, 2006:164). Student teachers, therefore, have to apply their thought, reflection and communication skills to understand and utilise the environmental facilities around them to address questions and solve problems.

2.4.2 Environment-person Factor

The environment and person segment of reciprocal causation is concerned with the interactive relation between personal characteristics and environmental influences. The environmental influences include not only the physical but the social as well (Rassia & Pardalos, 2012:13). They encompass friends, relatives and buildings, including the provided space size and related temperature conditions. Expectations, beliefs, emotions and mental competencies of people are developed and shaped by social influences through modelling, instruction and social persuasion. In essence, human beings are the product of the environment in which they grew up (Julie, 2013:34).

People call to attention varied responses from the social environment in which they exist as a result of their physical attributes, such as sex, race, size, age and physical qualities despite what they say and do (Julie, 2013:34). These people also trigger many social reactions owing to the roles and statuses which are bestowed upon them by the society. This implies that people can affect the social environment by their status and characteristics before they even speak or act. The social reactions so elicited affect the recipients' conceptions of themselves and others in ways that either strengthen or alter their emotional bias. The age and personal presence of the teacher or other noticeable defining characteristics engender some bias in student teachers about his/her teaching abilities, and consequent grasp of taught concepts.

2.4.3 Environment-behaviour Factor

The environment-behaviour sub-systems in the triadic model represents the two-way influence between behaviour and the environment. In the transactions of everyday life, behaviour alters environmental conditions and is, in turn, altered by the very conditions it creates (Julie, 2013:31). The environment is not a fixed entity that inevitably impinges upon individuals. When mobility is constrained, some aspects of the physical and social environment may encroach on individuals whether they like it or not. But most aspects of the environment do not operate as an influence until they

are activated by appropriate behaviour. Lecturers do not influence student teachers unless they attend their classes.

2.5 THE COMPONENTS OF A SOCIAL COGNITIVE LEARNING THEORY

The social cognitive theory posits that there are components that facilitate learning by observation through the modelling process. These are self-efficacy, self-regulation, goal setting and outcomes expectancy which are discussed in the following sections:

2.5.1 Self-efficacy

Self-efficacy is one of the constituent concerns in educational research. This is the judgement of the capability to execute given types of performances (Ahmad, Hussain & Azeen, 2012:14). It pertains to the strength of one's own ability to work and complete tasks and realize set goals (Finn & Frone, 2004:118). Kinginger (2013:49) emphasises the importance of students' own perceptions of their abilities, performances, possibilities and the learning context for work accomplishment to occur. The beliefs of students in their abilities to perform expected tasks strongly influence academic achievement (Usher & Pajares, 2006:92).

Webb-Williams (2014:76) reports that students reflecting self belief in their possibilities tend to show interest in their work and apply great effort in order to reach proposed ends. This group of students sets challenging goals and exhibit great resilience in dealing with demanding situations. Basing on this view then, low academic performance stems from low self-efficacy perception than lack of capabilities. Individuals who think positively about themselves are likely to perform better academically than those who view themselves negatively. Bandura (2006:170) argues that individuals achieve goals depending on whether they think of themselves "optimistically or pessimistically, in self-enhancing or self-debilitating ways".

Ahmad, Hussain and Azeen (2012:14) contend that the belief to do required activities well determines one's motivation and performance. The level of motivation to perform a task depends on beliefs that people have about themselves rather than on what is actually true. Bandura (2002:270) states that the power to continue engaging on a task even when they are challenges depends on personal motivation. It is the belief in personal power and motivation that an individual works to achieve targeted outcomes. This explains instances where people appear to perform beyond their knowledge and skills. Kinginger (2013:50) warns that students require more than internal motivation but to view themselves as agents of motivation processes in order to avoid negative thinking and self-perceptions that have bad outcomes. Agents in this case refers to those people who influence how they work and their circumstances in life with a clear intention (Bandura, 2002:270).

Bandura (2002:271) further reveals that individuals do not hold a monopoly of self efficacy beliefs but these are also a feature of people who work as a collective or group to attain intended outcomes. As a unison people have beliefs about how well they use resources, the amount of effort expended and the power to continue working despite impediments. The emotional states of the group and decisions they make at different times raise or lower collective self-efficacy. Similarly, action research activities can be done as individuals or in groups but it is important that self-efficacy beliefs that enhance task accomplishments be engaged and sustained. Usher and Pajares (2009:92) advice that it is important for teachers to be aware of the things that create and nurture the self-efficacy beliefs of their students so as to structure instructional strategies in ways that boost their academic achievement. This relates to this study which examines challenges of using action research in teaching and learning.

2.5.2 Self-regulation

Self-regulation is the process by which students activate and sustain cognition and motivation (Kinger, 2013:49).

Ahmad, Hussain and Azeen (2012:14) view self-regulation as an ability for a person to employ appropriate strategies to plan, monitor and complete an activity. Coskun

and Ghaemi (2015:2) also concur that self regulatory activities involve planning, monitoring and regulation. In the context of this present study, an examination was made on the ability of students to plan, monitor and regulate their own activities in relation to challenges of using action research as a teaching and learning strategy in colleges of primary teacher education.

Coskun and Ghaemi (2015:3) observe that self-regulatory aspects involve areas of time management, control of one's environments as well as guiding of personal effort and attention. The student has to be aware of the required effort to complete a desired task. Zimmerman (1989:329) adds that self regulated students "*personally initiate and direct their own efforts to acquire knowledge and skills rather than relying on teachers*". In the process of engaging in action research, student teachers are expected to have sufficient understanding and management of their working environment, and to apply appropriate effort to ensure objectives are realised.

Self-regulation demands people to anticipate consequences of actions prior to applying efforts towards those ends. This will then lead to the setting of goals and the planning of courses of actions to achieve those goals. High self-regulating students tend to set high goals for themselves. These further calls for greater resolve to attain those set goals. Kinginger (2013:51) observes that occasions do arise when the self-regulated student will seek out other-regulation or the assistance of more knowledgeable others. This study explored the value of student self-regulation and the role of college supervisors in guiding the use of action research as a teaching and learning strategy.

Aziz and Pachi (2013:46) also contend that the importance for a student to understand the amount of effort to be expended on a task lies in the ability to realize the relationship between various learning strategies and the social and learning environment. The available teaching methods and strategies have to be understood against the social and environmental background existent in the area. Techniques to implement the curriculum must inform and direct teaching and learning. The use of modern technology needs to be given attention in present day knowledge search and dissemination. According to Coskun and Ghaemi (2015:3), self-regulation helps

the student to realise the key role that the computer and internet play in the learning process. Therefore, student teachers achieve their goals better if they control and manage the tools they use with regulated teaching and learning.

2.5.3 Goal Setting

Goal setting is an important aspect of life and informs the amount of effort that is required to perform an intended task. Human beings are by nature goal-oriented (Locke & Latham, 2013:27). Lunenburg (2011:2) conceive a goal as what an individual is consciously trying to do. This can also be referred to as the intent or the purpose for engaging in a defined behaviour. Goals enable individuals to set standards and establish ideal outcomes (Locke & Latham, 2013:27). Once standards have been put in place people are compelled to work hard and to maintain that momentum.

People that are provided with specific goals perform better than those without goals (Lunenburg, 2011:1). This emanates from the understanding that tasks that are well articulated and defined allow for efficient practice to be done. Individuals do not waste time on unimportant things or get confused in the process of executing intended outcomes. Specific goals help bring about other beneficial organisational goals, such as reducing absenteeism, tardiness and turnover (Lunenburg, 2011:3).

Goals are therefore motivational. The motive to achieve a targeted goal cause people to devise strategies that will make them perform at the level consistent with goal requirements. Attaining a goal leads to satisfaction and further motivation, while failure to realise expectations may lead to frustration and reduced motivation (Lunenburg, 2011:2). In addition to motivation, the setting of goals, can help to organise and direct behaviour. Individuals tend to be attentive once work targets have been set and become conscious of time and effort expenditure in regard to outcomes.

Lunenburg (2011:1) argues that individuals who are provided with specific and demanding goals exhibit high performance compared to those facing easy, non-

specific or no goals at all. The general trend is that successful accomplishment of initial goals leads to the setting up of other more challenging and difficult goals. West and Thorn (2001:45) concur that higher performing adults set higher goals once original ones are met. Challenging outcomes attract increased energy, effort and persistence (Locke & Latham, 2013:440). These will be used in this study to understand challenges that confront lecturers and student teachers at colleges of primary teacher education in Zimbabwe in using action research as a teaching and learning strategy.

The ability of the individual to perform given tasks is essential for overall work accomplishment. Locke and Latham (2013:223) posit that "*if the goals set are not within the ability of the person to attain, they will not be attained*". According to West and Thorn (2001:42), these set goals must be manageable in terms of their difficulty, specificity and proximity. They must be specific, difficult but attainable. This implies that in teaching and learning environments, the content of study must be within the abilities of both teachers and students. Instructional delivery must be pegged at the level that students understand for them to acquire skills for further learning.

2.5.4 Outcome Expectancy

Outcome expectancy is also known as performance expectation and refers to what is expected as a result of performing a particular behaviour. Akinbobola and Adeleke (2013: 45) describe outcome expectancy as the belief of the individual that performance of a task will lead to the attainment of a desired outcome. It is concerned with beliefs about the possible outcomes of a behaviour and its associated value (Gao, Liu, Lodewyk, Zhang & Kosma, 2011:156). Some individuals accord values to certain possible expectations of behaviour so that behaviours that are most valued will be pursued vigorously than those regarded as of less value. These views appear to be offshoots of the work of Bandura (1977:193) who conceived outcome expectancy as the individual's estimation that a given behaviour will produce certain outcomes. The emerging understanding from the given ideas is that people engage in selected courses of actions on the conviction that those behaviours will yield outcomes. In most instances, the results are judged to be

positive or beneficial to the individual who performs them. Lecturers and student teachers that value the use of action research in teaching and learning will therefore expend more energy and time in performing its related activities successfully.

The relationship between self-efficacy and outcomes expectation is that self-efficacy precedes outcomes prediction. Self-efficacy is perceived as an individual's estimation of his ability to perform a given behaviour successfully and which motivates actions towards taking action. Bandura (1997:21) states that:

The outcomes people anticipate depend largely on their judgments of how well they will be able to perform in given situations. To claim . . . that people visualize outcomes and then infer their own capabilities from the imagined outcomes is to invoke a peculiar system of backward causation in which the outcomes that flow from actions are made to precede the actions (Bandura, 1997 :21).

While research indicates that self-efficacy influences outcome expectancy and not vice versa, it is also true that performance expectations can influence self-efficacy (Williams, 2010:419). An increase in outcome expectation leads to a corresponding increase in the behavioural intention to perform actions towards the achievement of targeted goals (Gorhan, Oncu & Sentrk, 2014:2262). The implication of this for student teachers is that they should not only focus on their perceived abilities to do well in action research activities but also the value of effective teaching and learning through performance in action research. The expectation for them to master action research skills and to use them to learn, teach and solve educational problems should add to their estimated performance capabilities.

According to Williams (2010:419), a context has to be established where the behaviour which is hoped to bring expected outcomes of performance is undertaken. Performance expectations need to consider that it is not only the skills and experiences of the person who is performing that matter but also the extent to which the environment enables behaviour performance. The individual has to be motivated to put an effort towards the realisation of desired outcomes. Courneya (2003:81) states that individuals who are not motivated to perform a behaviour will find it

difficult to perform even if they consider themselves as having the skills, opportunities or resources to stage the behaviour.

2.6 CONCLUSION

This chapter focused on the theoretical framework that underpinned the study. It was established that a theoretical framework constitutes a set of concepts, components and beliefs through which the study is conceived and implemented. The social cognitive theory which views learning as a social process that occurs through modelling of observed behaviour guided the study. In this theory, learners are perceived as acquiring knowledge through direct or vicarious influences. The sub-functions of attention, retention, production and motivation are influential in mediating gain in knowledge by the individual exposed to behaviours from the more experienced, knowledgeable and authoritative person. The triadic reciprocal relationships of environment, person and behaviour factors were also discussed pertaining their role in the learning and functioning of persons. This chapter further presented the four components of the social cognitive theory, that is, self-efficacy, self-regulation, goal setting and outcome expectancy particularly as they relate to the use of action research in teaching and learning.

CHAPTER THREE

ACTION RESEARCH AS A TEACHING AND LEARNING STRATEGY

3.1 INTRODUCTION

This chapter reviews literature related to challenges of using action research as a teaching and learning strategy in teacher education. The study covers the teaching of the action research curriculum theory when student teachers enter college to their engagement of action research throughout the duration of their training programme. Issues of focus included the concept of action research, its place and rational in teacher education, action research supervision and challenges facing lecturers and student teachers at colleges of primary teacher education in using action research as a teaching and learning strategy.

3.2 CONCEPT OF ACTION RESEARCH

Action research is a systematic change process composed of planning, taking action, observing, and evaluating the results of action (Bruce, 2009:248; Stringer, 2007:3; Mohamed, 2008:6; Bobrakov, 2014:11). According to Yasmeen (2008:1), action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to further the goals of social science simultaneously. It is a reflective process of progressive problem solving led by individuals working with others in teams or as a “community of practice” to improve the way they address issues and solve problems (Waterman, Tillen, Dickson & de Koning, 2001:4). These definitions present action research as an orderly process that is carried out by individuals or groups of people to solve problems or improve situations.

Herr and Anderson (2005:4) see action research as a self-reflecting and problem-solving strategy which assists researchers to understand and solve problems in social settings. It is concerned with learning in and through action and reflecting, and is conducted in a variety of contexts (McNiff, 2013:24). The information that is

gained about the situation to be improved is based on evaluative practice that alters between action and critical reflection (O'Leary, 2004:140). Inherent in these observations is that people acquire knowledge as they engage and review their actions in the research process. The context of the activities varies as it can be done in a number of fields including industry, health, business and education.

According to Reason and Bradbury (2001:1), action research is a deliberate, solution-oriented investigation that is group or personally owned and conducted. In education, action research is viewed as the process that seeks to understand and solve problems related to teaching and learning in schools and classrooms (Lim, 2007:2). It intends to improve the quality of actions and instructions (Johnson, 2005:21). Teachers have to act and talk persuasively about the power and influence of action research (Middlewood, Parker & Piper-Gale, 2011:13). This is relevant to this study which examines challenges that confront lecturers and student teachers at colleges of primary teacher education in using action research as a teaching and learning strategy.

Kulcu (2014:186) defines action research as pre-planned and constituted systematic inquiry based on co-operation for the purpose of increasing the quality of life by means of critical reflection and interrogation. The approach provides a plan and tools to gather information to institute positive change. It is regarded as a fruitful methodology used by academicians and teachers to obtain systematic and scholarly data, and to develop recent applications in various fields of education (AcarSeseni & Mutlu, 2014:547). Action research is also used to understand instructional process and to develop it (AcarSeseni & Mutlu, 2014:547). In the context of this study, senior lecturers, student teachers and the principal were selected to provide information on challenges of using action research as a teaching and learning strategy.

Action research is a set of practices that respond to people's desire to act creatively in the face of practical and often pressing issues in their lives in communities and organizations (Reason & Bradbury, 2008:3). Action research is a group of activities that seeks to inform and influence practice. Reason and Bradbury (2008:3) state that action research is "*a participatory, democratic process concerned with developing*

practical knowing in the pursuit of worthwhile human purposes, grounded in a participatory world view". The focus of this study, therefore, was to examine challenges of using action research at colleges of primary teacher education in Zimbabwe.

Glanz (2003:27) observes that action research is an important tool that allows educational leaders to reflect upon their practices, programs, and procedures. Teachers are able to think about their classroom activities and instruction in order to improve them for quality student outcomes. Action research is a planned procedure that serves to guide classroom practitioners in their quest to deal with concerns of everyday experiences for the purpose of changing them (Ferrance, 2000:6). These can then be shared with others (Ferrance, 2000:9). This relates to the present study which seeks to identify challenges that confront lecturers and student teachers in the use of action research with a view to locate opportunities for change.

3.3 HISTORICAL OVERVIEW OF ACTION RESEARCH

The origins of action research have not been convincingly accounted for within a single narrative (Charles & Ward, 2007:2). It has evolved over time, with accounts of its emergence diverse (Dick, 2004:431; Reason, 2006:189; Punch, 2009:137). Action research originated with Kurt Lewin (Somekh & Zeichner, 2009:6; Maksimovic, 2010:2). He was born in German in 1890 and emigrated to the USA where he received citizenship and continued to live, becoming a social and experimental psychologist in the 1940s (Foglia, 2008:65). Lewin is recognized as the founder of action research (Zuber- Skerritt, 2012:89). He was initially associated with the Centre for Group Dynamics at the Massachusetts Institute of Technology in Boston, but soon went to establish his own National Training Laboratories. As a social psychologist, Lewin was interested in group decision-making and minority group equality (Sandretto, 2007:4) and his work is considered fundamental to the origins of action research (Burns, 2004:978). In dealing with social problems, he focused on participative group processes for dealing with conflict and change in society and organizations. The underpinning belief in his practice was that in order to understand and change certain social practices, social scientists have to include

practitioners from the real social work in all phases of the process (Somekh & Lewin, 2005:11).

Studies show that action research is derived from the scientific method which can be traced back to the Science in Education movement of the 19th century (Masters, 2000:1; Waring, 2002:50). Action research was used by a number of people who worked to bring changes in society well before Lewin. Moreno, is a physician who used action research in a community development initiative with prostitutes in Vienna in 1913. However, Pereira-Diniz (2002:387) contends that participatory action research emerged in the 1970s and was used as a strategy to establish equity and self reliance in low income communities.

Kurt Lewin is thought to have constructed the current theory of action research in the mid 1940s (Ferrance, 2000:6; Carr, 2006:423; Maksimovic, 2010:120). The term was first used in Lewin's 1946 paper entitled "Action Research and Minority Problems". Action research was seen as research that used the principles of social science to effect social action (Carr, 2006:423). This methodology was based on experiential learning or learning by doing, which was specific to a given situation. Action research was described as proceeding in a spiral of steps, each of which was composed of a cycle of planning, action and fact finding about the results of that action (Maksimovic, 2010:121; Coghlan & Brannich, 2014:6). In order to understand and change some social situations, researchers need to engage members that are affected by the issue requiring intervention. Action research is not conducted on humans, but with humans and that practitioners have an active role in the research practice (Maksimovic, 2010:122).

3.4 PHILOSOPHICAL FOUNDATIONS OF ACTION RESEARCH IN EDUCATION

The life of action research draws much from the historical and philosophical weight of some movements. Of note is the Group Dynamics movement in social psychology and human relations training. This movement was used in the 19th century to address social problems through qualitative social ways of investigation. It

worked to address social, political and cultural issues especially emanating from the second world war. Kurt Lewin became influential at the time and used action research as a form of experimental research based upon affected groups. Social problems were seen as the focus of social science research (Tobin & Kincheloe, 2006:173). His theory viewed action research as composed of cycles of fact-finding, analysis, reflection, planning, implementation and evaluation of action (Maksimovic, 2010:121; Coghlan & Brannich, 2014:6).

In the 1950s and early sixties action research was used in the study of industry, and generated avid following in the United States of America at the Massachusetts Institute of Technology (Boston) and, at the Tavistock Institute of Human relations in London (Somekh & Zeichner, 2009:7). Eric Trist, a social psychologist influenced by Lewin, was based at the Tavistock Institute and attended to issues of both civil repatriation of German prisoners of war and large scale multi-organisational problems. The basic principle was to improve social formations and the lives of ordinary people by involving participants in the process (Somekh & Zeichner, 2009:7). This supports the understanding that decisions are best put into action by those who help make them.

The Post-war Reconstructionist Curriculum Development Activity was also a major injector of influence in the development of action research. Corey introduced action research through his “teacher as researcher movement” in 1949. He was a leading voice in contrasting action research with traditional research (Somekh & Zeichner, 2009:7). The initiative aimed to encourage teachers to utilise the results of their research in order to achieve social reconstruction (Maksimovic, 2010:122). Action research works to improve practices including professional development, curriculum reform and school restructuring (Hendricks, 2009:2). Action research was seen as the process through which teachers solved problems specific to their own schools and classrooms. It thrived as a strategy to design curricula and address complex educational problems. Action research was largely conducted by outside researchers with the co-operation of teachers and schools (Tobin & Kincheloe, 2006:173).

In the United States of America, action research flowered briefly in education in 1950s and declined. This down turn was due to the criticism that it attracted from established researchers and the linkage between the language of critical theory and left-wing political activism (Tobin & Kincheloe, 2006:174). The idea of the teacher as researcher was further suppressed and replaced by the so-called large studies in which there was a clear division between researchers and practitioners (McNiff, 2002:43). This change marked the separation of theory and practice (Pereira-Diniz, 2002:386). Outside researchers were then prevented from studying problems in education.

Tobin and Kincheloe (2006:174) state that the revival of “teacher as researcher” movement was another philosophical strategy that gave added impetus to the growth of action research. This movement originated in the United Kingdom as a result of the Stenhouses’ Humanities Project and Ford Teaching Project during the 1970s. These projects were concerned with curriculum developments, the former with strategies for teaching moral issues and the later with reform in the teaching of science using “discovery learning” methods (Somekh & Zeichner, 2009:7). Stenhouse viewed the curriculum as a set of processes and interactions rather than a specification of subject content. Teachers were considered to be best placed to judge their own practices, and as such interpretations of their own work was preferred to that of external researchers (Charles & Ward, 2007:5). Research is effective when it contains a measure of personal experience (O'Connor, Greene & Anderson, 2016:2). This would allow teachers to strengthen their judgment, boost professional autonomy and status, enhance classroom practice and improve themselves personally (Maksimovic, 2010:122). Research and curriculum development was treated as incomplete without the involvement of teachers playing a central part in the research process.

Action research is considered as an approach that should not succumb to the status core but work to challenge and change it. Martin (2001:262) states that action research must improve the lived practice of people by uncovering new and unexpected possibilities. The staging of the targeted change is done through collaborative reflection and dialogue among concerned parties (Martin, 2001:264).

This co-operation between the members of the community and project administrators must exist in a context where administrators would need to see themselves primarily as research students (Winter, 2001:33). This disposition is related to this study which focused on senior lecturers, student teachers and the principal in examining challenges of using action research as a teaching and learning strategy at colleges of primary teacher education.

In its next phase of development, action research became radical (Tobin & Kincheloe, 2006:174). The rebellious formulations of action research such as those rooted in the work of Paulo Freire in Brazil, had been actively pursued by many people (Baum, MacDougall & Smith, 2006:856). This new brand sought to move away from the traditional focus of action research in professional development and curriculum improvement in institutions. In the 1980s in Australia, Stephen Kemmis led a group of academics who were interested in critical theory and action research at Deakin University. This marked the beginning of radical scholarship, rooted in critical theory. The democratic tenets were brought into action research practice to challenge oppression and sustain social justice (Somekh & Zeichner, 2009:8).

The emergence of this form of action research animated challenges that existed in power, politics and control bases inherent in the older models of action research, which were generally viewed as aligned to the status quo. Critical action research serves as a radical route to locate students' voices in action research (Tobin & Kincheloe, 2006:176; Bell & Aldridge, 2014:3). The collaborative stance of action research demanded free and open communication that is not restricted by concerns of power and status. People with positions of power normally exude an influence which reduces the freedom of subordinate members to communicate their views openly. It was believed that social problems could best be addressed through collective struggle and change (Hunter, Emerald & Martin, 2013:25).

Action research has been resisted as soft research and courted a certain size of hostility from researchers who belong to the older camps and not familiar with its processes (McDonald, 2012:41; Hunter, Emerald & Martin, 2013:25). However, involving students in action research has benefits as it provides a way to obtain their

perspectives on what is salient in terms of school, teaching, learning and a myriad of other issues (Tobin & Kincheloe, 2006:33; Hui & Grossman, 2006:2). Inclusion of student teachers in this study was significant in that it helped to provide insight into challenges of using action research as a teaching and learning strategy.

In the recent past, the political nature of action research has been realisable in the contexts where there have been change in ideological systems and the consequent need for curricula transformation. In such instances, action research is used in articulating and pushing for the realization of new visions. In Namibia, action research has been at the centre of educational reform since independence in 1990. The policy thrust has been on the building of a new teacher education system which encourages teachers to critically engage with learning as professionals (Somekh & Zeichner, 2009:12). The focus has been on empowering teachers and building a local knowledge base through democratic means (Pereira-Diniz, 2002:387). Action research was adopted as the strategy to educate teachers in the national teacher education programme for basic education (BETD). Mayumbelo and Nyambe (1999) in Somekh and Zeichner (2009: 12) state that:

In year 3 students undertook their own action research study. Throughout the BETD, students were taught to be reflective 'so that they become independent agents able to respond to the vibrant and ever-changing environments of their classrooms and society' (Somekh & Zeichner, 2009:12).

This observation mirrors the critical worth of action research for teachers as it encourages them to think about their own practice in a process of continuous improvement. Reflective practice also develops independent performance in teachers as they would be empowered to think about their practice, formulate actions for improvement and action them (Bell & Aldridge, 2014:16). This builds an adaptive potential in teachers which is desired for cultivating creativity and innovation. These qualities are important for producing better professional outcomes.

The teacher educational change in Namibia has been viewed as a form of locally managed strategy to give control over educational policy and practice to those at the grass roots (Somekh & Zeichner, 2009:13). The desire was to challenge the

influence of the West in education. The development of local knowledge by teachers resonates as a form of political action that claims the right of interpretation in Namibian education by teachers.

The use of action research as a strategy to empower teachers in reforming the education system was also evident in South Africa. In 2002, Winkler conducted studies that focused on higher degree courses intended to offer teachers from the former Bantu education system qualifications that matched their experience. The participant teachers were from poor locations with faint job security. Somekh and Zeichner (2009:13) state that it was difficult to decide whether educational theory would be of any value to them and how to teach it in a way that would not devalue their own practical knowledge. The study indicated the need to engage teachers in theoretical work that involved reflection and confrontation.

The genesis, growth or spread of action research, in its various forms, was a response to different situations and contexts which played out over the years. Action research was used in the rehabilitation of populations that experienced a plethora of problems in the society, organisations and political environments. It has been employed in many fields which include Psychology, Engineering, Nursing and Sociology. Action research has also actively featured in countries that have just emerged from political changes and with a subsequent need to transform the curricula to match the new crafted visions. Changes in schools, classrooms and the development of professionals have further been shown to involve the various functions of action research. These studies as reflected in extant literature, have however, exposed a knowledge gap which the researcher sought to fill through an investigation of the challenges that confront lecturers and student teachers at colleges of primary teacher education in Zimbabwe in using action research as a teaching and learning strategy.

3.5 APPROACHES TO ACTION RESEARCH

Basically, three approaches or modes of action research can be envisaged although authorities have devised varied categorizations to represent them. Newton and

Burgess (2016:36) discuss three modes of action research containing the technical, practical and emancipatory. Noffke and Somekh (2009:80) have three dimensions which include the professional, the deliberate and the political. Berg (2001:186) condenses basically similar categorisation by different sources into the technical/scientific/positivist mode, practical/mutual/deliberate mode and the emancipatory/critical science mode. These modes are categorised depending on the amount of influence and responsibility that practitioners (lecturers) have in contributing to decisions, content and methods to be used in the process (Zuljan & Volgrinc, 2010:91). The perspectives of action research contribute elements that help to shape practices in action research strategies which are employed in the teaching and learning at colleges of primary teacher education.



Figure 3.1: **Three Approaches to Action Research.** (Adapted from Zuljan & Vogrinc (Ed), (2010:91). Facilitating Effective Student Learning through Teacher Research and Innovation. Faculty of Education, University of Ljubljana, Slovenia).

3.5.1 The Technical Approach

The technical approach to problem solving emerged from the early proponents of action research, including the likes of Lewin (1944) and Corey (1953). The main focus of this approach is to make a better product that is effective and efficient (Hall

& Keys, 2005:21). This is done through the use of known techniques in a pre-specified theoretical framework (Turago, 2010:17). It is the technical skills of the researcher that drives the project. The interaction between the researcher and the researched is primarily technical and facilitatory (Berg, 2001:186). The researcher identifies the problem and a specific intervention, and then solicits the collaboration of the practitioner to facilitate in the implementation of that intervention (Turago, 2010:17). The practitioner may be an external expert with the skill of executing standards that are set in a given area of practice. The technical communication flows essentially from the practitioner to the group. The researcher tends to assume the role of a facilitator. This approach emphasises the skill of action research which is derived from the experience and qualifications of managing the process (Turago, 2010:17). Noffke and Somekh (2009:10) observe that the focus of attention is on the teacher and learner, as a way of making teachers more skilful. In the context of this study, the skills of lecturers and their relations with student teachers were focused on in examining challenges of using action research as a teaching and learning strategy in colleges of primary education.

The technical action research is product directed but encourages personal participation by practitioners in the process of improvement and change. According to Kosnik and Beck (2006:117), technical action research develops in participating practitioners the characteristic of the artisan, who learns not just to implement set programmes but to creatively apply the learned knowledge. This perspective yields predictive knowledge. In this instance, partaking in action research activities is expected to improve the professional delivery of lecturers as well as the success of student teachers (Hui & Grossman, 2006:3). The focus in this study was to review completed research reports, lesson plans, lecture schedules and notes in order to examine challenges that confront lecturers and student teachers at colleges of primary teacher education in using action research as a teaching and learning strategy.

3.5.2 The Practical Approach

The practical approach is collaborative, interpretive and personal in nature. In this approach, the researcher and the practitioners actively participate in problem identification which entails finding causes to challenging situations and developing possible interventions (Turago, 2010:17). Action research starts from what concerns us in practice and proceeds to establishing lasting changes to the undesirable state of affairs (Masters, 2006:188). A mutual framework of understanding is reached with participants who are involved as co-workers in the process. The major idea in this perspective is to research with or for rather than on people. The researcher stands with or along with the researched. To Hall and Keys (2005:21), practical action research seeks to improve professional practice through the application of informed judgement of teachers. Its main objective is to allow participants to gain knowledge and understanding of their practice and eventually develop solutions to pressing issues (Reason, 2000:325).

Practical action research is a flexible approach compared to the positivist paradigm (Masters, 2000:4; Berg, 2001:187). The frequent use of the term “interpretive” indicates this flexibility and the consequent accommodation of interactive and phenomenological perspectives (Foglia, 2008:67). The changes derived from practical action research tend to have a lasting character in related contexts, but specific interventions may be short lived as more participants involved in the project leave the system (Hall & Keys, 2005:21).

The practical action research approach embodies three types of knowing. These are the *techne*, *episteme* and *phronesis*. The *techne* refers to *knowing how* and is the source of skilful action. This knowledge results in the making of action and is product related. *Episteme* is the source of scientific action or *knowing what*. Practitioners in this case do not separate thinking from doing in the conduct of their work (Pereira-Diniz, 2002:381). On the other hand, *phronesis* of practical wisdom is *knowing why* and is the source of moral action which is often called practical judgement (Carr & Kemmis, 2004:132; Cooke & Carr, 2014:91). This practical judgement is grounded in experience and self-reflection (Noffke & Somekh, 2009:9). It also fosters the

development of professionalism through the adoption of moral decisions for the good of the client (Pereira-Diniz, 2002:381). Phronesis is basically product centred as it results in doing action or praxis. The nature of the interaction of stakeholders in the research process is subjective, personal and constantly being formed and influenced by the situation.

Practical action research, therefore, is the approach that colleges seek to pursue and that student teachers need to be appraised on. Identifying problems and administering interventions with the active collaboration of stakeholders is the objective focus of research studies done in colleges and conducted by student teachers in schools where they would be deployed. A fuller grasp of the issues of this design coupled with the availability of supporting resources assist in delineating challenges that confront lecturers and student teachers in using action research as a teaching and learning strategy.

3.5.3 The Emancipatory Approach

The concern about emancipation in action research relates to matters of power relations, decision making and actions that are taken in various scales in the social world (Noffke & Somekh, 2009:85). This approach involves reflection and action to emancipate participants from dictates of tradition, precedence, habit, coercion, as well as from self-deception (Somekh, 2006:13). It promotes a critical consciousness which exhibits itself in political as well as practical actions to promote change. Action research is emancipatory as it requires that practitioners take a close look at the structures and social arrangements that dominate sections of the population and change them for the better (Newton & Burgess, 2008:19). Researchers adopting this strategy aim to bring social problems of participants close to the theory that is used to explain and resolve them, and in the process raise peoples' collective conscience. This study intends to stimulate a shift in mind set from the use of traditional methods of teaching and learning to the action research strategy by examining its related challenges for redress.

Noffke and Somekh (2009:79) point out that the conceptualisation of the critical science perspective is founded on the critical theory of Habermas, a critical social theorist who presented a theoretical model for understanding emancipatory action research. A framework within which social critique may be developed was proposed. This allows the merging of theory and practice to be possible (Turago, 2010:18; Bech & Kosnik, 2006:27). The development of this action-oriented social process involves the theory, enlightenment and action (Carr & Kemmis, 2004:132). Enlightenment combines empirical research with reason. It is the phase in which ideas and beliefs from tradition are taken as irrational and a hindrance to growth and change. The natural laws of science are used to understand the social world prior to action to serve the needs of people (Zalta, Nodelman, Allen & Anderson, 2015:1).

This approach is informed by theory which provides the impetus to carry out the practice. The reflection upon theory in the light of praxis or practical judgement, creates in people the knowledge that is personal. This knowledge can be acquired through reflection and is a source of power and control (de Vos, Strydom, Fouche & Delport, 2005:212). Critical intent is that natural element which motivates people to action and interaction in the activities of radical action research (Turago, 2010:18). In the second phase of enlightenment, theories are applied and tested in the process of reflection carried out within certain groups of participants. The group processes of reflection give rise to enlightenment in the form of authentic insights.

The process must be allowed to occur through open communication among participants. The facilitator should not attempt to influence the outcome of the process by attempting to thrust enlightenment on participants. In this current study, the importance of theoretical understanding in research, student participation and open communication is highlighted to examine challenges that face lecturers and student teachers in using action research as a teaching and learning strategy.

The strategic action resulting from enlightenment is a form of praxis. It is the action that is not influenced by conditions in the environment. This is the form of action research that is usually found in business organisations and in the work of non-governmental entities. In South Africa, it flourished during the struggle against

apartheid (Robinson & Meerkotter, 2003:447). College students however are not particularly skilled in this action research strategy but it possesses essential features that assist in the understanding of action research theory. The importance of communication, participation, motivation and environment in this approach is helpful in examining challenges that confront lecturers and student teachers at colleges of primary teacher education in using action research as a teaching and learning strategy.

3.6 THE CYCLIC NATURE OF ACTION RESEARCH

The defining feature that distinguishes action research from other research methodologies is its cyclic nature. It is a cyclical and continuous process (Rawlinson & Little, 2004:9). This reflects the fact that people usually work towards solutions to their social and organisation problems in cyclical or iterative ways (Punch, 2009:136). The words cycle, spiral or helix are used to convey this tendency. One piece of research leading to a set of actions is not the end of the process, but rather the start of a cycle or spiral (Koshy, 2010:6). The research produces outcomes which lead to taking of actions, but that in turn generates more questions for research, which in turn generates further action, and so on. This stresses the idea that action research process is repetitive, cyclical and endless. The cycles of spirals involve problem identification, data collection, reflection, analysis, action and problem redefinition (Freebody, 2004:86).

The approach involves a spiral of steps with each step being made up of a circle of planning, action and evaluation of the results of the action (Lewin, 1948:202). Figure 3.2 shows a representation of the action research process.

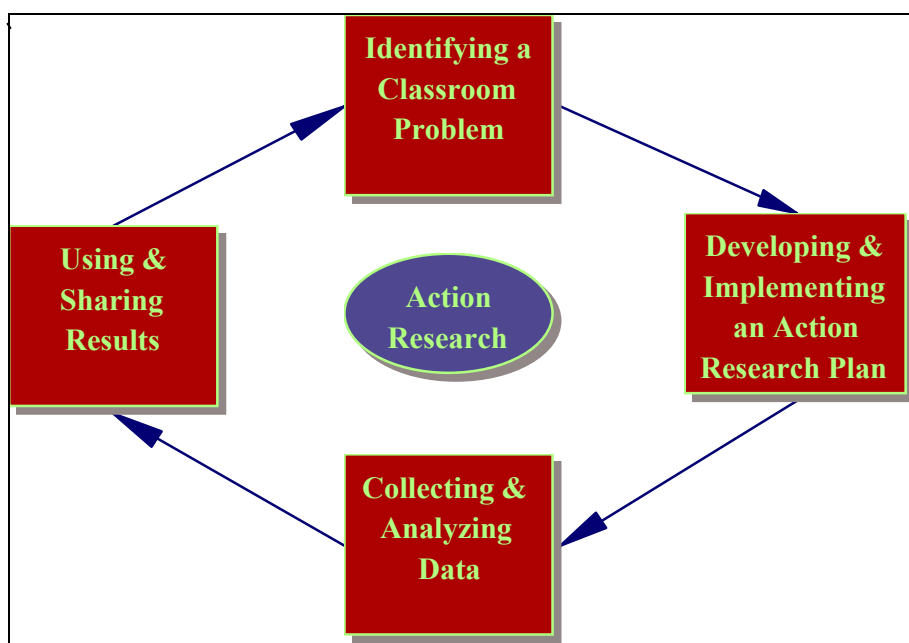


Figure 3.2: The Action Research Process (Adapted from Rawlinson & Little (2004:13) **Improving Student Learning through Classroom Action Research: A Guide to Becoming an Action Researcher.** Florida, Bureau of Exceptional Education and Student services).

Figure 3.2 above shows that action research is endless as learning is a cyclical process. The action researcher is always observing, analyzing, designing, assessing, and adjusting (Rawlinson & Little, 2004:9). Practitioners employing action research are always involved in reflecting on their practice and instituting changes for improvement. McNiff, Lomax and Whitehead (2003:117) support the concept, stating that "*Nothing is ever static. We are constantly changing ourselves and our contexts*".

The approach does follow a fairly sequential form. The first step of the initial cycle involves examining the idea (problem) carefully in the light of the means available. More fact-finding about the situation is required. If this first period of planning is fruitful, an overall plan to reach an objective emerges and a decision in regard to the first step of action is made.

The next step on the development and implementation of action plans involves crafting interventions envisaged to address the situation at hand. The researcher and

respondents collaborate in the task of identifying and prioritising actions to improve or modify the undesired state of affairs. Both the researcher and the people for whom the intervention is applied get involved in working to deliver a reorientation of their usually nagging circumstance. Data is collected after the intervention is served. The purpose of collecting data is to monitor students' learning related to the identified goal(s) for improvement (Rawlinson & Little, 2004:45). This allows an assessment of the effectiveness of the chosen technique in rectifying the undesirable condition. The outcome of the executed action is then shared with other interested parties and stakeholders. Many forms of communicating results are available including presentations to an audience, posters, written assignment, research report and a host of other technological methods. This relates to this study which involves student teachers implementing selected options to address problems and reporting results for assessment by lecturers.

Kemmis and McTaggart (2000:564) affirm that action research is composed of self-reflective cycles of planning, acting and observing. They also contend that these need not be viewed as a rigid sequence. The phases interlock, with each covered stage being rendered obsolete as a result of new found knowledge. This model is, however, criticized for placing insufficient emphasis on analysis at key points and for envisioning implementation as a straight forward process (Koshy, 2005:5).

Many action research models have evolved owing to the number of researchers interested in studying the various principles and aspects of the methodology. The result being the deepening and broadening of social practice. Each model should be seen as providing insight into ways of dealing with social issues in diverse areas of human life. Koshy (2010:6) observes that action researchers should always adopt the models which best suit their purpose or adapt these for use. Calhoun developed an action research cycle which is not in the form of a "spiral," but still reflects a process that is built around a cyclical frame (Mertler, 2009:15). The model is conceived as shown in Figure 3.3.

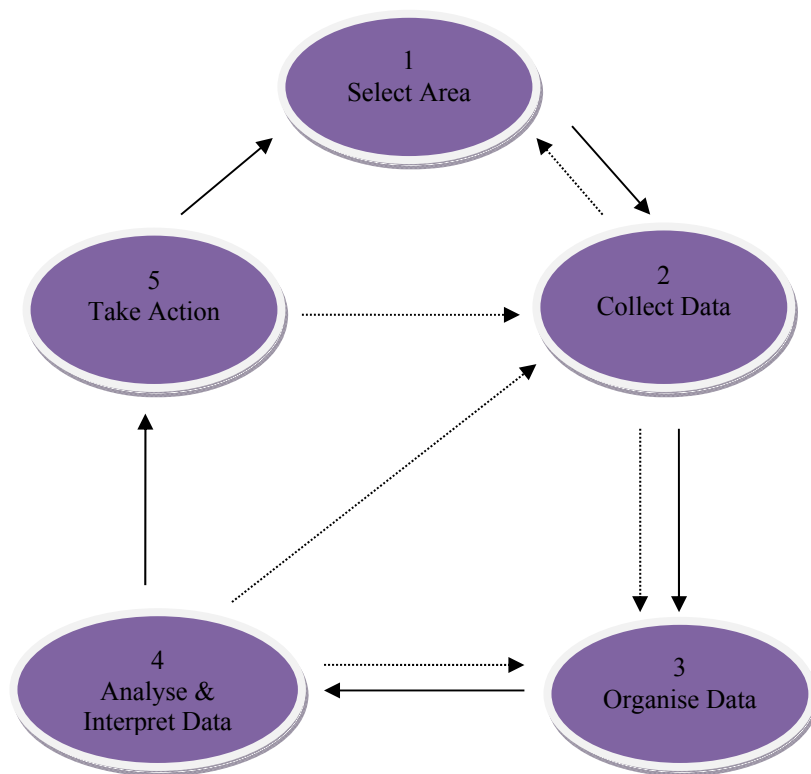


Figure 3.3: Calhoun's Action Research Cycle. (Adapted from Mertler (2009:15). *Action Research: Improving Schools and Empowering Educators*. Sage publication).

The solid lines indicate the primary direction of the action research cycle following the numbered sequence. The dotted lines indicate the forward and backward motion of the process as refinement or clarification of information takes place (Mertler, 2009:15). This model is useful for this current study as it provides guidelines that can be adopted to resolve problems using action research and to discern challenges which may stifle the process.

3.7 CHARACTERISTICS OF ACTION RESEARCH

Reason (2006:187) identifies four characteristics of action research which are: worthwhile practical purposes, democracy and participation, many ways of knowing, and emergent development process. The identified criteria are viewed as representation of choices that action researchers must make in carrying out research.

3.7.1 Involves Worthwhile Practical Purposes

Reason (2006:182) states that action research practice is a value-laden process. It raises questions of values, morals and ethics in the quest to transform societies and practices within it. Action researchers need to make moral choices in deciding on the options they consider useful and whether they continue to be appropriate and relevant. In addition, guides to what is required may consider issues such as who it is that defines what is wanted, whether people know what they want, and whether what people want is actually good for them. The value of morals relates to this current study which respects issues of consent, confidentiality and objectivity in examining challenges that face lecturers and student teachers in using action research as a teaching and learning strategy.

3.7.2 Democratic and Participative Process

The second characteristic of action research is that it is a democratic and participative process (Reason, 2006:189). No single person or group can study and improve practice without active involvement of those engaged in that practice for knowledge and necessary approaches will be lacking. People can only be better understood if they are studied as persons with a drive to act in the process and to generate meanings from their participation (Reason, 2006:189). Ideally, people have a right to participate actively and contribute to decisions that affect them and to know what is about them. They need to converse as a collective to share knowledge about the phenomenon that they set out to investigate (Miller & Grabtree, 2004:187). This aspect is pronounced in the conduct of action research and is done in an educative manner that increases the capacity of participants to engage in inquiry (Reason, 2006:189).

There has been concern about the need for deeper meaning of democracy in the process and conduct of action research. Rahman (2003:16) posits that people should be empowered toward their democratic participation and voice for realizing their human urges, to enhance their contribution to and involvement in the search for deeper articulation of an ideological vision of a more humane world. The creation of

“communicative space” is akin to successful action research practice (Kemmis, 2001:100). This is itself a form of action. In certain situations, the best thing to do may be to help open, develop, maintain, and encourage new and better forums for communication and dialogue. This may prove to be the most significant outcome than the solution of immediate practical problems (Reason, 2006:193). In this study, the ability of student teachers to communicate effectively in both written and group discussions was examined in order to extrapolate challenges of using action research as a teaching and learning strategy.

Action research as a democratic process requires exhibition of particular skills and abilities among its practitioners. Those involved in the inquiry should trade cautiously within the usually politically charged socio-political frameworks of practice. Democracy is often a threat to those who hold positions of power and politics in society. The political stage is in such a way that all those involved in the practice will not be heard as equal (Reason & Bradbury, 2008: 399). Those who participate in action research may be abused, threatened or curtailed (Reason, 2006:194). Therefore, skill is required in drawing participants together and creating a collaborative framework for conducting research in order for desired outcomes to be realised.

Tensions in the facilitation process require skilful management, especially where professional or external facilitation is involved. The consultant, community organizer and the community should negotiate working relations for action research conduct (Reason, 2006:194). A systematic balance has to be established where the affected people avoid irrationally rejecting the facilitator while the facilitator also prevents controlling and adopting inappropriate language for the concerned people. Reason (2006:194) argues that action research facilitators must follow disciplines of reflective practice and communicate well to build collaboration and team work in instances where action research is used to deal with problematic situations. This is relevant to this study which also focuses on student teachers working in groups to find research-based solutions to an assignment question, in-class specific problem or project.

The action research practitioner also needs to be sensitive to the effects of the limitations of first-order democracy. This approach brings together people who share a sense of identity in working together to deal with issues of common significance to the group (Gergen, 2003:51; Somekh, 2006:26). Its pitfall is that it creates both a sense of us and a sense of them which has the potential for isolation and antagonism. The researcher must be able to develop a concern for the issues of a particular group of people as well as those of the wider world (Somekh, 2006:27). It is argued that action research will be of limited significance if it is viewed as once-off work done in specific cases but instead should be seen as a series of small events that constitute a whole (Reason & Bradbury, 2008:6). This study is concerned with challenges that confront lecturers and student teachers at colleges of primary teacher education in Zimbabwe which may also mirror situations in the wider world of action research practice.

3.7.3 Concerns many Ways of Knowing

Action research can also be viewed in terms of its concern with many ways of knowing as a basis to address problematic issues (Reason, 2006:189). This dimension deals with the way people make sense of experience and how they relate these with the wider field of academia (Reason, 2006:189). It is concerned with the marriage of theory with practice and the testing of our claims to knowledge against evidence obtained from practice (Cohen, Manion & Morrison, 2000:226). This knowledge refers to abstract theories of scholarship. Action researchers like to claim that their work goes beyond the knowledge obtained from formal education to embrace the understanding achieved through participation with others and intuition (Reason & Bradbury, 2001:1).

A typology of four ways of knowing borders around experiential, presentational, propositional and the practical (Reason & Bradbury, 2008:366). Experiential knowing refers to the *lifeworld* of everyday lived experience (Reason, 2006:195). It is described as knowing through direct face-to-face encounter with a person (Nicol, 2002:214). The implication of experiential knowing is that direct contact and collaboration with concerned participants is the route to accessing relevant data

through which desired actions for change can be formulated and implemented (Reason, 2006:189). This approach to knowledge is crucial to this study in that the researcher will be native with the selected college of study in order to obtain rich data on the current challenges that face lecturers and student teachers in using action research as a teaching and learning strategy.

Presentational knowing grows out of experiential knowing and provides the first form of expression through story-telling, drawing, sculpture, dance and photos (Reason, 2006:197). It involves representing our knowing in artistic forms such as imagery and metaphor. This form of knowing is aesthetic, implicit or tacit and shows what was occurring (Taylor, 2004:73). Bruner (2002:103) argues that "*We come to experience the real world in a manner that fits the stories we tell about it*". The language that people use creates or represents the reality that they want and is tainted with subjectivity. In arguing for a new view of phenomena the choice is between using familiar or new vocabulary which signals change (Reason, 2006:195). People may choose to retell their experiences in new stories as a way of agitating for change. This aspect relates to this study since it involves lecturers and student teachers presenting their views and experiences as they reflect on challenges of using action research as a teaching and learning strategy.

Propositional knowing is the link between action research and scholarship (Reason, 2006: 196). It is the form of knowing which uses intellectual/discursive/explicit methods of representation and draws on concepts, ideas and theories (Taylor, 2004:74). According to Reason (2006:196), theoretical practices must be seen as part of action research. Student achievement in this field comes not only from hands-on involvement but minds-on as well (Dolezal, Welsh, Pessley & Vincent, 2003:254). The ability to develop theories grows out of in-depth examination of experience and new narratives. Theoretical perspectives can also be brought to bear on the conduct of action research. The relevance of Habermas and Gregory Bateson's reflective practice on action research are classic examples. In his conception of the theory of critical social science, Habermas saw the emancipatory value in the formulation as being mediated by the medium of power. This theory was used to reveal how goals or freedoms can be frustrated and provided suggestions for removing those sources

of oppression. It is believed that meaningful consensus can be reached through open dialogue in democratic conditions to bring the desired transformation in the lives of people (Frost & Snoeren, 2011:3). Action research, therefore, engages accepted theories and at the same time formulates new theories in the process of resolving context-tied issues. This study, while underpinned by the social cognitive theory infuses other accepted theories to examine challenges of using action research as a teaching and learning strategy at colleges of primary teacher education.

Practical knowing is knowing-in-action and is quite different from knowing-about-action. This articulates the distinction between action research and basic research. “I do” rather than “I think” should be the starting point of action research philosophy. Practical knowing assumes a quality of its own (Reason, 2006:197). Practical knowing is concerned with the skill or competency of representing an experience (Taylor, 2004:73). It seeks an understanding of how things are done, which is beyond the mere language and statement of concepts.

Practical issues in action research are addressed through cycles of action and reflection, in which the results of each cycle are evaluated against plans and objectives (McNiff, 2002:7). Researchers need to make choices with regard to the number of cycles to engage in, amount of time to engage in the activities, balance between action and reflection, and the scope of problem coverage. Reason (2006:197) warns that these cycles are always messier than the neat diagrams drawn in action research books would suggest. The process can adopt either the Apollonian or Dionysian approach. The Apollonian approach takes on a more rational, linear and systematic form, while the Dionysian inquiry is more imaginary, expressive spiralling, impromptu and tacit (Reason, 2006:197). In practice, inquiries combine the two approaches. Whatever approach to cycling is used, the question is whether enough evidence is produced to support claims through cycles of action and reflection. This is relevant to this study which focuses on the systematic way in which lecturers and student teachers gain knowledge and engage in action research activities in teaching and learning.

3.7.4 Emergent Development Process

Action research is an emergent process (Dick, 2003:1). This means that it does not come with a well-developed design but develops over time as communities of inquiry interact with communities of practice. According to Torbert and Reason (2015:3), action research emerges over time in an evolutionary and developmental process, as individuals learn new skills of research, as communities of inquiry develop, as understanding of issues deepens, and as practice grows and shifts over time. Action research is emergent in that during its process the questions, relations, purposes and what is deemed important can change. The issue that rings in mind is that as lecturers and student teachers engage in the process of finding solutions to problems, continuous adjustments are made as new knowledge, time concerns and social factors filter into the education business.

Action research cannot be programmatic. It cannot be defined in terms of hard and fast techniques (Bevir, 2007:8). It is an emergent process of resolving issues in a participative and democratic manner (Reason & Bradbury, 2001:1). The activities that people get involved in are not viewed as isolated behaviours but part of a continuous process that characterises life. Action research strives to identify and articulate the choices made in the investigation process. In view of the above, this study relied on the analysis of documents, lesson observations and views of lecturers and student teachers to examine challenges of using action research as a teaching and learning strategy.

3.8 ACTION RESEARCH AS A TEACHING STRATEGY

Action research exists in education because there is always room for teaching and learning. Many teaching methods are found in the classrooms but action research works well because the cycle offers opportunities for learner independence and reflection (Parpala & Lindblom-Ylänne, 2007:256). Action research routines guide the lecturers to select and organise teaching content and to take cognizant of learner characteristics and abilities. Its principles are similar to the way people investigate and address every day issues and problems.

Norton (2009:69) views the process as composed of phases of problem identification, analysis, acting, evaluation and modifying the way things are done to correct the situation. Teachers, therefore, pass through notable phases in their instructional processes of planning, teaching and assessment or evaluation (Stringer, 2004:4). The process involves the teacher making plans on issues of data search, materials, activities and objectives of the lesson. This is followed by an analysis or reflection on the plan prior to the delivery of instruction. Continuous evaluation, however, goes through these stages to create reflective thinkers in teachers (Merkler, 2012:26). The last stage of evaluation usually results in new issues which lead to the start of another cycle of activities in the quest to achieve the desired outcomes.

Patterson, Baldwin, Arango, Shearer and Stewart (2010:145) state that Stringer and colleagues present the practitioner research as a "Look, Think, Act" model. This description is viewed as appropriate for both teachers and students. The "Look" step or phase refers to data collection and analysis. The "Think" step refers to a critique or reflection on instructional, theoretical, or political implications that relate to the collected data. The "Act" phase focuses on the actions that are put into practice derived from academic skills or other teaching and learning aspects which may go beyond the classroom situations. The "Act" stage is the last element in the model but is influential in the development of new questions that result in a fresh investigation. This implies that the last phase of one inquiry can overlap or extend into the "Look" phase of the next cycle.

According to Hine (2013:4), the 'Look' stage pertains to information gathering process by observation in the form of seeing, listening, and recording. Questionnaires, interviews and documentary analysis are also used (Stringer, 2004:54). In the 'Think' phase, practitioners analyse the information that will have been gathered to discern important aspects and elements of the phenomenon under study. The last 'Act' stage consists of the implementation of the devised solutions to the topic, question or problem of study. In teacher education, as in other fields of study, the stages in the action research process are not as simple and linear as the various models portray. According to Helyer, (2015:18), the process is continuous

and complex, with people who participate in the activities having to think, plan, act, rethink, revisit action, move forward, leapfrog steps while at times making radical changes in direction.

3.8.1 The "Look" Stage

This stage involves data gathering and organisation processes which usually come through seeing, listening and recording. This stage is basically the planning phase where the collected information is collated and used to prepare instruction that is informed by the real situation in the classroom. Lesson planning is a creative process which provides a basis for effective learning (Milkova, 2012:1). It means deciding on what information to present, how to present and communicate it to students in ways that reflect realistic expectations. Effective content presentation is at best suspect and at worst a gamble in the absence of lesson plans (Shrawder & Warner, 2006:2). Planning makes teaching a rewarding experience for teachers and learning more satisfying for students. Shrawder and Warner (2006:3) describes a lesson plan as the road map used to plan and conduct a class through to the final examination. It assists in developing a logical and systematic learning process which is critical in making sure that students learn and achieve in the shortest possible time.

Planning involves the formulation of objectives and this results from a review of necessary documents, coupled with acquired knowledge of learning objectives, lesson components and instructional design. Learning objectives refer to statements that spells out what students will be able to do after the lesson is completed (Shrawder & Warner, 2006:5). The understanding is that a student who has been taught new experiences must be able to demonstrate changes in thinking skills, physical capabilities and attitudes. Bloom in the 1950s envisaged cognitive learning as a hierarchy starting from the concrete and progressing to the abstract. These mental skills were thought of as arranged from simple to complex, representing a progression in the learning development of the student. The elements of cognitive learning include knowledge, comprehension, application, analysis, synthesis and evaluation and from these emerge the three domains or taxonomies of learning

covering cognitive, affective and psychomotor skills (Shrawder & Warner, 2006:5). Cognitive learning addresses knowledge and mental skills that develop and accrue to the learner as a result of exposure to the learning materials. The affective domain has to do with feelings and emotions which are also expressed in beliefs, attitudes, values and interests that students gain as a result of the lesson. Psychomotor learning embraces the acquisition of physical skills which may be kinaesthetic or tangible.

3.8.2 The "Think" Stage

According to Hine (2013:3), this phase is where the collected information is analysed to identify its main features and to assess its suitability to achieve the stated goals of the lesson. This is the stage where teachers reflect on the plans they will have designed for the teaching and learning of students. They develop new ways of thinking and supporting the learning of students (Perrett, 2003:9). Reflection is vital to teacher development and can be intuitive, systematic and organised (Christodoulou, 2010:12). This can come as a result of experience in given practice or through adherence to laid down guidelines. The teacher with long service in the profession may need to rely on the wisdom obtained over the years of regular and familiarity with planning for effective lessons. In the thinking about the plans, the teacher has to consider the amount of material to be covered within the given time interval, the linkage of the content with previous and the next lesson, the amount of examples to be given and the general flow of the lesson. The issues of pedagogy, methodology and the whole strategy of packaging and delivery of instruction have to be debated and reviewed prior to actioning of plans. Ideas from reflection have to be tested before they are used practically (Helyer, 2015:19). Each class or group of learners has a personality of its own and teachers have to ensure that the important teaching aspects such as content, objectives, approaches are matched with the nature of a particular set of learners. Teaching contexts normally comprise a varied group of students at different levels of prior knowledge and personal experiences (Milkova, 2012:2). The pacing of the lesson, the materials to resource the lesson and coordinating classroom space are part of the reflective exercise that teachers experience in the time between planning and delivering a lesson (Coe, Aloisi,

Higgins & Elliot, 2014:3). Lesson assessment plans also need to be pondered to the satisfaction of the teacher. This is done on course materials, teacher performance, learning outcomes, class time and feedback on content retention of students (Milkova, 2012:4).

3.8.3 The "Act" Stage

This is the central focus of the teaching and learning activity and involves teachers and learners going through the instructional sequence. This stage is the implementation phase where the plans are enacted and from which data for assessment and feedback is also generated. The skills and knowledge of teachers are critical in providing guidance, scaffolding and assessment of learning experiences (Barron & Darling-Hammond, 2008:15). These include the ability to describe and discuss information through communication as well as to question, listen, monitor and give feedback (Coe et al., 2014:15). Direct teaching of theory in traditional ways helps students learn new ideas and knowledge (Barron & Darling-Hammond, 2008:5). Classroom interactions call upon the teacher to exhibit abilities to deal with student discipline, use well available instructional technology, express warmth and a caring attitude, and establish a conducive learning atmosphere. Teachers who are reflective in their teaching are able to pick up aspects of instruction that either enhance or hinder content mastery (Hine, 2013:3).

Communication is the single most critical factor in ushering effective lesson presentation. Babonea and Manteau (2012:2) state that effective communication is essential in expressing ideas, feelings and the thinking around a shared goal. The language used by teachers tells whether students understand or not. It is preferred that the language used should be to the level of students and possess adequate technical terms to give learners the basis to discuss fully the pertinent areas of the subject. Use of appropriate language helps to establish student-teacher rapport and the engagement of students in the lesson. The interest and enthusiasm which every teacher must develop in students should be understood to result from using a language that is adapted to the characteristics of the class. It is also vital to sustain

the interest of learners by maintaining the right pace of the lesson and keeping expectations within the abilities of students.

Questions that take cognisance of Bloom's taxonomy in order to require knowledge which involves the lower and the upper end in the continuum of difficulty are a must in lesson delivery (Munzenmaier & Rubin, 2013:1). Enough response time need to be given to students after asking them a question to enable them to think and represent their ideas in words. It is encouraged that the teacher be good in listening to contributions of students so that appropriate evaluations of content mastery is made (Helyer, 2015:19). The responses usually contain cues which the teacher can use fruitfully to plan for the next learning activity.

Lessons that create lasting impressions in students tend to be those that include demonstrations. The amount of time that students spend reviewing and practicing has a long-term effect on retention (Bjork & Bjork, 2011:59). This has the effect of moving the contents of the lesson from being abstract to practical and real. What is taught in class is brought closer to the lives of students, the school and the community. The quest to realise this goal is supported by the use of instructional materials which assist in the description, clarification and simplification of concepts. Kaur (2007:3) believe that the teacher can make complex knowledge easy to comprehend through demonstration, use of assistive materials and life examples. Learning materials are the different apparatus used by teachers and students to maximise learning in various study areas (Nwike & Catherine, 2013:104). Students taught with the assistance of instructional materials are believed to achieve better than those taught without. This is because materials stimulate excitement in learners and can be arranged in a flexible manner as per the needs of learners to enhance their performance in the area of study. Nwike and Catherine (2013:104) further believe that the use of instructional materials provides a concrete basis for conceptual thinking, motivates learners and captures their imagination when used appropriately.

Assessing involves finding out the level of student achievement. Important aspects of assessment are decided at the planning phase when instructional goals and content

are identified. Assessment procedures have to encompass both the teacher and students to ensure a complete analysis of teaching and learning discourse (Barron & Darling-Hammond, 2008:4). Student assessment may take place in the form of paper and pencil tests, portfolios, work samples, projects, reports, journals, models, presentations, demonstrations, and other forms of product and performance assessments. Ahrens, Brant and Lee (2007:47) state that problems of student performance can be established through the use of student self-evaluations, assignments and tests.

The assessment activities that teachers may choose to employ in their classrooms must encourage learning through experience or active practical sessions (Gurney, 2007:91). This involves giving students opportunities for direct and active interaction with the activities for learning and this is a good vehicle for grasping of concepts. Emphasis need to be placed on doing and acting rather than on theory. The essence of making assessments is to record strengths and weaknesses of the learning activity so that needed adjustments are made for the betterment of student outcomes. Part of the process would evaluate the effectiveness of the strategies used, the extent to which objectives were achieved and to suggest recommendations for improvement (Ahrens, Brant & Lee, 2007:47). Kay and Keys (2005:12) add that feedback should be encouraging, constructive and positive as well as take cognisance of the individual needs of students and their backgrounds. Feedback should also be timely (Coe et al., 2014:29). This implies that lecturers and student teachers have to be closely assessed in their use of action research in the teaching and learning discourses to enhance understanding.

3.9 RATIONAL OF USING ACTION RESEARCH IN TEACHING AND LEARNING

Action research allows a study to be placed within a particular context or situation of interest. The area of focus can be of various sizes but the attachment of the research endeavour to a clearly defined location remains of crucial importance. Studies, especially in the field of education can focus on issues that concern in-class activities, grade level, school streams, school wide problems, the community and so

on. The thrust of the study will basically be to have a detailed investigation and understanding of the phenomena of research in order to devise context-tied or relevant solutions.

This research methodology is akin to participation by members at the centre of the issue under investigation. Koshy (2005:21) states that "*Researchers can be participants, they don't have to be distant and detached from the situation*". Action research starts with a direction of change with others (Reason & Bradbury, 2008:1) Distant or outsider participation faces problems of detachment from pertinent matters in the study area, and failure to articulate fully the feelings, attitudes and concerns of the researched using their language. Action research requires practitioners with an acute grasp of the situation under study to enable a smooth and informed transition through the established stages of the research process. The use of action research as a teaching strategy is lauded in that it makes use of every day classroom attendees to gather, analyze data as well as action remedies developed in the study.

While the action research process moves in cycles with observable steps, these do not pre-suppose a fixed linear fashion. The process can move back and forth and start at any point of the helix. The planning stage can entail problem diagnosis and analysis of that concern, while implementation of strategies for change also involves an assessment of the action taken. It basically involves continuous evaluation and modifications as the process rolls on (Koshy, 2005:21). This teaches student teachers not to think in a linear fashion but to be alert to emergent features and behaviours of learners during instruction and to address them as they emerge.

The practice of action research is not always guided by an existing theory, but can also result in the development of a theory. This is because action research is context-based and solution focused. It usually deals with new unique phenomena for which, at times, no research effort has been expended as to result in established assumptions, concepts and beliefs. Koshy (2005:21) posits that there are chances for theory to emerge from the research instead of always following a previously formulated theory. However, Yasmeeen (2008:49) contends that for action researchers, theory informs practice and practice refines theory in a continuous

change. These views do reveal the symbiotic relationship between theory and practice and that these influence each other in an endless cycle that changes stress between theory and practice. Pillay (2013:7) further observes that the timetable should make provision for theory lessons to come before practicals.

Action research is good choice for use in teacher education as it is flexible and modifiable depending on the situation, hurdles and resources (Yasmeen, 2008:49). This is recipe for the realisation of multi-pronged research results which are capable of addressing wide areas of the teaching and learning activities. Studies informed by this methodology can lead to open-ended outcomes (Koshy, 2005: 21). The room for reflection and evaluation that action research presents throughout the stages creates new opportunities and prospects for renewed investigation, and so yielding endless sets of outcomes. This is ideal in education where new knowledge and ways of understanding are constantly emerging to improve practice.

3. 10 PRIMARY TEACHER EDUCATION IN ZIMBABWE

The current teacher education system in Zimbabwe runs an integrated blend of the conventional and unconventional approach of the ZINTEC programme. The programme runs for three years in a model that is popularly referred to as the 2-5-2 model (Mswazi & Gamira, 2011:412). Student teachers spend the initial two terms of their teacher education programmes at the college, five terms in schools on teaching practice and the last two terms at college (Jenjekwa, Rutoro & Runyowa, 2013:25; The Development of Education National Report of Zimbabwe, 2004:13).

The curriculum at colleges of primary teacher education is uniform but differences in the use of that syllabi occurs. Each college draws its own syllabus which is then approved by the University of Zimbabwe. The University of Zimbabwe through the Department of Teacher Education (DTE) is the supervising and certification authority. It has the mandate to unify primary teacher education programmes and to improve the quality of teacher education in general (Mswazi & Gamira, 2011:412). Syllabi for the colleges have been largely harmonised through constant moderation

by the University of Zimbabwe. The curriculum that colleges offer is composed of four sections as follows:

- Section 1: Teaching Practice
- Section 2: Theory of Education
- Section 3: Academic/Main Study
- Section 4: Professional Studies Syllabus A, B and C

Teaching Practice is a practicum stage in which student teachers actually teach in their schools of practice for five terms following the first two terms of theoretical grounding in Theory of Education (TOE), Academic Study and Professional Studies Syllabus A, B and C (Rutoro & Runyowa, 2013:25). Organized face-to-face tutorials during vacation courses supplement the support given to student teachers during teaching practice.

Each student has to select a Main Study from an array of subjects that are in the primary school curriculum. Student teachers are expected to do an in-depth study in any of the areas which include Art and Design, Environmental Science, Home Economics, English, Music, Shona, Mathematics, Physical Education, Music, Religious Studies. The professional and theoretical aspects which are crucial to the classroom are contained in Syllabus A. Syllabus B is made up of pedagogical subjects taught at primary school inclusive of National and Strategic Studies (NASS), Health and Life Skills (HLS), and Information and Communication Technology (ICT).

Research forms Syllabus C. This curriculum is introduced to student teachers during the first residential phase and runs through the duration of the entire course. Student teachers are exposed to and begin engaging in research activities before proceeding on teaching practice. Student teachers are supposed to be provided opportunity to practice the use of action research teaching and learning strategy through micro-teaching and peer-teaching sessions but these are excluded from the training programme at the college under study. This militates against efforts to impart reflective skills to student teachers so that they are able to solve problems that relate to teaching and learning. Ljubljana (2010:34) notes that research is meant to make

teachers resourceful and effective in practical teaching and to address concerns in their specific subject areas.

3.10.1 Micro-teaching

According to Bell (2007:24), microteaching is a practice in which students in educational methods courses teach a lesson to their peers in order to gain experience with lesson planning and delivery. It is an activity that is undertaken in small groups in order to enable those who participate in it to acquire skills (Quinn, 2000:388). Pre-service teachers are organised into small groups and made to practice or demonstrate the skills they would have gained during theory lessons in a short period of time (Higgins & Nicholl, 2003:352). The understanding is that teaching is no longer a mechanical process whereby teachers just need to stand before students and deliver material to passive receivers of knowledge. A lot goes on into teaching which pre-service teachers have to learn about and reflect upon to be effective in teaching practice.

The process of reflection is important to teachers as they continue to learn about teaching and the management of practices involved. It serves to assist teachers in problem solving, self-assessment and continued growth in teaching. A reflective person has a clearer conception of practices and procedures as these will be regularly critiqued and improved (Helyer, 2015:23). The micro-skills that constitute the microteaching cycle are better understood and modified during student teacher training in readiness for the actual teaching profession. These micro-skills encompass activities involved in lesson planning, teaching and evaluation. Quinn (2000:388) states that microteaching sessions are normally videotaped to capture every detail that the audience would have missed out but which is crucial for a terminal review.

Micro-teaching is meant to avail a situation in which student teachers feel immersed in real teaching and learning. It is an opportunity for them to role play what teaching is, how it will be like in practice and to assess their skills and potential (Bell, 2007:26). This arrangement is advocated for by Danielewicz (2001:137) who

supports teacher education that assists student teachers to build teacher identities during the entire period of training. The strategy enables individuals to rehearse teaching skills and methods without being scared about the outcomes of not being successful. Feedback and peer review are provided to guide growth in teaching skills. Higgins and Nicholl (2003:221) further consider microteaching as a tool for nurturing confidence and self-awareness in the students.

3.10.2 Peer-teaching

Topping (2010:322) views peer teachers as people who belong to the same social group, are not qualified teachers but help each other to learn while at the same time they themselves learn through teaching. These are fellow students with less knowledge and teaching experience than lecturers. Peer-teaching can be described in terms of the seniority of the person teaching others, the size of the groups and formality of the teaching encounter. The peer-teaching concept applies at various levels of study from junior classes to post graduate meetings.

Peer-teaching has benefits to lecturers and student teachers. It is a cost-serving exercise which develops the teaching skills of student teachers, particularly in developing confidence, knowledge and instructional skills. Peer-teaching is also good as it can avail to students those topics which may not be fully addressed in the curriculum. Peer-teaching is believed to produce outcomes that are more comparable with those groups taught only by lecturers and professors (Mills, Dalleywater & Tischler, 2014:1).

Peer-teaching offers added value in fostering cooperation and social interaction amongst students (Mills, Dalleywater & Tischler, 2014:1). This happens as student teachers work closely together in the planning, teaching and evaluation of lessons presented. In peer-teaching, student teachers tend to be free to discuss issues involved in the activities than they would do had lecturers been in charge of the teaching.

3.11 VIEWS OF LECTURERS AND STUDENT TEACHERS ON ACTION RESEARCH

This section presents the views of lecturers and student teachers on the use of action research as a teaching and learning strategy from the reviewed literature.

3.11.1 Views of Lecturers on Action Research

Action researchers strongly believe that change and improvement can come from active participation in social contexts through the reflective cyclical process of action research (Townsend, 2007:1). Lecturers have welcomed the use of action research owing to the generally held view that the nature of teaching and learning of students shapes the quality of student achievement (Townsend, 2007:3).

Boyle, While and Boyle (2004:64) observe that the participation of lecturers in action research is encouraged as the majority of those who take part in long term projects indicate some changes in their teaching practice. Tahir and Abubakar (2009:420) remarks that lecturers perceive their involvement in research as enhancing their research and teaching skills. These readily engage with colleagues to examine problems which may include teaching methods, classroom life and the quest for deeper understanding of concepts. This corroborates the findings of the action research approach by the New South Wales Department of Education in which teacher teams engaged with mentors to improve teaching through sharing, reflection, planning, action and observation.

Seider and Lemma (2004:221) report that Neapolitan (2000) conducted a study with 21 lecturers who had done individual action research projects as part of their graduate degree programme in teacher management. The findings revealed that lecturers believed that participating in action research assisted them to gain individual and professional development and to move other teachers in the direction of instructional and curriculum improvement. Research data also showed that lecturers perceived a huge effect in their teaching and learning soon after carrying

out the study. These reported an improvement in understanding and skills in the areas in which their research work was focused (Seider & Lemma, 2004:222).

In the study by Seider and Lemma (2004:225), lecturers revealed using action research principles since their immersion in the action research experience. They added that reflection as it is contained in action research had become part and parcel of their conscious effort. This indicated the positive impact that involvement in research creates on those included in this activity. The ability to solve teaching and learning issues through action research was further perceived to build a sense of professional efficacy with its associated feeling of confidence and self-esteem. The application of teaching strategies that are derived from action research were reported to characterise the lessons they continue to teach.

The participants in the study indicated that action research is a challenging engagement. Some of the challenges concerned setting up of the research problem, time management, gathering of relevant data and writing down the research report of the results of the investigation (Seider & Lemma, 2004:222). The intimidating encounter or interaction experience with the supervisors also added to the challenges. Mixed views were, however, given pertaining to the issue of the administrative support and institutional climate for conducting an action research study.

3.11.2 Views of Student Teachers on Action Research

Barnard, de Luca and Jinrui (2015:938) conducted an action research study on the perceptions of students and lecturers on the use of peer feed back in content mastery and academic writing. The findings of the study revealed that students felt very confident, nurtured and positive about the collegial critique that ensued in the progress of the study. The students also realised that their opinions in the group were valued and respected. It also emerged that student teachers gain lifelong benefits in the acquisition of skills, knowledge and attitudes for use in future academic tasks. The methodology assisted students greatly as it considered what they had already known and built on it to reinforce teaching and learning.

Student teachers prefer the use of action research strategies in the teaching and learning discourses as they involve active engagement and collaboration. Mohamed (2008:6) conducted a study which was focused on exposing students to collaborative, traditional and inquiry-based learning methods. It was revealed that students perceived collaborative learning as providing significant gains in their learning and performance.

Students indicated their enjoyment in participating in active learning and that they would recommend it for other learning instances (Mohamed, 2008:7). The method enabled students to develop positive feelings, dialogue more with others and engage with critical thinking issues. The sense of ownership of the learning process which characterised the situation increased teaching and learning.

Achen and Lumpkin (2015:5) used an action research study to evaluate the use of classroom time through systematic analysis. The results showed that students' perceptions of the impact and enjoyment of the lesson coincided with those moments which involved active learning of students as they worked in pairs or groups and in exploratory work. Students indicated an increase in enjoyment, participation and discussion. The involvement of the lecturer in situations experiencing active engagement of students is also heightened through the demand to moderate and guide the teaching and learning activities.

Bobrakov (2014:80) investigated ways in which theory and practice can be integrated using action research. In the study, the students reflected a positive attitude to the use of action research which was widely supposed to be a means linking the gap between theory and practice and school and the university. The students highlighted that participation in action research gave them the opportunity to establish links between what they had learned and the practice of it. Action research provided students with an ability to think and rethink about their practice, to reflect, network with colleagues, ponder problems and find strategies to address problems or questions.

Student teachers consider action research as providing them with skills to research and evaluate professional practices and activities (Bobrakov (2014:8). The study further revealed that students had the opportunity to observe other teachers teaching, record their own teaching and stand for critique by colleagues. Research skills were acquired and also used as teaching tools that instilled confidence and creative feelings about teaching and learning. Allen (2010:3) presents a similar view of action research as a method that engages students in ways which develop self confidence and esteem. Action research is, however, a challenge as it requires one to possess theoretical understanding of teaching and learning in order to apply and evaluate the effectiveness of those applications. This calls for enhanced thinking skills on the part of the student teachers. It also emerged that action research was perceived as a process of constant review of teaching and learning allowing the picking up and tackling of gaps through repeated cycles of action and reflection (Bobrakov, 2014:11). Unlike other teaching strategies, action research enhances professional development and impart teaching competence for tackling future work.

3.12 ROLE OF ACTION RESEARCH IN TEACHER EDUCATION

The basic aim of every teacher education programme, and particularly the primary teacher programme, is to educate competent teachers and to develop the necessary professional qualities to ensure lifelong teaching careers for teachers (Kansanen, 2004:211). According to Lempinen (2010:1), lifelong learning relates to development in diverse areas of daily life, employment and participation in training. It starts before formal schooling and continues throughout life. In its reference to teaching, this concept implies the imparting of skills beginning with the family, the work place and in daily social contexts. These contexts impose positive or negative effects on lifelong teaching and learning whose ultimate thrust, however, is to prevent social exclusion.

Action research as a strategy to also improve practice, ensures that teaching and learning processes remain sensitive and keep pace with global trends. The method is useful in adopting and adapting innovations which are a recurring feature of the knowledge industry. Learning is also viewed as an integral part of working life,

networks and online settings (Lempinen, 2010:2). This implies that lifelong teaching and learning is ideal in contributing to the transformation of traditional learning environments that used to emphasise teachers and learning institutions. Action research has become an important ingredient in the cultivation of individualised and learner driven educational path.

In modern education systems, a research-based approach is integrated into every course of the programme so as to cultivate questioning and thinking skills in teachers. This approach serves as the scientific basis upon which the entire curriculum of teacher education courses rest (Marble, Finley & Ferguson, 2000:5). This suggests that functional teacher training programmes must find space for action research practice in order to produce balanced practitioners who are able to understand that subjects and teaching approaches do not stand out as distinct entities but are intricately interwoven in practice (Kansanen, 2004:213).

Kansanen (2004:213) further states that in order to develop reflective teachers who understand that research-based evidence and thinking is a natural part of their daily work, research method courses need to be introduced at the beginning of their training. The main purpose is to allow teachers to use one or two of those methods in their day to day practice. Enough competency has to be developed so that they are more likely to think and act according to the criteria of research and justify their decisions through research-based thinking. Teachers require knowledge of research methodologies in order for them to receive new knowledge, or many epistemological perspectives (Young, 2001:6). This implies an ability to read, discuss and additionally use that reading and discussion in the individual's own thinking and work. All students then, should be involved in common research methods courses which they later use to conduct their own research and answer research questions.

Teaching practice enables student teachers to action the reflective skills that accrue during the theoretical stage of training. The students rely on this ability during classroom instruction and when carrying out project work. According to Kosnik and Beck (2006:117), student teachers need to use the many elements of action research, its reflective aspect in particular, to solve their own practice-based

problems. Reflection is a way to gain knowledge about one's own doings, the contexts in which practices occur and interactions in the teaching and learning process (Cimer, Cimer & Vekli, 2013:133). It creates critical thinkers who critique their attitudes, beliefs, behaviours and relations that develop among student teachers and their colleagues.

Action research combines theory and practice (Punch, 2005:135). It puts the teacher in a dual role of being the producer of educational theory and user of that theory. This is a way of producing as well as improving knowledge about higher education teaching and learning. There need to be no separation between the design and delivery of teaching and the process of researching these activities. This effectively brings theory and practice closer together (Kansanen, 2004:214).

3.12.1 Importance to Practice

Action research practice is an effective way of improving teaching and learning in schools. The reflective and collaborative tendencies inherent in action research lead to the refinement of practice for enhanced practice by teachers and learners (Parsons & Brown, 2002:7). Teachers should not believe that their long-acquired skills are an eternal defence for good teaching. Effective teachers are those that constantly reflect upon their own practice and rely on the use of many exemplars to frame new situations (Cimer, Cimer & Vekli, 2013:136). In dealing with a problem situation, reflective teachers make use of the experience they gained from successfully dealing with a similar issue in the past. This reflective ability develops wisdom to generate new knowledge for addressing concerns which relate to teaching and learning (Merkler, 2012:26). The reflection, as it shapes professional practice, is critical in this study on challenges of using action research as a teaching and learning strategy.

3.12.2 Promotion of School-wide Enhancement

Action research practice can be handy in bringing about overall institutional improvement within a school. Action research that is conducted in teams has the

advantage of bringing together many perspectives, opinions, experiences and resources (Merkler, 2012:25). This form of action research that involves many teachers in the school is known as school-wide action research (Clauzet, Lick & Murphy, 2008:2). The common outcome of this process is better instruction, improved learning and productive school graduates.

3.12.3 Teacher Empowerment

Immersion of student teachers in the process of action research helps in advancing teacher growth and development. Empowered teachers are able to make useful decisions pertaining to work schedules, resources, curriculum implementation and work tasks given to learners. Such teachers are provided latitude to implement innovative and creative changes to their instructional practice (Merkler, 2012:25). Teachers of this nature are able to demonstrate authority and control over their professional practice in ways that lead to eventually improvement in learner outcomes and expected standards (Helyer, 2015:22).

3.12.4 Professional Growth

Action research practice affords student teachers the opportunity to engage with colleagues and professional issues like usable methodologies, approaches, teaching materials and assessment strategies. The approach enhances decision making processes, problem solving skills and attitude change. The professional role of teachers is also conferred with the important task of developing knowledge and theories to propel the teaching and learning business further. Johnson (2008:44) views action research as "*the most efficient and effective way to address the professional development of teachers*".

West (2011:94) posits that teachers need to be empowered to systematically explore their hunches, inform their practice and to instil in students a researcher's habits of mind. This kind of thinking about practice may arouse greater reflectivity in students as they become practitioners and could offer opportunity for them to continue their professional growth once they become practicing teachers. This is relevant to this

study since it strives to uncover setbacks that confront lecturers and student teachers at colleges of primary teacher education in Zimbabwe in using action research as a teaching and learning strategy.

3.13 IMPORTANCE OF ACTION RESEARCH TO TEACHERS

Hine (2013:1) advances that action research provides members in the education system with a systematic, reflective approach to respond to areas of concern within their respective domains. This points to the fact that solutions to observed problems are not arrived at haphazardly but through a rational process that strives to realise sustainable outcomes. The reflective tenet entails thorough interrogation and evaluation of ideas and options prior to establishment of preferred alternatives. Davis, Summers and Miller (2012:153) observe that action research empowers teachers as it provides them with the ability to generate new knowledge about themselves and classroom problems. This call for teachers to be rational decision makers relates to this current investigation as it focuses on student teachers.

Action research is one practice that seeks to equip teachers with tools to unravel hazy situations in their areas of practice and study. Hine (2013:2) concurs observing that action research provides knowledge and understanding for practitioners to improve educational practices and to solve problems in their classrooms and schools. Action research teaches student teachers to generate their own knowledge and to be able to make decisions from researched information.

Action research process is collaborative and investigative. Participants work together to design and plan a structure and conduct the research process to deal with practical problems in their learning (Brown, 2002:10). Researchers get the opportunity to select a topic or issue to investigate. This further allows literature to be reviewed through the involvement of reflective analysis for the refinement of current practice. Student teachers usually have opportunities to interrogate and find solutions to problems they encounter in learning and to share new teaching approaches with colleagues (Danielson & McGreal, 2000:24).

Action research develops the skills of teachers making them more thoughtful decision makers. It builds a reflective practitioner (Sagor, 2000:7). Progressive reflection on their classroom practice helps to boost already attained knowledge and skills, and thereby transforming the teacher to better master the teaching aptitudes. The process of continued 'mulling over' their practice sharpens insight and judgment. Danielson and McGreal (2000:24) state that few activities are more powerful for professional learning than reflection on practice. This type of reflection takes place after performance of the action. For teachers, this pertains to thinking about the teaching discourse after the activity has been implemented. Reflection in action on the other hand involves thinking about the actions while they are being performed.

Davis et al., (2012:152) believe that the use of action research in education enables teachers to record information and evaluate issues in ways that lend them to be successful planners. Teachers who are reflective are perceived to be precise and objective in integrating information obtained from multiple sources, reporting classroom incidents and using current insights to plan for the future. According to Riding (2002:81), *"It is also useful to reflect on how you teach, because in doing so you may come upon some simple way of making your teaching more effective and also more efficient"*. Therefore, reflection is an imperative for acute planning, synthesis of data and objective practice which is the foundation of educational improvement.

According to Mills (2003:12), action research allows students to experience "research that is relevant". Action research is situated in the lived experiences of people. This implies that it is indigenous to practitioners as those affected by the situation are enlisted to change it. Student teachers are likewise required to carry out research on curriculum, community, school or classroom issues which are part and parcel of their daily professional practice. Mills (2003:14) further states that the involvement of students in action research plays out a part of the daily life of a classroom teacher. This is pivotal in this study because it focuses on challenges of using action research as a teaching and learning strategy at colleges of primary teacher education.

Fusco and Espinet (2010:23) contend that action research allows teachers to broaden their knowledge of teaching and research as a result of a sustained study of an educational matter related to their work. Teachers learn to question the sources of knowledge and their biases as they engage with principles of action research and interrogate available research. There is also opportunity to realise that teaching and learning demands constant reflection on and in practice which is expressed in the form of a cyclic process of developing questions from practice, planning, data collection, analysis, implementation and sharing of results.

Gurney (2007:91) believes that reflective teachers should create learning environments which show their reflective practices and motivate students to learn. The learning environments they create should cultivate students' interest to learn and think about the issues that the teacher presents to them. The teaching process needs to be characterised by attitudes of learning, participation, collaboration, co-operation and activism (Coe et al., 2014:16; Ferguson, 2014:28). Creative classrooms also allow teachers to share their knowledge with students in ways that make them both learners in the process.

The demonstration of passion and guardianship for learning are evident marks of reflective practitioners. The passion that teachers show to students is able to inspire them for a life-long journey of learning. This passion of the teacher serves to touch the minds of the learners and to push their drive for content mastery. In their service as guardians for classroom discourse, teachers are able to engage students into productive learning. Gurney (2007:92) argues that the teacher who goes into the classroom unprepared, unwilling to share and unfocussed is failing in his responsibility as a teacher.

3.14 ACTION RESEARCH AND TEACHING COMPETENCIES FOR LECTURERS

The European Union (2013:9) views competence as "*a complex combination of knowledge, skills, understanding, values, attitudes and desire which lead to effective, embodied human action in the world, in a particular domain*". It constitutes a pattern

of feeling, thinking, acting or speaking that causes a person to be successful in a job or role. Competency refers to a highly valued qualification that accounts for the effective use of one's knowledge and skills in a specific, normally complex environment (Westera, 2001:5).

According to Cubuku (2010:213), professional competencies encompass knowledge and understanding of the students and their learning, curriculum, subject content, education system and the role of the classroom practitioner. Teacher competence is the extent to which a teacher holds knowledge and teaching skills (Robinson & Kay, 2010:3). This covers the ability of the teacher to arrange and present lessons in ways that are exciting and flexible. The higher the competency level of the teacher the better the attitude for student learning and development.

Westera (2001:3) notes that knowledge has to do with the production of facts, processes, theories and procedures in a specified field. The beliefs, opinions, and experiences of people in day to day living is treated as knowledge. Knowledge is also viewed as a stable entity which is the topic of learning, recall and reproduction and can be assessed by testing. A person who is unable to reproduce knowledge is judged to lack of it while the one capable of presenting knowledge when demanded is considered knowledgeable. On the other hand, understanding portrays the intellectual capacity to use information in a sensible and meaningful way (Westera, 2001:3). It is brought about by an ability to apply it in new situations and circumstances. The attitude part of knowledge embraces issues that include confidence, motivation and persistence in expressing what is known.

Competency can imply both theoretical and operational perspectives (Westera, 2001:6). From a theoretical stand point, competence is perceived as a cognitive frame work that facilitates specified behaviours. This involves the mental processes which determine the kind of actions to be performed in given situations. The operational perspective of knowledge concerns the wide spectrum of higher order skills and behaviours that show the capacity to deal with complex and emergent situations. The demonstration of knowledge, skills, attitudes, thinking and decision-making processes belong to this domain.

Competences in education can be viewed in terms of teaching competences and teacher competences (Cebrian & Junyent, 2015:2771). Teaching competences relate to the knowledge, skills and attitudes that teachers display while in action in the classroom. Ananiadou and Claro (2009:8) associate these with the professional skills and knowledge that action in the classroom demands. According to The European Union (2013:10), teacher competences imply a wider perspective of teacher professionalism which interlocks aspects of the individual, the school context and the community. Teacher competences include a reflection of interest in professional improvement, collaboration and networking with relevant partners and creative engagements as reflected in Figure 3.5. In the context of this study, the competences of lecturers were an important aspect in examining challenges of using action research as a teaching and learning strategy.

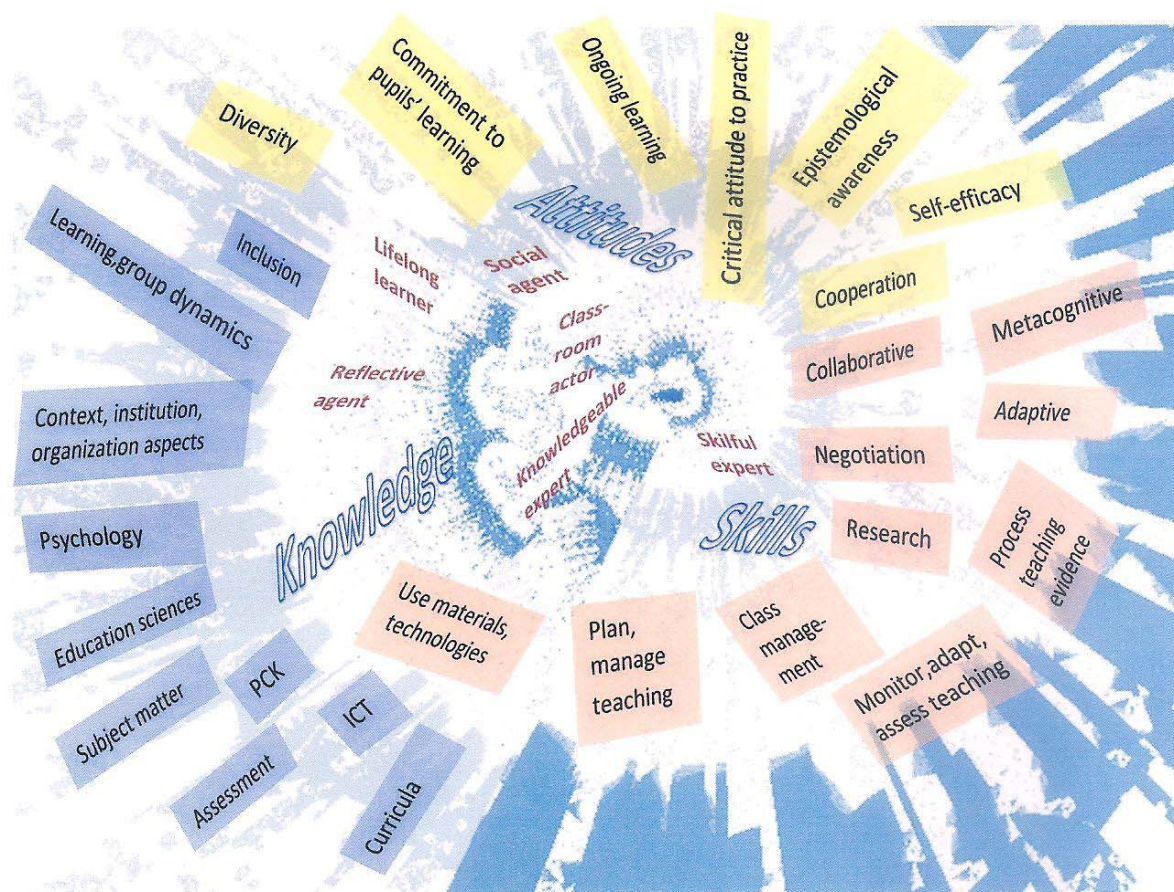


Figure 3.4 **Teacher Competency Framework.** (Adapted from Caena (2013:14). **Supporting Teacher Competence Development for Better Learning Outcomes.** Education and Training, Brussels).

Teachers need to possess professional attributes that are crucial to effective teaching of students. These are characteristics that ensure teachers are ready for the challenges, obligations and demands of teaching and reflect their values, beliefs and skills. Attributes describe the attitudes and behaviours which indicate the ability of teachers to facilitate student learning (Department of Education and Training, 2004:6). According to Fulbeck and Subert (2010:2), quality teaching that supports teacher skill-seeking and improved instruction contributes to student learning and achievement. A relationship exists between the teachers' instructional behaviours and student achievement. Attitudes also reflect a positive influence on changes in instructional behaviours (Fulbeck & Subert, 2010:7). Teacher's attitude contributes significantly to student attention in classrooms. This implies that the attitude of teachers directly affects the attitude of students (Kosgei, Mise, Odera & Ayugi, 2013:76).

Teachers have to communicate and share knowledge, ideas and experiences with colleagues and be willing to take recommendations from them (Goe & Stickler, 2008:6). The level of commitment to their work should be high, with readiness to assist students grow in all aspects of their life. Their moral integrity has to be demonstrated in thought and action using the language that is to the level of students. Innovative teachers are preferred to enhance the learning of students as they design learning activities that are engaging and interesting to them. They reflect on their practice and ensure instructional activities are adapted to the abilities of students in given learning contexts.

Teachers need to possess sound knowledge to influence the learning and achievement of students in the content of the curriculum (Ljubljana, 2010:25). This knowledge is supported by metacognitive or thinking skills which enable the retrieval of relevant instructional knowledge (Caena, 2013:12). Pedagogical content knowledge of a particular subject area is also crucial for effective teaching abilities (Goe & Stickler, 2008:6; Hightower, Delgado, Lloyd, Wittenstein, Sellers & Swanson, 2011:18). Teachers need to have sufficient knowledge of the subject curriculum to impart to students, as well as education theories and assessment techniques (Caena, 2013:12).

According to Metzler and Woessmann (2010:1), the subject knowledge of the teacher exerts a significant impact on student achievement. Goe and Stickler (2008:3) concur that "*Teachers with stronger subject knowledge produce better student achievement compared to less knowledgeable teachers*".

Research reveals that teachers with knowledge of the subject matter are effective in instructional delivery. The presence of teachers who are masters in the content of the subjects is good practice as it results in increased learning for students (Richardson, 2008:17). The understanding of the history, culture and structure of the subject and its relationship with other subjects in the curricular contributes to the overall knowledge desired of teachers and this is pivotal in enhancing teacher competency for student achievement.

Teachers have to engage in a range of skills, strategies and actions. These have to be used in varying ways depending on the needs and situations (Caena, 2013:12). Metzler and Woessmann (2010:1) state that the only attribute that has been shown to significantly correlate with student achievement is the academic skills of teachers. Wenglinsky (2001:1) believes that if teachers were to possess the skills to teach at the level demanded by existing academic standards, then student performance will improve. This implies that teachers have to be good in demonstrating skills required for student learning which include effective communication. Edinger (2009:252) observes that student teachers may require a lot of help in communicating ideas at the level that learners in the public school would understand. Teaching involves effective communication with the subject matter presented in a manner that captures the interest of the audience.

Student teachers need to acquaint themselves with class management skills and adapting strategies and activities to the level of learners. These have to be considered while mindful of theories, research and experiences driving teaching practice. In adapting the curriculum content, the individual differences in the classroom must be considered. Edinger (2009:252) posits that learners vary from each other in many ways and this is expressed in the way in which they prefer to learn. Some prefer to learn in small groups while others favour individual activities to

work on. Selected learners want to be involved in quiet activities such as reading and writing or to engage in projects. Other groups of learners may choose between being seated in rows and columns or a flexible arrangement of classroom furniture. There are certain learners that are interested in monitoring their own progress instead of being teacher supervised. This is key in this study since it considers the differences in the way in which student teachers learn to extrapolate challenges of using action research as a teaching and learning strategy at colleges of primary teacher education.

Teaching strategies for effective teachers take advantage of the importance of higher order thinking skills in learning. According to Wenglinsky (2001:5), higher order thinking skills involve less of conveying information and more of conveying understanding. Students are taught skills to apply concepts in practical situations or they may initially solve a problem and then try to understand the concepts that support the solution. Concept application means solving a unique problem with which the student is unfamiliar while simulation involves examining a physical representation that exemplifies a theory. Students taught by teachers who use both higher and lower order thinking skills tend to outperform those who are taught by teachers who rely only on lower order thinking skills. The use of action research in teacher education ideally demands student teachers to apply high order mental skills in tackling assigned learning tasks.

Teacher assessment that provides room for individualisation, collaboration and authentic forms helps in enhancing student learning and achievement. In individualisation, the teacher teaches each student according to the knowledge and experience that particular student already possesses. Collaboration implies two or more students working together to solve problems. According to Wenglinsky (2001:6), authentic assessment occurs as an artefact of teaching activities. This involves assessment which is made as students work in groups on a project over a period of time. This is relevant in this current study which involves student teachers working in defined stages, whether as individuals or groups to investigate problems generated from their teaching and learning experiences.

3.15 SUPERVISION AND ACTION RESEARCH STRATEGY

Supervision plays a crucial role in the growth and development of human resources and forms a functional component of progressive organizations. Education is one sector that has embraced this function in an endeavour to improve the teaching and learning in schools. Wiles and Bondi (2000:3) view supervision as a general leadership function that coordinates and manages those activities concerned with learning. It pertains actions in which individuals work with teachers to improve instruction. Supervision is the process of engaging teachers in instructional dialogue for the purpose of improving teaching and increasing student achievement (Sullivan & Glanz, 2009:4).

Glickman, Gordon and Ross-Gordon (2005:9) define supervision as the application of

"...certain knowledge, interpersonal skills and technical skills to the tasks of direct assistance, group development, curriculum development, professional development, and action research that will enable teachers to teach in a collective, purposeful manner uniting organizational goals and teacher needs and provide for improved student learning".

This observation views supervision as concerned with the application of knowledge and interpersonal and technical skills to bring about development in groups, curriculum, profession and action research. The intention is to assist teachers to function in an organised way that integrates their goals with those of the organisation in order to ultimately improve the learning of students.

Sergiovanni and Starratt (2002:6) view supervision as an opportunity that is availed to teachers to develop their capacities towards contributing to the academic success of students. It is the process of helping the student to become an independent professional researcher and scholar that is able to adapt to various research areas (Pearson & Brew, 2002:135). To achieve this feat, supervisors need to develop requisite skills, knowledge and dispositions that are the bedrock for effective supervisory behaviours (Sullivan & Glanz, 2009:4). In the context of this study, lecturers who are the prime guides in the development of student teachers are expected to possess strong knowledge and skills in action research.

There is need for a paradigm shift from perceiving supervision as inspection of subordinates to emphasising collegial interactions. Restrictive autocratic styles must be changed to facilitate shared decision making and the creation of an environment that encourages creativity and innovation. In fact, student teachers should be involved in instructional supervision (Sergiovanni & Starratt, 2002:95). This is necessary to encourage cooperative dialogue between them and supervisors. The end result is that classrooms become work rooms where teachers act as action researchers in settings characterized by effective teaching methodologies. The supervisor has to adopt supervision approaches that are accepted by teachers, seen as collaborative, and contributing to professional development. Teachers deserve an increased share of control in the supervision process. Glickman et al., (2005:99) believe that the teacher is in control when his views are listened to, the supervisor clarifies what the teacher says and the teacher speaks more of his concern.

Several models have emerged throughout the history of supervision development. These depend on the beliefs and attitudes of individual instructional leaders (Sullivan & Glanz, 2009:4). The principles and concepts that define each model have a particular influence on educational supervision. In practice, however, these models overlap to shape the whole supervision process. This study discusses the clinical model of supervision.

3.15.1 Clinical Supervision and Action Research

Kirui and Amhed (2012:160) state that clinical supervision emphasises the collegial, congeniality and face-to-face aspects of supervision. It involves direct observation where the student teacher is guided and mentored into the teaching experience (Coe et al., 2014:5). Assistance is delivered directly to the teacher to bring about changes in skills and teacher development (Tesema, 2012:16). The process requires the supervisor and supervisee to operate closely instead of a situation where the supervisor supposes to offer guidance from a distance. It is an eyes-on and hands-on process that is meant to deliver professional improvement to teachers (Krajewski & Anderson, 2015:421). Kirui and Amhed (2012:160) also note that clinical supervision intends to engage teachers in a dialogue in order to diagnose and find

solutions to teaching and learning problems. In this study, student teacher involvement and dialogue during supervision processes were reviewed to understand challenges of using action research as a teaching and learning strategy at colleges of primary teacher education in Zimbabwe.

The process works to develop new knowledge and skills that are contained in the teaching-learning setting. The development of these skills involves the supervisor actually observing the classroom behaviours of the student teacher and then working together collaboratively throughout the process in a counselling-guidance context (Krajewski & Anderson, 2015:422). This is precisely the mentoring and counselling tasks that are contained in this form of supervision (Abiddin, 2008:18). Clinical supervision can follow a laid down sequence but this can be altered depending on the emergent social and technological factors that may come to influence the teaching and learning discourse.

Clinical supervision aims to improve instruction by means of systematic cycles of planning, observation and analysis of teaching in order to institute realistic modification. The teacher and supervisor mutually discuss and agree on the area of focus, plans and cooperatively design strategies to assist the teacher to make needed adjustments in professional performance. Beach and Reinhartz (2000:144) posit that in clinical supervision, supervisors serve as mentors and friends to support teachers and provide a conducive environment to improve student learning and achievement in the classroom.

Krajewski and Anderson (2015:422) observe that the supervisor should possess high skills of discerning effective teaching and applying the principles of learning. This is critical for gaining the respect of teachers as the supervisor should be way above ordinary teachers in terms of professional knowledge. A climate which is conducive to professional improvement has to be created. Supervisees must not be afraid or disturbed in the process but should be open enough to learn and be critiqued by other professionals (Nyame-Asiamah & Patel, 2009: 51).

Adimasu (2014:31) identifies the stages which include pre-observation conference, observation, analysis and interpretation, post observation conference and post conference stages. Clinical supervision views the teaching profession as an organised endeavour with pedagogical skills that can be categorised and studied. The behaviour of a teacher is also important in creating an effective learning environment. Clinical supervision involves four distinct stages which are presented as follows: pre-observation conference, observation, data analysis and post observation conference.

3.15.1.1 Pre-observation conference

In the pre-observation stage, both the supervisor and teacher agree on issues of focus during the observation stage. This is advocated for by Sergiovanni and Starratt (2002:95) who believes that teachers need to be involved in the process of instructional supervision. This scenario provides the basis of the cooperative effort needed in this approach (Tesema, 2014:16). At this stage, the teacher has to rehearse and describe what is to be done during the lesson, inclusive of purpose and content. The supervisor, in the main, tries to understand what is to be done by raising probing and clarifying questions. The kind of data and methods of data collection during the instructional process have to be agreed upon by the two functionaries. It is pivotal, however, that effort should be made to avoid unsettling the teacher prior to lesson delivery.

3.15.1.2 Observation

The purpose of observation is to capture the realities of the lesson and to allow the teacher and supervisor to reconstruct the lesson in order to analyze it (Bulunuz, Gursoy, Kesner & Salihoglu, 2014:1825). This stage causes the supervisor to observe instruction, collect data and make personal judgement based on the points and activities agreed upon at the pre-observation stage. The conference has to be characterized by trust, credibility and productive support for the improvement of professional practice (Adimasu, 2014:22). The activities of the lesson can be captured through observation, recording, videotaping and audio taping.

3.15.1.3 Data analysis

This phase requires both the teacher and supervisor to make sense of the collected data. The supervisor, at times with the teacher, plans for the conference stage. Issues that concern this stage include the patterns that emerge from the data, strengths of the teacher, techniques used, incidents to be addressed, beginning and ending of the conference.

3.15.1.4 Post observation conference

This is the time when the student teacher and supervisor meet to discuss the observation and analysis in relation to the teacher's objectives. Well collected and analyzed data enables the teacher to make good use of it and to evaluate his/her teaching and classroom performance. The emphasis of the model on cooperative planning and collaborative relationship ensures student teachers grow in self-confidence and self-direction. They have a voice in the process (Bulunuz, Gursoy, Kesner & Salihoglu, 2014:1826). Kemmis (2001:100) emphasises that the best thing to do is to open forums for communication and conversation. The skills of self renewal and self direction are also imparted to improve teaching and professional advancement. This stage is crucial especially when action research is used as a teaching method as both the supervisor and student teacher are able to identify, discuss and agree on challenges observed during the instructional discourse or engagement in a task involving an investigation.

3.16 ROLES OF SUPERVISORS IN ACTION RESEARCH

Supervisors have diverse roles in the research that they find themselves involved in with supervisees (Abiddin, 2008:16). These roles integrate and overlap, depending on the student teachers that they work with, the research topic and the level of study. This study presents a selection of six roles that are pivotal to the research practice.

3.16.1 Information Source

The supervisor has a range of research experiences that the supervisee can refer to and which can assist in the completion of a research-based activity. Research

supervision is a status that reflects confidence in the knowledge and skills of individuals to create a new generation of researchers (Chiappetta-Swanson & Watt, 2011:4). The expert power of the supervisor makes it possible for supervisees to be directed to certain sources of information or to the library reading materials in particular study areas. Overreliance on the supervisor can, however, stifle the tutee from gaining as much as possible from the research. The student teacher has to be adequately motivated to search for information and to convince the supervisor that appropriate effort is being made in tackling assignments or research activities.

3.16.2 Sounding Board

This is the most important role of a supervisor. A "sounding board" refers to a person whom one can bounce off ideas, concepts and views. This individual also serves to focus the thinking of a supervisee. This is based on the understanding that the supervisor possesses comprehensive experience in the area of study which qualifies him/her to provide the needed facilitation in the process. According to the Research Information Network (2010:12), it is necessary to assess how supervisors are updating their own knowledge and skills in the changing information landscape. They should possess skills and experience to direct students in their professional growth and research (Wadesango & Machingambi, 2011;32).

Supervisors guide student teachers in action research activities (Helyer, 2015:21). They prevent the student from losing track or wandering about in the research endeavour. This role is made clear in the topic selection, where the supervisor assists in deciding if the topic is too broad or narrow. The supervisor may bring into the fray a new perspective or framework which may increase the reseachability and manageability of the topic. This also relates to shaping the scope of the work and defining critical research issues. The supervisor can also act as the "devil's advocate", by raising tricky questions that force the supervisee to rethink issues or clarify his or her thinking on the research question.

3.16.3 Educator

Engaging in research, particularly action research, is a learning process. Much of the learning occurs as the researcher is immersed in the processes and activities involved. The supervisor may act directly in the learning of the supervisee. This can take place by exploring difficult material or giving advice for the reading of more material in the area of interest. This is supported by the Research Information Network (2010:11) which states that supervisors are instrumental in helping research students access their training and development needs. In some instances, both the supervisor and supervisee may be made to read through the material to enable a clearer understanding of topical issues. The areas of learning may include aspects on theory, analytical matters, research implications and other areas of research importance.

The teaching role of the supervisor may be implemented through formalised classes. This occurs when the research work is part of a course of study. In this case, selected students in the class can be requested to explain certain items of the research process as a peer-teaching strategy. This calls upon the ability to facilitate learning and to provide environments for problem solving (Nyame-Asiamah & Patel, 2009:51). The guiding philosophy being that students learn better when subject concepts are presented and explained by their colleagues than by a teacher. This approach to teaching of students is then integrated into the entire research project process.

3.16.4 Motivator

The motivator role assists the supervisee to keep progressing through the project. This provides the drive and enthusiasm to keep forging ahead even despite hardships that may be encountered along the way. The supervisor may need to reinvigorate the student teacher, especially in instances where interest is lost in the activity. One's energy may be reignited if the real benefits or unique contributions of the project are instilled in the researcher.

The supervisor has to work to keep the research process on track. This can be done by way of establishing a time table for the project and then reviewing it at regular meetings (Abiddin, 2008:17). This strategy assists when the research is lagging behind the time schedule and to infuses extra energy to be applied to keep pace with plans. The failure to execute activities and processes as initially planned may result from unrealistic proposal plans. This scenario would naturally require a revisit of the research proposal with a view to modify those activities to make them more realistic. The student researcher should keep a journal identifying major developments, obstacles and learning outcomes to make an evaluation of progress possible. Constructive and timely feedback on the evaluation of the work of student teachers is also a must in order to keep pace with set time lines (Chiappetta-Swanson, 2011:9).

3.16.5 Evaluator

The supervisor is inherently responsible for evaluating the research. This involves assessment and grading. Evaluation presents a difficult task for the supervisors who are usually so intricately involved in the research. They tend to feel part and parcel of its process. Internal evaluation is merited as it allows various aspects and processes of the research to be considered for assessment, inclusive of the learning experiences of the student, respect for time lines, and the presentation. Evaluation of research may involve external or independent examiners to ensure the work matches universal frameworks.

Evaluation of research need to be clear about the specific criteria on which it will be based. This usually hinges on the objectives of the project, which may be on the importance of the learning process in the project or better grasp of business practices. In educational research, the main focus is on how well the research actually answers the research question. The supervisors, however, should make sure that students actually tie the material back to their questions and to what they said they will do.

3.16.6 Counsellor

Counseling is an important function in relation to action research because it can result in enhanced supervisor and supervisee relationship. It consists of teaching, support, feedback, providing counsel, consultation, evaluation, motivation and the monitoring of progress. The supervisor needs to take care of the feelings and emotional states of the supervisee to ensure a sustained engagement and performance in research (Townsend, 2007:5). The supervisor and tutee constantly talk about the strengths and areas for development of the latter in such a way that his or her self-efficacy beliefs are not strangled (Barnes, 2004:63). This is pertinent in this study which focuses on challenges that confront lecturers and student teachers at colleges of primary teacher education in using action research as a teaching and learning strategy.

3.17 THE ROLE OF SUPERVISEES IN ACTION RESEARCH

The student teacher has a role to play in the supervision process to enable the desired outcomes to be achieved. There has to be commitment to work and a realisation of the amount of work load to be covered within the limits of time for the completion of research (Chiappetta-Swanson, 2011:14). Greater responsibility for progress in the planned tasks and duties should rest with the supervisee. Cyr (2005:8) believes that supervisees have to be proactive and develop proficiency in the search for knowledge and mastering of concepts. This can be facilitated by the presence of an attitude that encourages the seeking and accepting of advice from the supervisors. An open communication should also entail exposing and addressing personal, social and academic issues that might stifle progress.

The supervisee is required to develop a plan and time table to guide progress with the assistance of the supervisor. Setting schedules with corresponding deadlines also require the adherence of the supervisee (Chiappetta-Swanson, 2011:14). The supervisee is also expected to present drafts on time for reviews and to keep constant contact with the supervisor. This supports the view that it is the duty of the students to manage their learning projects (Wadesango & Machingambi, 2011:32).

This is relevant in examining challenges of using action research as a teaching and learning strategy in primary teacher education.

3.18 LECTURER AND STUDENT-TEACHER SUPERVISORY RELATIONSHIP

According to Young, Lambie, Hutchinson and Thurston-Dyer (2011:3), a strong working alliance has to occur between the supervisor and the supervisee and should rest on open and honest communication. Supervisory relationship has been cited as the basic foundation of supervision (Vaccaro & Lambie, 2007:52). Young et al., (2011:3) identify empathy, openness and commitment as crucial elements for the growth and development of the supervisee. Mutual respect and genuine concern for the supervisee and his/her work is paramount for task accomplishment.

Quality supervisory relationship concerns a mixture of facilitating attitudes, behaviours and practices (Brian, 2005:1). Falander and Shafranske (2005:9) posit that facilitating attitudes entail the supervisor showing empathy towards the growth path of the novice and the generation of a sense of teamwork between the two. Warmth, understanding, affirmation, acceptance, respect, a non-judgemental stance are facilitating behaviours that come from the supervisor. The supervisor has to engage practices that motivate the supervisee to experiment, explore as well as disclose feelings, actions and areas of conflicts (Chiappetta-Swanson & Watt, 2011:11). This is critical in this study which calls for the motivation of student teachers at colleges of primary teacher education in using action research as a teaching and learning strategy.

Brian (2005:1) states that the supervisor may also do well to create a contract that will obligate compliance on both parties. This is intended to orient the supervisee to supervision and to craft a road map for the entire supervision experience. The contract can contain the goals of the process, the context of supervision, assessment criteria, evaluation instruments, schedules and the roles of the supervisor and the protégé. Willis (2010:7) concurs noting that supervisors should make sure that their supervisees are aware of their roles and responsibilities and to explain to them the goals, objectives and expectations of supervision. The expected

behaviours and attitudes for the supervisory process have to be clarified. Supervision contracts may be quite pivotal in tasks that are extended over time as in action research projects that student teachers are required to conduct as part of their teacher training component.

3.19 PROFESSIONAL DEVELOPMENT OF LECTURERS

Staff development is one of the significant strategies for improving staff competencies. It is an educative process which is planned, continuous and concerned with the professional growth of school personnel, and critical in action research practice. Professional development refers to the process in which employees of an organisation better their knowledge and skills through peer reviews in ways that uplift their role in the organisation (Marriss, 2010:1). It serves to facilitate change on a personal, professional and institutional level as to clear misconceptions that filter into practice. Beliefs, attitudes, theories and values of teachers concerning teaching and learning are re-examined and interrogated (Temperley, Wilson, Barrar & Fung, 2007:196). Members learn together so that they operate at a similar level. Professional development is job-embedded. This means that the processes and activities involved in the sessions are closely tied to the job expectations.

Staff development is a lifelong experience. This is an on-going process of education, training, learning and support activities which is concerned with helping people to grow in their work environments. The emphasis is that the interests of the workers have to be considered within the goals of the organisation. The ultimate mission of staff development programs is the successful delivery of instruction and the learning process.

There is no magic formula for designing and implementing appropriate staff development programmes. This arises from the point that the needs of an organisation are as unique to it as the people and strategies required to drive and change it. The selection of specific models, therefore, should come from research and practice to determine how these can be modified or combined to address the

needs in institutions (Zepeda, 1999:95). The guiding belief is that staff development designs are situational. The initiatives that work in one context can fail in another. This eclectic practice might require the mixing and matching of models and processes to achieve desired outcomes.

3.20 MODELS OF STAFF DEVELOPMENT

Staff development models vary according to the number of reasons to support their implementation. These reasons may include a new curriculum implementation, reviewing a teaching strategy, improving staff relations and working to bring a new technology into the teaching and learning discourse. Some known staff development models encompass RPTIM (Readiness, Planning, Training, Implementation, Maintenance); Individually Guided, Problem-Based; Study group/Cluster Approach and Action research. This study discusses the action research staff development model as it relates to the assistance required in overseeing the progress of student teachers in their employment of action research as a teaching and learning strategy.

3.21 ACTION RESEARCH MODEL OF STAFF DEVELOPMENT

This model is conceived around the Lewinian model which perceives solutions to problems being derived in a sequential and cyclic process. The framework, though a systematic procedure, does not oblige tight controls especially in the collaborative progression to finding ways to improve teaching and the learning of students. The action research model of staff development offers members the opportunity to collaborate and learn together to find alternative positions on areas of concern (Ferguson, 2011:32). Lecturers can either lead as individuals or collaborate with their peers and even student teachers as a ploy to instill a research culture at the institution (Middlewood, Parker & Piper-Gale, 2011:12). Opportunities for individual tutoring and guidance are also provided. There is a chance for participants to render emotional support to each other in the process of making decisions that are evidence based. The strength of individual participation in the development drive results in the change that is owned and accepted.

In action research staff development model, the teachers and other members of the learning group take the role of researchers. In this case, teachers assume the lead to study problems in their classrooms and use findings of the study to make decisions to refine their own practice. There are processes that come into play to usher in the action research model of staff development, which include peer coaching, mentoring, reflection and self-analysis and dialogue.

3.21.1 Peer Coaching

Two basic peer coaching strategies exist. One involves the coaching done by an outside specialist while the other entails reciprocal coaching by colleagues within the same department or teaching team. Peer coaching requires the creation of a climate for acceptance of change, specifying issues of focus and training of group members. It involves pre-conference, conference and post-conference or reflection sessions (Moss, Sloan & Sandor, 2009:70). The knowledge acquired from training is used to craft plans which should reflect the new practices for using action research as a teaching and learning strategy.

3.21.2 Mentoring

Mentoring can be understood in various ways. Abiddin (2008:3) views mentoring as the process in which the supervisor oversees the supervisee. It has an important role in staff development. Teachers frequently feel isolated in their work places due to a lack of time to interact with colleagues and share their practices (Fusco & Espinet, 2010:23). Mentoring, therefore, prevents the feeling of isolation and is an effective tool for increasing collaboration among teachers. A mentor usually oversees the career development of a junior person through teaching, promoting or sponsoring.

Geen (2002:8) reports that the concept of mentor has been defined in many ways as referring to an individual who provides information, role models and opens doors. It also has links with someone who is committed to good teaching and professional advancement. The mentoring process is viewed as a complex practice that provides

opportunities for counselling, sponsoring, motivating, modelling and friendship to raise the professional standard of an individual (Geen, 2002:9; Krajewski & Anderson, 2015:422). Mentoring is used in grooming a future professional and offers information which is field specific (Bird, 2001:459). The mentee is guided and supported to ensure the blossoming of experiences and attitudes that help to grow the desired competencies. Middlewood, Parker and Piper-Gale (2011:15) note that in the mentoring process, the student teacher needs to go through the stages of modifying instruction with the assistance of a mentor. The mentoring attributes are important in this study since it focuses on challenges that confront lecturers and student teachers at colleges of primary teacher education in Zimbabwe in using action research as a teaching and learning strategy. Multiple models of mentoring exist but this study focuses on the reflective models.

3.21.3 The Reflective Model

Reflection is a process that is generally taken as a cure-all for improving teaching and learning (Rushton & Suter, 2012:2). It involves thinking critically and creatively about practice with the intention of bringing about improvements or changes (Cimer, Cimer & Vekli, 2013:133). Reflection comes after acquiring teaching skills so that those being developed can stop and ponder their practice. This is a crucial process that enables teachers to improve the quality of instruction and is led by those with more knowledge, skills and experience (Rushton & Suter, 2012:2).

The reflective approach in this case, encourages the less experienced lecturers to switch focus from their own teaching performance to the effectiveness of their teaching and the learning of student teachers. These have to progress from the daily practices and develop professional competencies that enable the questioning of traditional practices and trying out new ideas. These lecturers get the opportunity to articulate skills and knowledge that usually lie uncommunicated in the mind (Jarvis, 2006:168).

This model acknowledges that professional development requires systematic debate and conversation about teaching and learning. It emphasises the sharing of

experiences in a context that has an aura of collaboration and co-operation. The co-operative, supportive and trusting environment fosters the development of values and beliefs about teaching which benefit the trainer and trainee (Jarvis, 2006:166). Attitudes and assumptions which have not been previously challenged can be an agenda for interrogation (Collett, 2007:3). This reflective aspect is relevant to this study as it examines challenges of using action research as a teaching and learning strategy at colleges of primary teacher education.

3.21.4 Reflection and Self-analysis in Action Research

Reflection is treated as a serious thought about a subject. It is associated with meditation and deliberation. Reflection is a source for skills, knowledge acquisition and self-directed learning. It is a powerful way to know about the self in research as well as to unpack the very self in teaching practice and research (Hong & Lawrence, 2011:3). Student teachers can rely on reflection to identify factors which may obstruct learning and those that provide impetus for academic improvement. Issues that inform current practice are examined while the concept is also useful to initiate plans to remodel teaching and learning (Hong & Lawrence, 2011:3). This is realised through critical examination of their own teaching as colleagues in context specific staff development sessions, resulting in motivation and changes in attitudes. Hong and Lawrence (2011:4) believe that in action research staff development process:

Knowledge is not passed down from one person with authority to a group of people with less power and limited knowledge, instead knowledge is acquired through social interaction within a particular learning community (Hong & Lawrence, 2011:4).

This echoes the notion of positive staff development practices which normally involve co-workers that are in the same rung in terms of professional development and growth. Student teachers contribute to uplift each other professionally in a state of equal power and authority.

Dana and Yeldon-Silva (2003: 5) argue that professionals seek to revolutionize practice through reflection. This is pursued by raising questions, gathering data to

gain new insights into their wonderings, analyzing the data with the help from reading relevant literature, modifying practice as informed by the new knowledge acquired during research and sharing findings with others.

Reflection fosters critical and creative thinking in student teachers and assumes a crucial role in action research practice. It is from thinking about one's practice that learning gaps are realised and for which new knowledge emerges and develops (Davis *et al.*, 2012: 153). The continuous interrogation of usual and traditional practices propels the student teacher to move beyond being a user of information to a producer. Questions may arise on teaching methods, resource materials, procedures, curriculum and general learning conditions, and these may serve as sources of action research. The student teacher with the assistance of lecturers can identify a research problem that needs a solution. The competencies in critical thinking aided by experience in practice, enhances success in rectifying classroom concerns. Ultimately, the possession of reflective thinking skills provides firm ground for student teachers to have the motivation of using action research as a teaching and learning strategy in their training programmes.

The reflective model focuses on developing critical thinkers who can analyse the whole teaching process from planning to evaluation. Teachers are made to reflect-on-action and reflect-in-action (Hall & Keys, 2005:21). According to Collet (2007:3), reflection-in-action allows teachers to locate and decide on problems that result during practice. Reflection-on-action on the other hand, works to improve future action with the use of information from the previous event. This skill is ideal for action research practice as the student teacher takes full charge of class activities and understand the resultant behaviours. At this level, the supervisor takes the role of colleague, co-enquirer and friend. The student teacher is able to apply innovative strategies for change which is an important attribute for using action research as a teaching and learning strategy.

3.21.5 Dialogue

Group dialogue is a means to extend investigation and interpretations and to scrutinize implications (Fusco & Espinet, 2010:23). Collaboration with other student teachers provides a source of support to sustain and enrich their work as they share knowledge and skills as well as receive feedback from peers (Fusco & Espinet, 2010:23). Himley and Carini (2000:200) state that, *“through oral inquiry, teachers build the ‘thick descriptions’ that enlarge their grasp of the local situation, while also opening up larger implications of their work”*. This means that the collective discussions in regard to the situation which warrants change attracts full descriptions and a wide spectrum of views to expose possible options.

Dialogue is an offshoot of collaboration in action research practices. In this case, members of the group benefit from meeting to share knowledge in the common area of interest (West, 2011:92). They should build partnerships and mutual sharing strategies that form a network of responsibility for student success (Berg, Mellaville & Blank, 2006:2). Practitioners in the education field seldom experience collaborative interaction compared to other professional areas like in engineering, medicine and Law. According to West (2011:93), teachers rarely collaborate or even consult one another, serve for predetermined, complex staff meetings and 'professional development' in-service programmes. Collaborative element among teachers is further suppressed by the fact that those involved in the discourse are not the ones to evaluate the quality of the practice. This is particularly significant for student teachers whose collaborative work with peers, teachers and the community is assessed by college lecturers who will not be part of the team.

Sagor (2009:8) advises that teachers should engage in inquiry and development activities to create "knowledge, understandings and breakthroughs that are needed for the achievement of universal success". Staff development programmes, therefore, are a form of collaborative community of practitioners designed to foster a shared purpose of studying and improving professional practices for the ultimate shift in student attainment. The creation of space for lecturers to dialogue and arrive at

new levels of understanding of issues is the needed recipe for enhanced teaching and consequent student mastery of targeted concepts.

McLesky and Waldron (2012:72) believe that collaborative professional staff development is teacher-directed and often involving collective participation of members. It actively engages teachers in learning about their school and classroom learning opportunities. It also tends to be job-embedded and intensive to support teachers in developing and using new skills. This model embraces activities that are tied to actual instructional discourse, student participation, data search and organisation, reporting results and evaluation. There is need, ultimately, to track and record the research that is carried out in the process to ensure it is disseminated and put into practice (Middlewood, Parker & Piper-Gale, 2011:12).

3.22 CHALLENGES OF ACTION RESEARCH TO STUDENT TEACHERS

The most prominent challenge facing student teachers pursuing action research pertains to the issue of managing the constraints of time. Hine (2013:161) posits that doing research while fulfilling other duties at school can present difficulties in the area of time management. Goodnough (2008:445) also notes that the most prevalent concern of teachers is on finding adequate time to engage in all the stages of the action research process. Brown (2002:15) further adds that engaging in action research requires an increased time commitment. Activity in action research projects is done while student teachers are in their schools of practice and expected to be involved in full time duties that go with the teaching profession. Involvement in lesson planning, instructional delivery, marking and project work presents an obvious difficulty to student teachers. Marias (2011:82) states that although co-curricular activities largely take place during normal curriculum hours, they sometimes demand commitment beyond the usual school day and this presents an added load to student teachers.

Student teachers also experience problems in finding an area of focus and formulating a research question. Goodnough (2008:445) points out that the formulation of research questions constitutes the most demanding aspect of action

research. O'Connor et al., (2016:5), however, view topic formulation as an area of moderate difficulty. Middlewood, Parker and Piper-Gale (2011:12) advises that anyone wishing to do research has to be trained in the art to do it well. They are a myriad of issues and concerns in education which can provide fertile grounds for research. The biggest challenge, then, is for student teachers to construct a manageable research question that fits within the time frame sanctioned by the teaching practice period. This consideration is worsened by the fact that most student teachers will be first time researchers, and so learning concurrently the basic research skills and the practice of research.

The other challenge that student teachers encounter in research has to do with holding a presumed knowledge of the solution to a conceived problem. In engaging in research projects, the student teachers are normally provided time to go to their practicing schools to familiarise with the places and identify learning challenges that learners face. They then formulate possible research topics, which together with the assigned lecturer discuss and adopt for research. Hine (2013:161), however, advises that patience needs to be observed in research to ensure proper planning, data gathering, analysing and translating plans to action. In fact, one has to follow the "observe-reflect-act" process (Stringer, 2004:4) or the "look-think-act" phases of teaching. This implies that solutions to problems are a result of a systematic study of problems or research questions rather than the "quick fix" tendencies that students usually bring into the research process (Fusco & Spinet, 2010:23). This focus on finding solutions to problems from the meaning of collected data instead of personal interest is relevant in this study since it examines challenges of using action research as a teaching and learning strategy at colleges of primary teacher education in Zimbabwe.

Action research requires the collaborative efforts of those involved in the process. It thrives in an environment involving the building of community and trust among participants (Goodnough, 2008:437). This rests on the belief that this approach encourages doing research with people rather than on them (Goodnough, 2008:448). The research that student teachers conduct usually occurs in-class, and as such can involve pupils, class teachers, other student teachers and parents.

These must be reigned in at all the stages of research to enable their views, feelings, attitudes, perceptions and opinions to be captured in the process. The outcomes of the process are collectively owned (Middlewood, Parker & Piper-Gale, 2011: 29). The ability to take care of the collaborative element of action research enhances its use as a teaching and learning strategy in primary teacher education.

The availability of resources or lack of them constitute a factor in the review of challenges regarding the use of action research in teaching and learning. The word resource refers to a source of supply, support or aid that can be used for a specific purpose (Kurdziolek, 2011:1). Human, material and capital resources collectively constitute this requirement. The human resources embrace the physical and mental qualities provided by human beings while the material resources include equipment, furniture and textbooks. Capital resources embrace long term projects inclusive of specialised buildings. In education, learning resources are perceived as physical demonstration tools, the knowledge of students, expertise of the teacher in a subject area, the organization of materials, ideas and activities (Kurdziolek, 2011:1). Learning resources also pertains the information which is stored in a variety of forms of media to assist students to learn (Educational Resource Acquisition Consortium, 2008:8).

Learning resources deeply influence education practices, especially in institutions of higher learning that focus on research and the development of knowledge. These facilitate effective acquisition of skills and concepts but are not self enacting in delivering positive change in the learning discourse (Kurdziolek, 2011:1). The right environment has to exist that gives student teachers the opportunity to interact among themselves and read materials in the process of learning new knowledge and to reinforce that which they already know (Nyoni & Mufanechiya, 2012:76).

It is important to assess the suitability of learning resources in the classroom in relation to the curriculum content and values, age of learners and social considerations (ERAC, 2008:9). According to Kurdziolek (2011:1), classroom instruction can be understood as a product of relationships and interactions among teachers, students, materials and the environment. This presents instruction not as

an activity which is acted out by teachers to their students, but rather a collective and collaborative process of knowledge construction through and with classroom resources. This relationship is shown in Figure 3.5.

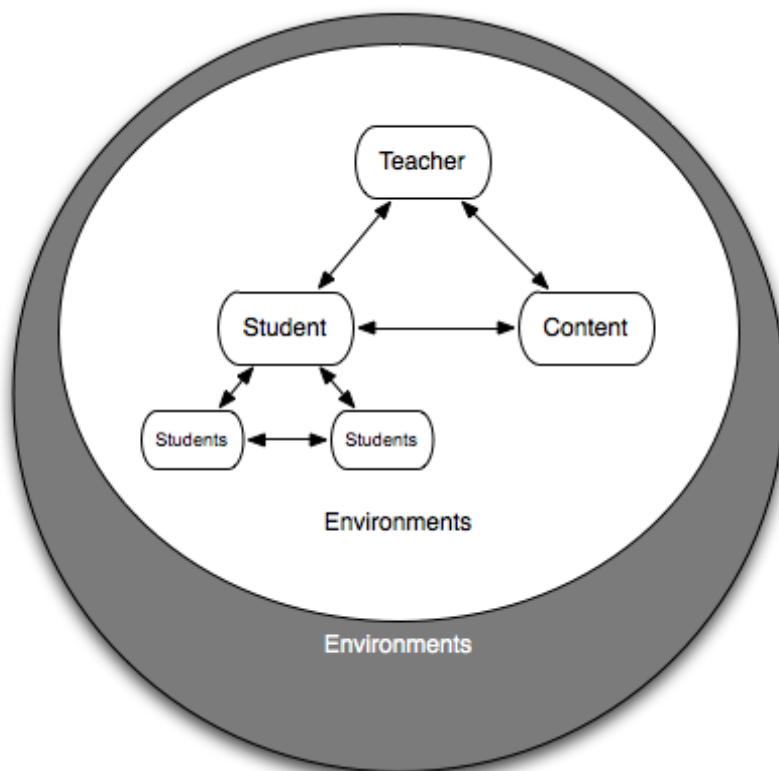


Figure 3.5: Instruction and Use of Resources. (Adapted from Kurdziolek, M.A. (2011:1). **Classroom Resources and Impact on Teaching.** Virginia, Faculty of the Virginia Polytechnic Institute and State University).

Learners need to operate in a supportive environment endowed with suitable and quality learning resources. In any production process, the quality of the outputs depends upon that of the inputs and how they are used. Olawale (2013:34) observes that the materials that teachers elect to use for teaching must be of good quality to enhance the attainment of the desired purpose. The institution library should be stocked with high quality study materials to support both the theoretical and practical learning processes in institutions. It is also important for teachers to be accustomed with the teaching resources and services at their disposal in order to give maximum benefit to the students. Machingura, Magudu, Maravanyika, Moyo and Musengi, (2012:66) state that the provision of the needed teaching/learning

resources has to be adequate with teachers and students able to make optimum use of them. Khoro (2011:33) states that interaction occurs between students and the subject matter as they read the prepared documents but advises that these should be written in ways that estimate face-to-face interaction between the writer and the student. The action research guides and other reading sources to which student teachers are referred to have to be understandable and to their level of cognition. This is relevant in examining challenges of using action research as a teaching and learning strategy in primary teacher education.

The application of technology is also an important aspect to infuse in the education system. This involves the use of computers and related internet services. Information technologies have transformed our teaching, thinking and learning (Smith, 2009:49). Interest has continued to grow in an effort to realise effective and meaningful use of technology in student teacher education (Kay, 2006:387). The challenge has been in implementing strategies to improve the attitudes, ability and use of computers by higher education teachers. Kay (2006:390) further posits that it is difficult for student teachers to be motivated to use technology if lecturers do not embrace it in education. However, access to technology empowers student teachers to understand the nature of action research and to use it to learn, teach, write assignments and conduct research. This relates to this study which examines challenges of using action research as a teaching and learning strategy.

The practice of action research can be curtailed by teachers being unable to distance themselves from the situation being researched, and therefore, unable to attain an objective view point (Brown, 2002:15). Classroom action research focuses on the teacher and the teaching experience. Student teachers, likewise, do research on their own practices and learning experiences. The subjective stance usually arise to influence the processes of data collection, analysis, evaluation and the presentation of information. The student teacher may work to conceal the negative aspects of his actions in teaching, leading to the crafting of faulty conclusions.

The issue of simultaneously conducting research and practicing teaching in schools impacts the research process. Fusco and Spinnet (2010:26) allude to the challenge

of helping teachers shift into the role of researchers. Brown (2002:15) states that the conflict emerges between the practices of teaching and researching. Teaching is about imparting correct knowledge and skills while research assumes understanding and creating new knowledge. The complex nature of teaching may render the inclusion of action research in the process quite strenuous for student teachers.

3.23 CHALLENGES OF USING ACTION RESEARCH TO LECTURERS

There are many challenges and tensions in action research (Marshall, Willson, de Salas & McKay, 2010:90). Teachers in colleges of teacher education have the problem of understanding and managing the differences in research teams (Marshall, Willson, de Salas & McKay, 2010:90). Student teachers are in the majority of cases assigned an in-class problem or question which they have to investigate in groups. In this case, the lecturers will be faced with the task of building skills and capabilities of student teachers so that they are able to operate at the same level of understanding. This is premised on the understanding that student teachers bring from home varied skills, abilities, characteristics and background experiences which influence the way information is received and processed (Felder & Brent, 2005:57). Volman and van Eck (2001) observe that females learn best through co-operative engagements with others in ways that favour critical thinking, strategising and active participation. Marshall, Willson, de Salas and McKay (2010:90) further confirm that in action research, members can bring to the group different skills, knowledge, capabilities, theoretical and philosophical orientations. It is mostly how individuals are brought up which determines the reception, processing of information and ultimate participation in action research.

Action research demands that the teaching plans and strategies be communicated clearly and regularly throughout the learning process. The communication lines must be open in all directions to allow mutual interaction between lecturers and student teachers and among student teachers. Marshall, Willson, de Salas and McKay (2010:90) point to the existence of an interesting challenge of listening to the needs and interests of students as they engage in research while also preserving the objectives set out during the instructional processing or planning of activities. Wicks

and Reason (2009:249) add that the problem here is on how to help people feel free and comfortable to contribute while at the same time making sure that a sense of challenge and stimulation is retained. Active listening is also crucial as one engages with student teachers and colleagues in the search for solutions to academic problems.

Considerable resources need to be devoted to reviewing the literature for productive discussions with students (Marshall, Willson, de Salas & McKay, 2010:90). In giving assistance to student teachers in action research, teachers must tap from the many theories of learning from academic literature, cases of good practice in formal research and their own experiences. Hall and Keys (2005:23) identifies, among other constraints, the shortage of resources, lack of research skills and time as militating against the teaching and practice of action research. Action research practice, however, may not always require constant reference to book knowledge but the acquired wisdom of practitioners developed and improved over time. This knowledge is supposed to develop into a hunch or intuition from which assistance to student teachers readily comes. It is from this position that constructive, encouraging and positive feedback on the work of student teachers must come and which they can understand (Hall & Key, 2005:17).

According to Nyagura and Reece (1990), the quality of education is closely related to the quality of teaching. This raises the question of the quality of lecturers and their roles in teaching action research and using it for student learning. Hall and Keys (2005:23) support this by contending that other barriers to action research involve the use of research language and individual beliefs that oversee the role of the teacher. While there are no clear distinguishing features for a good and effective teacher, literature tends to focus on values, personality and the emotional aspects of instruction and the teacher. This implies that teachers must arouse in the student positive emotional responses towards learning. They ought to act in a friendly manner, be enthusiastic, flexible and willing to help. A concern about the welfare of students both socially and academically has to be demonstrated. College lecturers, therefore, are challenged to spend most of their time on teaching and motivating

learners into cooperation, as this is imperative to understanding action research methodology and using it in teaching and learning.

Quality teaching should be measured against its ability to develop research skills in learners (MacGregor, 2007:19). This aspect hinges on the types of teaching methods and strategies that are employed in instructional delivery. Teachers need to move away from textbook driven curriculum that encourages rote learning (Welch, 2007:7). Student teachers should engage in project work which is learner-centred and fosters the nurturing and development of critical inquiry. This approach is ideal for action research practice which among other things, encourages group participation, critical thinking and dialogue in the process of finding solutions to problematic situations (Goodnough, 2008:433).

According to Wicks and Reason (2009:247), facilitators of action research should engage in second-order inquiry. This calls for supervisors to constantly evaluate their own knowledge against the nature of work they are expected to perform and establish sound understanding with those involved in the research. There is need for self-reflection and introspection so that they do not have to find themselves lagging behind in terms of expected requisite research skills. Action research should lead to critical reflection and encourage tutors to take responsibility for the direction of their own development (Hall & Keys, 2005:6). Lecturers must, therefore, guard against redundancy to the point of failing to possess and provide technical assistance to research students that are allocated to them for supervision. The skill of engaging in a research-based approach to addressing, particularly, classroom-tied problems must be readily made available to student teachers, who in turn, would use it to teach their classes and learn during teaching practice.

Lecturers have to be ready to deal with new ideas and tackle emergent processes in research practice. This arises from the understanding that while action research seeks solutions to issues in a cyclical process, it also respects that meanings have to be constructed within communities of practice (Goodnough, 2008:453). Action research process is contextual. This means that each activity is new and unique, and so not directly shaped by the processes of earlier cases. Loughran (2003:182)

affirms that action research is contextual and starts with the beliefs, knowledge and understanding of teachers in dealing with problems which cannot be treated as static while being researched. Action research activity is not a clear path, but a bumpy road for many young researchers (Bilgili, 2005:34). The redundancy of lecturers and inability to understand the eclectic nature of action research relate to this current study on challenges of using action research as a teaching and learning strategy at colleges of primary teacher education.

3.24 CONCLUSION

This chapter discussed the concept of action research in-depth. Action research was presented as a systematic strategy to address immediate nagging problems in society through the use of locally available resources. The historical development of action research was traced from the work of Kurt Lewin as a social scientist dealing with group conflicts and the equality of minority groups to its use as an agent of curriculum development. Approaches to action research, which concern the technical, practical and emancipatory also found space in the discussion. The place of action research in teacher education was reviewed together with the structure of the primary teacher education programme and its related teaching content. It was emphasised that the quality of education of a nation hinges on the quality of teachers and teaching provided. The general action research model, action research teaching strategy, benefits of action research in teaching and learning were also presented in this chapter.

The primacy of supervision of lecturers and student teachers in using the action research strategy was tackled. This was linked with the essence of professional development efforts to boost the knowledge of people in regard to the teaching and practice of action research. The perception of action research as a strategy to impart reflective skills, confidence and participative attitude among those engaged in it added to the discussion. The chapter ended with a consideration of challenges of using action research to lecturers and student teachers. The need for constant review of literature sources to enable action research practice to be firmly grounded on theory and experience emerged strongly. Emphasis on practice through learner

centred methods which encourage interaction and self-regulation were other aspects which were perceived to contribute to challenges of using action research in teaching.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

This chapter addresses the research paradigm, design and methodology which rest on the purpose of the study, formulated research objectives and questions. The population of the study, sampling procedures, sample, data collection, analysis and ethical considerations are also included in this chapter as they assist to examine challenges that confront lecturers and student teachers at colleges of primary teacher education in Zimbabwe in using action research as a teaching and learning strategy.

4.2 RESEARCH PARADIGM

A paradigm is a set of assumptions or beliefs about fundamental aspects of reality which give rise to a particular world view (Maree, 2007:47). Wahyuni (2012: 69) concurs, observing that paradigms are fundamental beliefs that affect the way to conduct social research, including the choice of a particular research methodology. Corbin and Strauss (2008:1) further state that researchers are guided by the philosophical frameworks, which are called paradigms. These address fundamental assumptions such as beliefs about the nature of reality (ontology), the relationship between the one who knows and the known (epistemology) and assumptions about methodologies.

Saunders, Lewin and Thornhill (2009:110) view ontology as the theory of what exists. It relates to the nature of knowledge or the view of how one perceives reality (Wayhuni, 2012:69; Cohen *et al.*, 2007:7). There are two basic ontological arguments. One perceives that the existence of reality is external and independent of our observation and interpretation of it (Pring, 2000: 59). This is called realism or objectivism (Wayhuni, 2012:69). Scotland (2012:10) posits that objectivism views knowledge which perceives reality as objective to be absolute, finite, measurable

and value-free. The researcher and those for whom the research is targeted are presented as independent entities, with meanings only residing in the objects of research rather than in the mind of the researcher. This means that meanings of the phenomena of study exist in the external object rather than in the political and historical situation.

Subjectivists contend that reality is dependent on social actors and assumes that individuals contribute to social phenomena (Wayhuni, 2012:69). It is anchored on relativism, which views reality as subjective and varying from one person to another (Scotland, 2012:11). Reality is believed to emerge from human senses. This implies that the world is meaningless without senses to conceptualise it. The existence of the world is dependent on our knowledge of it (Grix, 2004:83). Construction of reality rests with individual researchers and this creates meanings which are as many as there are researchers. Reality is then communicated through language that actively shapes and moulds that reality (Frowe, 2001:185).

Huff (2009:108) views epistemology as concerned with the very base of knowledge, its nature and how it can be acquired and communicated to other human beings. It is the beliefs on the way to generate, understand and use the knowledge that are deemed to be acceptable and valid (Wayhuni, 2012:69). Epistemology is also seen as the theory of what we can know (Kalof, Dan & Dietz, 2008:19). The assumption is that it is possible for the researcher to take an observer role and to employ quantitative methods, while also an interpretive stance may be adopted. This suggests that we can believe in external existence of reality but also realise that our observations and interpretations are molded by psychological biases and quirks, power relations, cultural lenses and other forces that comprise the social construction of reality (Kalof, Dan & Dietz, 2008:20).

Ontological and epistemological orientations have borne three main research paradigms which are positivism, antipositivism (interpretivism) and the critical paradigm. Positivist researchers use quantitative designs while studies underpinned by antipositivist and critical frameworks utilise qualitative designs. A combination of qualitative and quantitative designs, at various points along the continuum, results in

mixed methods designs. This study employed pragmatism which basically resides in the critical paradigm but adopts concepts from both positivism and antipositivism in practice.

4.3 PRAGMATISM

Pragmatism is a set of ideas that advocates employing "what works" (Tashakkori & Teddlie, 2003:713; Morgan, 2014:1046) using diverse approaches and valuing both objective and subjective knowledge (Creswell & Clark, 2014:43). According to Donaldson, Christie and Mark (2009:120), pragmatism focuses on contextual contingencies that make our various research designs and methods more or less useful. It recognises qualitative and quantitative techniques as the two points on a continuum which can be useful at different points even within a single research study. Therefore, this world view is the best in that it provides a formulation of mixed methods research (Creswell & Clark, 2014:26). This was adopted in this study as it suited the nature of the formulated research questions and subsequent data collection instruments which included a questionnaire schedule, interview guides, document analysis and observation schedules.

This philosophical assumption takes a middle path through realism and constructivism. The understanding being that although there is reality that exists outside of human experience, this can only be perceived through human experience (Morgan, 2014:39). In this study, the researcher took advantage of the complementary nature of quantitative and qualitative perspectives in pragmatism to analyse the solicited data in order to achieve convincing conclusions and recommendations.

Pragmatism contends that the world is real and socially constructed, and that knowledge of the world which is based on experience is social knowledge. Morgan (2014:39) adds that while knowledge of each person is unique as it is based on individual experience, much of this knowledge is socially shared because it comes from socially shared experiences. The superiority of this paradigm further lies on the premise that it can be applied in individual and group contexts to provide a deeper

understanding of a phenomena in its natural setting. The researcher used it, as guided by the research questions, to find out what is being done at colleges pertaining the use of action research as a teaching and learning strategy, how it is done and to make suggestions to alleviate the challenges.

4.4 RESEARCH DESIGN

Taylor (2000:80) describes research design as the plans and strategies that are developed in order to seek, explore and discover answers to research questions. It is concerned with the way in which the entire research is planned and managed until results are reported (Haeffel, Gardner & Vogt, 2012:v). This research adopted the equal status basic convergent type of the mixed methods design, which entails a simultaneous collection and analysis of quantitative and qualitative data prior to an integrated analysis (Guetterman, Fetters & Creswell, 2015:555).

Mixed methods design basically involves the combined use of both quantitative and qualitative methodologies within the same study (Jupp, 2006:176; Creswell, 2012:12). The design enhances the analysis of research data and the production of rich research outcomes (Lichtman, 2013:105). This design is suitable for this study as it allowed for the integration of quantitative and qualitative methods, techniques, procedures and perspectives in examining challenges of using action as a teaching and learning strategy in colleges of primary teacher education. The researcher had the opportunity to visit the college under study to conduct interviews, review documents and observe events, processes and behaviours of people in order to come up with rich descriptions thereof. The sub-items provided below highlight the methodology used to answer the research question.

4.5 RESEARCH METHODOLOGY

Research methodology is a systematic way of showing how research is to be carried out for the purpose of gaining knowledge (Rajasekar, Philominathan & Chinnathambi, 2013:5). It is the procedure by which people who conduct research describe, explain and make predictions about the phenomena under investigation.

This section presents the methods employed in the collection of research data. The study used both quantitative and qualitative methods.

4.5.1 Quantitative Methods

Quantitative methods involve the collection of data in numerical form for analysis (Jupp, 2006:250). The study employed a survey method in the form of questionnaires to collect data from participants. McMillan and Schumacker (2010:195) view a questionnaire as a set of written questions. It is a valuable tool as it enables the soliciting of opinions and numerical information that is crucial to understand the phenomena under study (Johnson & Christenson, 2008:176). Questionnaires permit the researcher to obtain data from a large target group while also maintaining anonymity and objectivity. The questionnaires were administered to final year students to obtain numerical data for the study (See Appendix A p.240).

4.5.2 Qualitative Methods

Interviews, documentary analysis and observation were used to generate data for the purpose of triangulating such data. Triangulation is the principle of strengthening the validity of the findings of a study through the use of many methods, sources or agents (Wilson, 2009:120).

4.5.2.1 Interviews

Interviews are methods of data collection, information or data gathering that involves asking a series of questions. It represents a meeting or dialogue between people where personal and social interaction occur (Jupp, 2006:157). Interview schedules consisting of self-developed questions were adopted to generate relevant research data from face-to-face encounters with participants for the study (See Appendices B p.243, C p.244). This method was ideal as it allowed for the clarification of questions, probing and use of non-verbal cues for in-depth data generation (Marshal & Rossman, 2006:102). It is a powerful method of understanding others (Punch, 2004:175). The principal was interviewed in order to shed light on the implementation of the action research curriculum at the college. The HODs provided

first hand information in relation to the teaching, supervision and assessment of student teachers in using action research as a teaching and learning strategy.

4.5.2.2 Document analysis

Document analysis involves the detailed examination of documents produced across a wide range of social practices, taking a variety of forms from the written word to the visual image (Jupp, 2006:79). Merriam (2009:139) states that documentary analysis refers to a wide range of written, visual, digital and physical material relevant to the study. Sarma (2012:84) adds that many kinds of documents, including public documents like news papers, journals, minutes of meetings, census data, official reports, archival records and private documents such as, personal diaries, letters, and e-mails are also used in a qualitative study. This source of data is stable, reliable and accessible for future reference. The researcher reviewed documents on site. The college research policy document was scrutinised to understand the guiding principles for the implementation of action research. The course outlines were analysed to check on the contents of teaching and depth of coverage while lesson plans were reviewed to provide information on the structuring of instruction and the use of supports. A checklist was used to gather evidence in relation to challenges of using action research as a teaching and learning strategy (See Appendix D p.245).

4.5.2.3 Observation

Observation involves the systematic viewing of people's actions and the recording, analysis and interpretation of their behaviour (Gray, 2009:397). According to Marshal and Rossman (2006:98), observation entails the organised noting and recording of events, behaviours and artefacts in the social setting selected for study. It enables the researcher to gather data on the following: the physical setting, human setting, interactional setting, and the programme setting (Cohen, Manion & Morrison, 2000:305). In this study, an observation schedule (See Appendix E p.247) was used to gather information on the way in which lecturers delivered instruction to students, the interactions that took place, the organisation of student teachers in class and the provision of resources. The researcher adopted the participant observation method to view and record instances of interest to the study as they occurred.

4.6 SAMPLING PROCESS

The sampling process involves the choice of the population and the determination of the sampling procedures and the sizes of the samples.

4.6.1 Population

A population is a group of people the researcher is interested in and from which a sample is taken (Hanslam & McGarty, 2003:213). It is the collection of all individuals about whom the researcher wishes to make specific conclusions (Welman, Kruger & Mitchell, 2012:52). Punch and Oancea (2014:302) view population as the total target group which is the subject of research and about whom the researcher is trying to say something. The population for this study comprised the principal, lecturing college heads of departments, and student teachers that shared a common experience on action research methodology. These had valuable information needed for the study. The heads of departments were spread among the following areas: Practical Subjects (Physical Education, Home Economics & Art); Humanities (English, IsiNdebele, ChiShona, Religious Studies & Social Studies); Sciences (mathematics & Science); Contemporary Subjects (Health and Life Skills, Information and Communication Technology); Early Childhood Development; Inclusive Education; Distance Education; Infrastructure Development and Marketing and Information Services.

4.6.2 Sampling Procedures

Sampling procedures involve techniques that researchers use to select groups from the wider population (Jupp, 2006:271). The selection of sampling procedures to be used in a study rests on the choice of a research design, the amount of rigour sought for the study, characteristics of the population and the availability of participants (Creswell, 2005:146) . This part covers the sampling techniques that relate to the mixed methods design used in this study.

4.6.2.1 Quantitative sampling procedures

The participants who responded to questionnaires were selected through simple random sampling technique. This is a process of selecting a sample in such a way that all individuals in the defined population have an equal and independent chance of being selected for the sample (Gay, 1992:126; Bryman, 2012:190). Simple random technique prevents a biased choice of participants that may influence the establishment of predetermined results. A list of final year students was used to select the desired sample for the study. The quantitative sample comprised 140 final year students from the selected college.

4.6.2.2 Qualitative sampling procedures

A *purposive* (judgmental) sampling technique was used for a qualitative sample. In judgmental or purposive sampling, the researcher uses expert judgment to decide on people to be included in the sample frame in relation to certain traits (Burton, Brundrett & Jones, 2014:86). Morgan (2014:127) asserts that purposive selection involves the practice of collecting detailed information from carefully chosen sample sources. This relates to people, sites and methods that suit the purpose of the study. One college of primary teacher education in a town in Zimbabwe constituted the case of study. This is in line with Punch (2005:144) who views a case study as a detailed study of a social phenomena in its context, in order to reveal its unique characteristics. The principal, heads of departments and final year students were the foci of this study as they were believed to possess rich information about the use of action research in teaching and learning. The qualitative sample therefore comprised 1 college principal and 9 heads of departments.

4.6.3 Study Sample

Johnson and Christensen (2008:223) define a sample as a subset of cases drawn from a population. The sample is the real group that is included in the study and from whom data are collected (Punch & Oancea, 2014:302). It comprises individuals selected from a population (Gay & Airasian, 2003:101). A sample may be selected either owing to its representativeness of the entire population or due to its

possession of essential characteristics imperative in the study. Two samples were constituted from the quantitative and qualitative domains:

4.6.3.1 Quantitative sample

The quantitative sample comprised 140 final year student teachers who had been exposed to the teaching and practice of action research activities at college and during teaching practice.

4.6.3.2 Qualitative sample

1 college principal and 9 lecturing heads of departments constituted the qualitative sample. The principal was suitable for this study as a holder of unique information on the adoption of action research in teacher education and has a lot of experience in the supervision of lecturers. Heads of departments, as lecturers, provided instruction and supervised student teachers in action research.

4.7 DATA ANALYSIS

Data analysis is the process of determining what the data mean. Burns and Grove (2003:479) assert that data analysis is a process for reducing and organising data to produce findings that require interpretation. It pertains organising data, breaking it into smaller units, segmenting it per set categories, synthesising and deriving information for reporting to others. Quantitative data were analysed through the Statistical Package for Social Sciences (SPSS) version 24 and qualitative data were analysed thematically.

4.7.1 Statistical Package for the Social Sciences

The SPSS is a software package for the analysis of statistical data (Landau & Everitt, 2004:1). The process begins with the creation of a data set, defining variables and then entering data in the variables to come up with a number of cases. There are types of variables. Scale variables contain numeric values of measurement while categorical values are composed of values which define a

category, for example gender and age. Categorical values can also be a single number or a rating scale, such as 1-7.

In this study, the categorical values were used for demographic data while the Likert type scale with strongly disagree, disagree, undecided, agree and strongly agree were employed. Data were then entered into the SPSS with cases defined by values which were in the variables. The analysis was made through selecting the required output from a menu to obtain graphs and tables to represent information. The SPSS provided the best choice for data organisation and management as well as a range of options for data presentation.

4.7.2 Thematic Analysis

Thematic analysis is " a method that is used to identify, analyse and report ideas (themes) within data (Braun & Clarke, 2006:79). It is interpretive and subjective (Lacey & Luff, 2009:6). The approach is inductive in nature as it seeks to derive meanings from the texts instead of imposing meanings on the gathered data. The steps of the thematic analysis are shown in Figure 4.1.

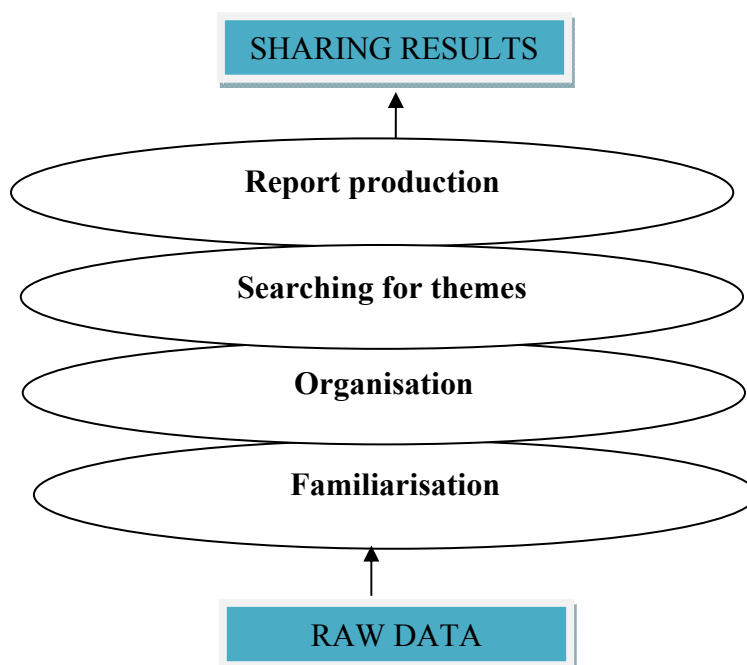


Figure 4.1: **Steps of Thematic Analysis.** Adapted from Braun, V. & Clarke, V. (2006), **Using Thematic Analysis in Psychology.** *Qualitative Research in Psychology*, 3: 77-101.

Figure 4.1 shows the steps of the analysis process as consisting of familiarisation, organisation, searching for themes and report production as discussed hereunder:

Familiarisation: This step involves a deeper understanding and transcription of raw data which is sourced from participants. This data has to be read and re-read in order to grasp the initial ideas contained. In this study, the researcher transcribed the recorded verbatim statements from heads of departments and the college principal within a month of data collection to ensure original ideas were reflected in the narratives.

Organisation: The collected data has to be organised. This can entail the use of codes, pseudonyms or dates to segment data. Interesting data that speaks to similar issues is coded. Provisional codes are assigned which may be modified as the analysis progresses. The codes are also used to categorise data as their meanings and patterns give guidance. Information which is relevant to each code is then collated. In this study, the researcher used acronyms with numbers to identify interviewees for the study. The codes were informed by the research questions, literature review and information from participants.

Searching for themes: Themes are concepts that emerge from the gathered data (Lacey & Luff, 2009:24). This stage involves defining and ascribing names to themes that result from data. These themes are developed through collapsing codes into working themes and putting data into each theme. The themes continue to be refined according to the contents names which they bear. In this study, four themes were developed (See sub-section 5.4.2 p.159).

Report production: This is the final stage in the analysis process. It involves the synthesis of data and the reporting of the results. The creativity of the researcher is critical in analysis. The quality of the results depends on the quality of the collected data. In this study, the verbatim excerpts which were transcribed through a meticulously executed process involving reading, re-reading and member checking were used to complement narrative discussions. This thesis serves as a conduit to share the results of the analysed data.

4.8 VALIDITY AND RELIABILITY OF QUANTITATIVE DATA

The extent to which a study satisfies the validity and reliability criteria determines the level at which its results can be used to generate informed decisions about the phenomena under investigation (Leedy & Omrod, 2010:28). This section gives treatment to validity and reliability considerations, in regard to challenges that confront lecturers and student teachers in using action research in teaching and learning.

4.8.1 Validity

Validity determines whether a particular instrument measures what it is intended to measure or the truthfulness of the results (Cohen, Manion & Morrison, 2002:105). Validity in this study was ensured through pre-testing of the questionnaire to enable participants to give appropriate responses to set items. The researcher selected 10 second year student teachers who were on TP to respond to questionnaire items. This was done to enhance clarity of meanings and to attend to areas of ambiguity. The quantitative sample was randomly selected using simple random sampling to ensure all final year student teachers had an equal chance to be included in the study and to allow the findings of the study to be generalisable (See sub-section 4.6.2.1 p.120).

4.8.2 Reliability

Reliability is the extent to which results are constant over time, represent the total population under study and can be reproduced under a similar methodology (Joppe, 2000:1). In this study, the researcher clearly outlined the research methodology which was used including pragmatism, mixed methods design, data collection instruments and the use of the SPSS version 24 to analyse data as a technique to enhance the reliability of the findings. Piloting the questionnaire also assisted in enhancing the reliability of the research outcomes.

4.9 TRUSTWORTHINESS OF QUALITATIVE DATA

This concept relates to the quality or rigour of a research study that generates trust and confidence in the truthfulness of findings and conclusions (Loh, 2013:4). It focuses on the extent to which the research is acceptable and considered worth to be included in the field of knowledge as to be used in many ways and means. The four criteria for a trustworthy study include credibility, transferability, dependability and confirmability (Shenton, 2004:64).

4.9.1 Credibility is about the extent to which the study measures or tests what it is actually intended (Shenton, 2004:64). The concept deals with the congruency of the findings with reality. Triangulation of methods, sources and investigators enhance confidence in the research findings. According to, the use of different methods compensates for their individual limitations and exploits their respective benefits. In this study, credibility was realised through the use of multiple sources of information which included the principal, HODs and student teachers to allow for the verification of the sourced data. Observation, document analysis and interviews made it possible for the collected data to be corroborated. The use of multi-methods in a single study is a strategy to add value, rigour and breadth to the research (Denzin & Lincoln, 2000:5). The researcher also made personal visits to the selected college and became native with the participants in ways which afforded access to primary research data.

4.9.2 Transferability is the degree to which research findings can be applied to other similar contexts (Gay & Airasian, 2003:246). It is made possible when thick descriptions or rich accounts of the phenomena of study are produced (Bryman, 2012:392). In this study, the processes and procedures that were undertaken are described in detail to enable the same study to be applied in similar situations involving the use of action research as a teaching and learning strategy.

4.9.3 Dependability concerns the possibility of a repeated study to obtain the same results when the same methods, context and participants are involved (Shenton, 2004:71). The researcher selected participants that are believed to possess rich

information owing to their active participation in activities related to the use of action research in teaching and learning. The college of primary teacher education was a well selected site where the teaching and practice of action research is anchored.

4.9.4 Confirmability is the investigator's comparable concern for objectivity (Shenton, 2004:71). Measures should be employed to ensure that findings, interpretations and conclusions of the study are derived from data sourced from participants rather than the characteristics and preferences of the researcher (Loh, 2013:5; Shenton, 2004:72). In the context of this study, the contamination of researcher bias and prejudice were reduced through the use of member checking. After the transcription of the recorded interviews with the principal and the HODs, the researcher went back to the participants to offer them the opportunity to confirm if the information contained in the narrations matched their contributions.

4.10 ETHICAL CONSIDERATIONS

The researcher sought permission for field entry from the Ministry of Higher and Tertiary Education, Science and Technology Development (See Appendix M p.280). Once permission was granted, personal visits were made to conduct face-to-face interviews, analyse documents, observe lessons and administer questionnaires. The conduct of the study was informed by the ethical obligation to safe-guard the rights of the participants who provide information in a research (Streubert Speziale & Carpenter, 2003:314). Information obtained from the sampled group was treated with due confidentiality, which is also akin to anonymity. Identities of individual participants were concealed through the use of codes. Leedy and Omrod (2014:107) posit that individuals should not be exposed to harm that is above that which they receive in day to day lives or be asked to participate in a research that may result in violation of ethical or moral standards.

Participants need to be asked to complete consent forms to confirm their willing involvement in the research processes (LoBiondo-Wood & Harber, 2002:273; Houghton, Casey, Shaw & Murphy, 2010:20). Participants should be assured that their privacy and sensitive details would be secured and that the obtained

information would be used solely for the purpose of the study (Welman, Kruger & Mitchell, 2012:181). The researcher asked the principal, HODs and student teachers to complete consent forms prior to participation in the data collection process and they were assured that the information they gave was confidential (See Appendices F-J p.249-251; K p.253). The participants were informed prior to data collection that they were free to participate and that they could withdraw from the study at any stage, or as and when they saw fit. Houghton, Casey, Shaw and Murphy (2010:16) concur that research participants should be told that they have the liberty to withhold their participation at any stage of the study.

4.11 CONCLUSION

The chapter presented the research design and methodology of the study. This covered the research paradigm which served to provide the philosophical basis on which the investigation was framed. Pragmatism was chosen as the paradigm that guided the study. This philosophical stance belongs to the critical theory and uses both the positivist and post positivist perspectives to determine an appropriate design for the study. Mixed methods design was selected to guide the selection of participants, data collection methods and data analysis procedures. This allows for the combination of quantitative and qualitative techniques in a single study. The sampling process focused on the population of study, sampling procedures and the sample. Simple random sampling technique was used to select the quantitative sample while purposive sampling technique was employed to constitute the qualitative sample. The researcher settled for the survey to collect qualitative data. Interviews, observations and document analysis were earmarked for the gathering of qualitative data. Critical ethical considerations which emerged strongly included anonymity, consent and respect for the integrity of participants. Actions to ensure validity and reliability of quantitative findings were discussed. The criteria for trustworthiness of qualitative data focused on credibility, transferability, dependability and confirmability. Chapter Five discusses the research findings as derived from the literature review, objectives of the study and research questions.

CHAPTER 5

DATA ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

The previous chapter focused on the research design and methodology which determined the selection of methods and techniques that were used for data collection. This chapter deals with the analysis and interpretation of the collected data in relation to the challenges of using action research as a teaching and learning strategy in primary teacher education. This mixed methods research employed both quantitative and qualitative techniques to generate research data in a concurrent fashion from the selected sample. A survey was conducted with student teachers to solicit their views with regard to the use of action research as a teaching and learning strategy. The Statistical Package for the Social Sciences (SPSS) was used to ascribe meaning to that information which was gathered through the use of a quantitative instrument. Qualitative data were obtained through interviews that were scheduled with the principal of the college, the Heads of Departments (HODs) as well as the documentary analysis and lesson observations. Qualitative data were analysed thematically.

5.2 QUANTITATIVE DATA ANALYSIS

This section focused on an analysis of the survey of the views of student teachers on challenges of using action research as a teaching strategy in teacher education. The instrument was composed of two parts: section 1 and section 2. Section 1 solicited information pertaining to the demographic data of participants while section 2 was on statements relating to action research practices. The participants had to express their opinions by making choices on the Likert scale of ***strongly disagree, disagree, undecided, agree*** and ***strongly agree***.

5.2.1 Section 1: Demographic Data

This part analysed the characteristics of the participants in terms of gender, age and level of education.

Table 5.1: Gender and Age Distribution of Student Teachers

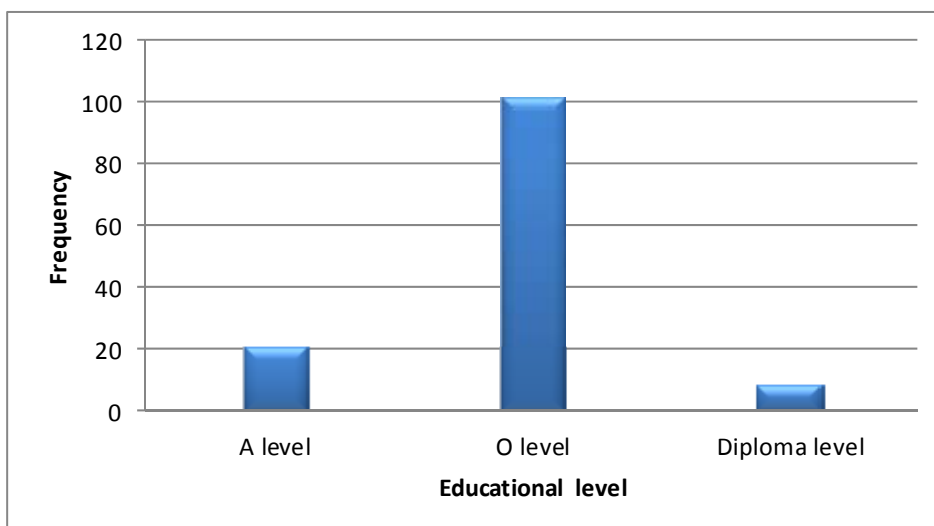
GENDER	Frequency	Percentage
Male	31	22.1
Female	109	77.9
Total	140	100
AGE RANGE		
20-29	69	49.2
30-39	60	42.9
40 and Above	11	7.9
Total	140	100

Table 5.1 shows that 31 (22.1%) males and 109 (77.9%) females participated in the study. This high number of females in the sample is significant for the use of action research strategy as literature also state that females learn best through co-operative engagements with others in ways that favour critical thinking, strategising and active participation. Males on the other hand view achievement as a result of their own ability and not necessarily an outcome of group effort (See sub-section 3.23 p.109). This attribute naturally impacts on the use of action research in teaching and learning in primary education. 69 (49.3%) participants belonged to the 20-29 age range, 60 (42.9) to the 30-39 group and 11 (7.9%) were 40 years and above.

Educational level of student teachers

Of the total participants, 29 (20.7%) had A-Level certificates and 102 (72.9%) Ordinary Level certificates. The remaining 9 (6.4%) held diploma qualifications from

other professions other than in education. These obtained diplomas mainly from polytechnics but failed to get employed due to the constricted opportunities in their various sectors, forcing them to enroll anew in teacher education. The educational experience of student teachers is critical in regard to their ability to understand action research principles and to implement them in action research. The amount of knowledge that they bring to college training is indicative of their state of cognitive development and associated readiness to learn new skills and behaviour. Action research demands participants to use high order mental skills to grapple with the activities of diagnosing problems in the teaching and learning context, to devise and action preferred remedies as well as evaluate the outcomes of implementations. The educational levels of student teachers are presented in Graph 5.1.



Graph 5.1: Educational Level of Student Teachers

5.3 SECTION 2: QUANTITATIVE DATA ANALYSIS PER RESEARCH QUESTIONS

5.3.1 How do Student Teachers View Action Research as a Teaching and Learning Strategy?

This section of the survey instrument solicited the views of student teachers on the selected aspects concerning action research and its use as a teaching and learning strategy.

Action research involves working out problems in a step by step process

The participants were unanimous in opining that action research involves working out problems in a series of steps. 19 (13.6%) participants strongly disagreed with the view while 5 (3.6%) disagreed. 66 (47.1) agreed and 50 (35.7) strongly agreed. In total, 17.2% of the sample of study refuted the tendency of action research practice to proceed in a system of defined steps in addressing problematic situations. 116 (82.8%) agreed with the statement in question. Literature presents action research as a systematic process which is composed of a series of steps of planning, action, observing and evaluating action (See sub-section 1.1 p.1; 3.2 p.37). The responses of participants showed that most student teachers are aware of the basic procedure to engage action research in dealing with education concerns. However, there is a significant number of participants (17.2%) who are unaware of inherent steps in the conduct of action research.

Action research activities require active participation of student teachers.

Participants were asked to give their responses on whether action research requires active participation in its activities. The responses are shown in Table 5.2.

Table 5.2: Responses on Student Teacher Participation in Action Research

	Frequency	Percent
Strongly disagree	14	10.0
Disagree	4	2.9
Undecided	1	0.7
Agree	72	51.4
Strongly agree	49	35.0
Total	140	100.0

Table 5.2 shows that action research practice requires active participation from student teachers. 72 (51.4%) participants agreed, 49 (35%) strongly agreed, making a total of 121 (86.4%) in the positive group. 14 (10%), strongly agreed, 4 (2.9%) disagreed while only 1 (0.7%) was undecided. This implies that action research is a participatory process that is done to solve real problems of human beings as they reside in a participatory world view. It entails practical participation of individuals that are affected by a problematic situation (Sub-section 3.2 p37; 1.1 p2). The critical stakeholders in the phenomenon of concern have to collectively apply their minds in establishing, implementing and evaluating adopted strategies for improving their conditions. Student teachers are therefore, expected to participate actively and meaningfully in processes that are designed to improve teaching and learning in primary teacher education.

Action research requires open and effective communication from participants

This survey item sought participants to indicate their decisions on the extent to which they consider the importance of open and effective communication in doing action research. This is represented in Table 5.3.

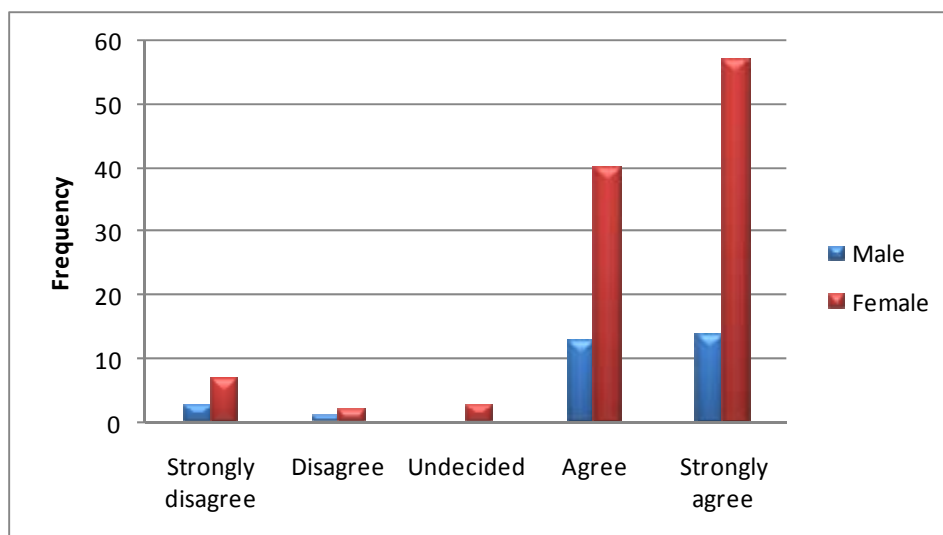
Table 5.3: Action Research Requires Open and Effective Communication

		Gender		Total	
		Male	Female		
Action research activities require open and effective communication from participants	Strongly disagree	3	7	10	
		2.10%	5.00%	7.10%	
	Disagree	1	2	3	
		0.70%	1.40%	2.10%	
	Undecided	0	3	3	
		0.00%	2.10%	2.10%	
	Agree	13	40	53	
		9.30%	28.60%	37.90%	
	Strongly agree	14	57	71	
		10.00%	40.70%	50.70%	
	Total		31	109	140
			22.10%	77.90%	100.00%

Graph 5.2 represent the importance of communication in the practice of action research. 71 (50.7%) strongly agreed that open communication is critical in doing action research while 53 (37.9%) agreed. On the other hand, 10 (7.1%) strongly disagreed, 3 (2.1%) disagreed and a meagre 3 (2.1%) remained undecided. A total of 89.6% agreed. A cross tabulation by gender reveals that females surpass males across categories in percentage points as indicated in Table 5.3 and Graph 5.2.

In total, 31 (22.1%) males and 109 (77.9%) females responded to the survey item. 57 (40.7%) females strongly agreed and 40 (28.6%) agreed to the view, constituting a total of 97 (69.3%) participants who agreed. For males, 14 (10%) strongly agreed and 13 (9.3%) agreed, adding up to 27 (19.3%) participants on the affirmative bracket. The emerging pattern attests to the importance of communication in action research. Effective and open communication is central to action research as participants have to articulate clearly the issues that advance optimum performance in the teaching and learning enterprise (See sub-section 3.14 p.85). Action

researchers also need to converse as a collective to share knowledge about the phenomenon that they set out to investigate (See sub-section 3.7.2 p.55). Weak command of oral and written language on the part of student teachers must be seen as contributory to problems of using action research in teaching and learning.



Graph 5.2: Action Research Requires Open and Effective Communication

Participation in action research has given me confidence and self-esteem

Participants were asked to indicate whether their involvement in action research activities gave them confidence and self-esteem. Their responses are represented in Table 5.4.

Table 5.4: Confidence and self-esteem from Action Research

	Frequency	Percent
Strongly disagree	11	7.9
Disagree	7	5.0
Undecided	7	5.0
Agree	69	49.2
Strongly agree	46	32.9
Total	140	100

Table 5.4 shows that confidence and self-esteem are the offshoots of participation in action research practices. In the survey, 69 (49.2%) participants agreed and 46 (32.9%) strongly agreed that participation in action research has bestowed them with confidence and self-esteem. 11 (7.9%) strongly disagreed, 7 (5%) disagreed and 7 (5%) again were indecisive. Altogether, 25 (17.9%) remained negative, thereby giving credence to the ability of action research to instill confidence and self-esteem to those who are involved in it. Studies confirm that action research provides teachers with methods that involve and engage them, resulting in a shift of attitudes to ones that give them more self confidence and self esteem (See sub-section 3.11.2 p.75; 3.11.1 p.73).

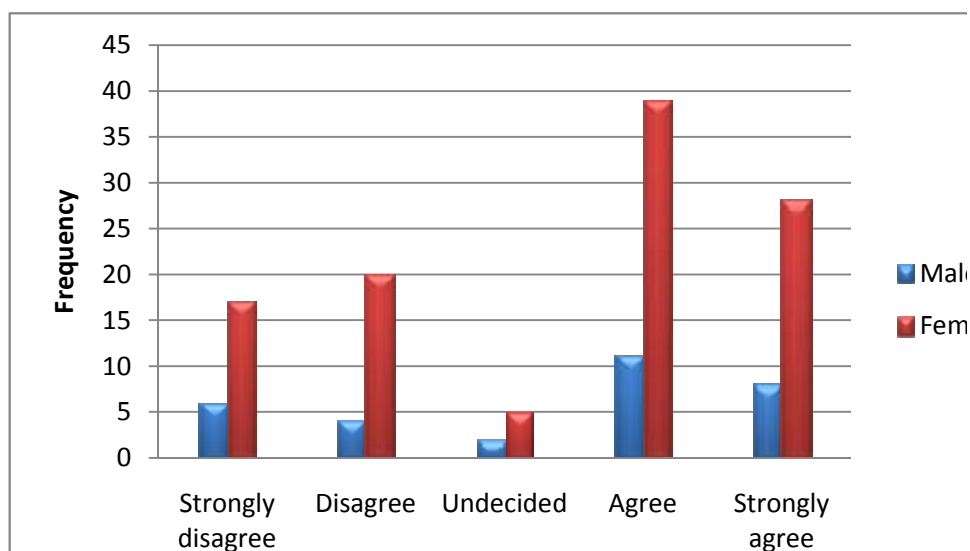
Consideration of the background of student teachers in action research

Participants were requested to rate their views on the need to consider the backgrounds of student teachers in the teaching and practice of action research. Their responses are presented in Table 5.5 and Graph 5.3.

Table 5.5: Background of Student Teachers in Action Research

	Gender		Total
	Male	Female	
Strongly disagree	6	17	23
	4.30%	12.10%	16.40%
Disagree	4	20	24
	2.90%	14.30%	17.10%
Undecided	2	5	6
	1.40%	3.60%	5.00%
Agree	11	39	50
	7.90%	27.90%	35.70%
Strongly agree	8	28	36
	5.70%	20.00%	25.70%
Total	31	109	140
	22.10%	77.90%	100.00%

Table 5.5 shows that the background of student teachers should be considered when using action research as a teaching and learning strategy. In total, 86 (61.4%) participants favoured the notion of giving attention to the backgrounds of student teachers in action research practice. Of these, 39 (27.9%) females and 11 (7.9%) males agreed while 28 (20%) females and 8 (5.7%) males strongly agreed. On the other hand, 17 (12.1%) females and 6 (4.3%) males, adding up to 23 (16.4%) strongly disagreed. 20 (14.3%) females and 4 (2.9%) males disagreed. Only 6 (5%) participants were undecided. The background factor relates to the family to which the individual is born and bred, and the consequent nature of resources that are provided for learning. The beliefs, moods, perceptions, interests and attitudes that are fostered shape the learning styles and efforts that students apply to their learning activities. The way individuals are brought up influences how they prefer to learn, receive and process information (See sub-section 3.14 p.85; 3.23 p.109). The resources and support that students get from home determine their levels of self-efficacy, goal setting, outcome expectation and motivation, which are crucial for action research conduct. Graph 5.3 also presents the above responses of participants.



Graph 5.3: Background of Student Teachers in Action Research

Importance of goals that student teachers set for action research practice

This survey item sought to solicit the views of student teachers on the need for students to set their own goals in the learning and practice of action research. Their responses are presented in Table 5.6.

Table 5.6: Importance of Student Teacher Goals for Action Research Conduct

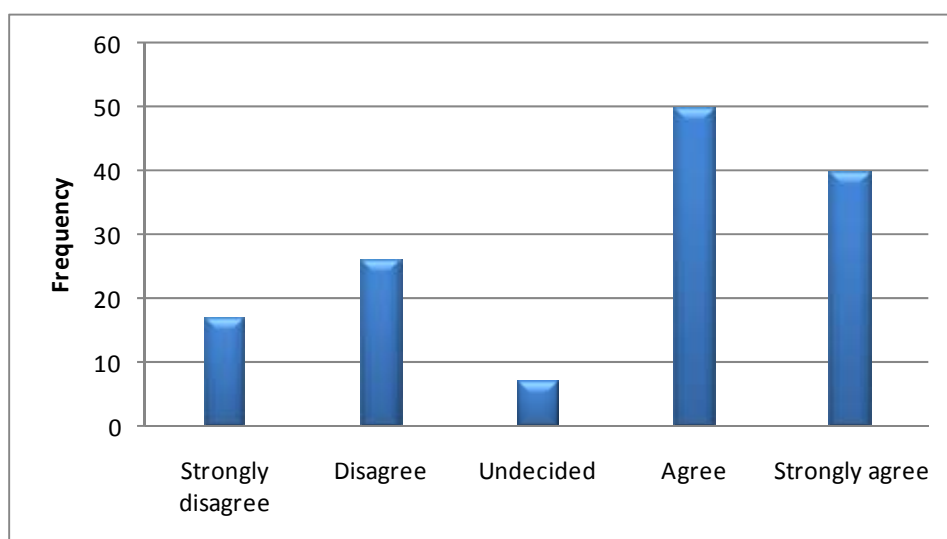
	Frequency	Percent
Strongly disagree	11	7.9
Disagree	7	5.0
Undecided	7	5.0
Agree	61	43.6
Strongly agree	54	38.6
Total	140	100.0

Table 5.6 shows that participants were unanimous that setting own goals is paramount for student teachers as they engage in action research. 61 (43.6%) agreed, 54 (38.6%) strongly agreed, totaling 115 (82.2%) of those who were generally in agreement. 11 (7.9%) strongly disagreed, 7 (5%) disagreed while the same number (7) were undecided.

Goals are drivers of focused and disciplined performance. This is supported by the view that human beings are naturally goal oriented and that these goals afford individuals the latitude to exert the amount of effort that is required to achieve intended outcomes and set standards. In practice, people with specific goals perform better than those without while higher goals tend to imply higher performance (Sub-section 2.6.3 p33). In this view, student teachers who set clear and attainable goals would normally reflect increased rates of performance and achievement in action research practice. Absence of such goals inevitably contributes to challenges of using action research as a teaching and learning strategy.

Use of action research in micro and peer-teaching

Participants were asked to rate their responses on whether they had been offered the chance to employ action research principles during peer-teaching and micro-teaching sessions. Graph 5.4 shows that 50 (37.7%) participants agreed and 40 (28.6) strongly agreed that chance had been extended to them to use action research methodology during peer-teaching and micro-teaching. In total, 90 (64.3%) agreed. 26 (18.6%) disagreed, 17 (12.1%) strongly disagreed while only 7 (5%) remained neutral. It is evident that student teachers are not provided with adequate practice on action research during training. This contradicts literature which states that micro-teaching allows student teachers to practice skills they would have theoretically acquired in a typical classroom situation and offers cooperation and interaction among students (See sub-section 3.10.1 p.70; 3.10.2 p.71). A sound implementation of practice sessions on the use of action research in teacher training lessons augments its application as a teaching and learning strategy.



Graph 5. 4: Use of Action Research in peer and micro-teaching

Work overload taking up time for action research

Participants were asked to indicate whether the amount of work that they are assigned to do takes a lot of their time for action research activities. Table 5.7 represents the responses.

Table 5.7: Workload and time for Action Research

	Frequency	Percent
Strongly disagree	17	12.1
Disagree	33	23.6
Undecided	10	7.1
Agree	37	26.4
Strongly agree	43	30.7
Total	140	100.0

Table 5.7 shows that the amount of work which is given to student teachers during training affects their participation in action research. 43 (30.7%) participants agreed, 37 (26.4%) strongly agreed, giving a sum of 80 (57.1%) of those in agreement with the view. 33 (23.6%) disagreed, 17 (12.1%) strongly disagreed while 10 (7.1%) remained neutral.

Student teachers are inundated with work related to all the subjects that they do at college, in addition to the duties of scheming, planning, teaching and marking while on teaching practice. They also have to grapple with co-curricular activities involving sports, drama, music and public speaking, which largely take place during normal curriculum hours and demand commitment beyond the usual school day (See sub-section 3.22 p.104). These tasks collectively contribute to challenges of using action research in teacher education.

5.3.2 What is the Nature of Action Research Curriculum that is Provided to Student Teachers at Colleges of Primary Teacher Education?

This research question sought to establish the responses of participants on issues related to the teaching of action research inclusive of the amount of time allocation, planning, setting of objectives, access to resources and evaluation.

Planning for lectures on action research

Participants were requested to rate their responses regarding the essence of planning for lessons/lectures on action research. The responses are presented in Table 5.9.

Table 5.8: Need to Plan for Action Research

	Frequency	Percent
Strongly disagree	12	8.6
Disagree	5	3.6
Undecided	7	5.0
Agree	63	45.0
Strongly agree	53	37.9
Total	140	100.0

Table 5.8 reveals the primacy of planning in the conduct of action research which emerged from the participants. 63 (45%) agreed and 53 (37.9%) strongly agreed, adding up to a substantial figure of 116 (82.9%) participants in support of the view. 12 (8.6%) and 5 (3.6%) strongly disagreed and disagreed respectively. Only 7 (5%) remained undecided.

This underscores the critical place of planning to teach and use action research in teaching and learning. Literature states that planning constitutes one of the notable

phases that teachers pass through in implementing their instructional processes. This is a creative process without which course presentation is suspect and at worst a gamble. (See sub-section 3.8.1 p.62). The issues of problematising learning gaps, critical materials, time frames, democratic principles and evaluation techniques need to be taken cognisance of at the planning stage before lecturers and student teachers engage in the action research experience.

Adequacy of action research lessons on the college time table

On this survey item, participants were asked to indicate their responses on the adequacy of lessons on action research at the college under study. Their responses are shown in Table 5.9.

Table 5.9: Adequacy of Action Research Lessons

	Frequency	Percent
Strongly disagree	31	22.1
Disagree	32	22.9
Undecided	14	10.0
Agree	34	24.3
Strongly agree	28	20.0
Total	139	99.3
Missing	1	.7
Overall total	140	100.0

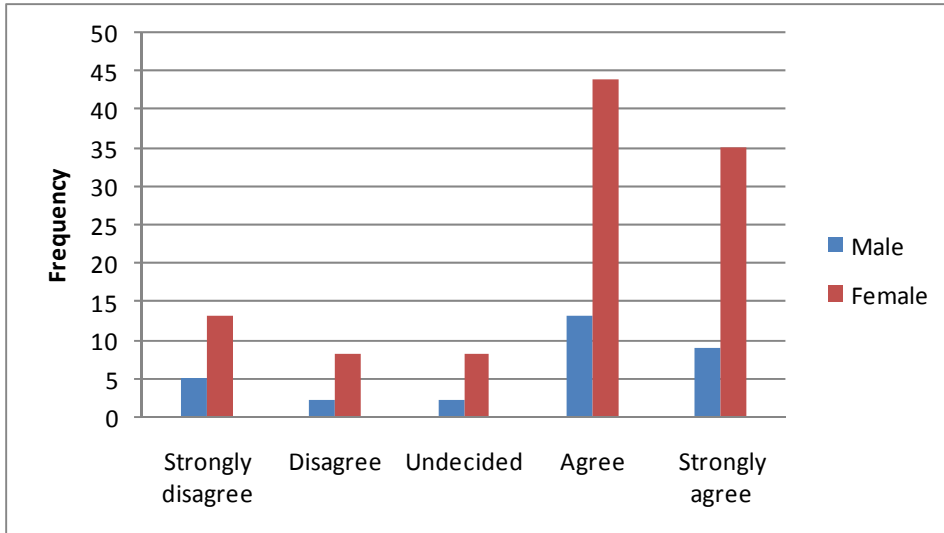
Table 5.9 presents the responses of participants on the adequacy of lessons for action research teaching at the college. 32 (22.9%) disagreed, 31 (22.1%) strongly disagreed and 14 (10%) were undecided. This totals 77 (55%) participants who objected to the view, including the neutrals. 1 (0.7%) participant did not indicate a response to the survey item. Inadequate lessons on action research creates problems in covering important subject content. Action research endeavour requires

that theory lessons be fully taught to enable student teachers to actively implement the learned content. The finding of this study contradicts the assertion which stresses that the timetable should make provision for theory lessons to come before those lessons on practicals. This justifies the need for adequate lessons to be provided on the main college time table for a fuller coverage of action research content to prepare student teachers to use it in teaching and learning (See sub-section 3.9 p.67).

Action research lessons begin with clearly stated objectives

Participants of the study revealed that lessons in action research commence with well stated objectives. 57 (40.7%) agreed with the statement, 44 (31.4%) strongly agreed, making up a total of 101 (72.1%) participants who confirm that objectives are stated prior to the delivery of lessons. On the other hand, 18 (12.9%) strongly disagreed, 10 (7.1%) disagreed and another 10 (7.1%) remained undecided. One participant did not indicate a position in regard to the survey item. A significant number of 38 (27.1%) rejected the idea that lessons in action research start with a presentation of objectives.

The representation in Graph 5.5 points to the essence of objectives in the delivery of action research lessons. These objectives are crucial as they direct the teaching process and spell out what the students will be able to do after the teaching experience. The cognitive, affective and psychomotor domains are the foundation blocks of lesson objectives which assist students to reach the desired learning outputs and outcomes (See sub-section 3.8 p.61). The 38 (27.1%) participants who indicated that lessons are not informed by articulated objectives help to explain challenges of using action research as a teaching and learning strategy in colleges of primary education in Zimbabwe.



Graph 5.5: Action Research Lessons and Learning Objectives

Awareness of the different types of action research

Participants were asked on whether they were aware of the various types of action research in light of the nature of teaching to which they are exposed. Table 5.10 presents their responses.

Table 5.10: Awareness of Types of Action Research

		Gender		Total
		Male	Female	
Strongly disagree		5	17	22
		3.60%	12.10%	15.70%
Disagree		3	14	17
		2.10%	10.00%	12.10%
Undecided		3	14	17
		2.10%	10.00%	12.10%
Agree		13	42	55
		9.30%	30.00%	39.30%
Strongly agree		7	22	29
		5.00%	15.70%	20.70%
Total		31	109	140
		22.10%	77.90%	100.00%

Table 5.10 shows the responses of participants on their awareness of the types of action research. 55 (39.3%) agreed, 29 (20.7%) strongly agreed, giving a substantial figure of 84 (60%) participants who were conscious of the diverse types of action research. 56 (39.9%) participants showed ignorance on the various types of action research. These were composed of 22 (15.7%) who strongly disagreed, 17 (12.1%) who disagreed and another 17 (12.1%) who were unsure. Literature confirms the existence of dimensions or categories of action research and contend that these depend on the amount of influence that practitioners have on decisions and methods to be used in the process (See sub-section 3.5 p.46). The 56 (39.9%) participants who were not aware of the existence of the different types of action research demonstrate the inadequate knowledge that student teachers have pertaining to the action research methodology, which consequently militates against its effective use as a teaching and learning strategy.

Feedback on evaluation of work provided on time

Feedback from an assessment of the work of student teachers is critical in establishing their level of achievement. 51 (36.2%) participants admitted that feedback based on the evaluation of their work is done on time. 23 (16.4%) strongly agreed. In total 74 (59.6%) participants confirmed the speedy receipt of feedback on the evaluation of their action research work by lecturers. 31 (22.1%) and 23 (16.4%) disagreed and strongly disagreed respectively. 65 (46.4%) participants were negative on this survey item with only one not recording a response. The responses are shown in Table 5.11.

Table 5.11: Time for Provision of Feedback

	Frequency	Percent
Strongly disagree	23	16.4
Disagree	31	22.1
Undecided	11	7.9
Agree	51	36.2
Strongly agree	23	16.4
Total	139	99.3
Missing	1	.7
Overall total	140	100.0

Table 5.11 shows that results from the assessment of the work of student teachers are released on time. These evaluations should be based on activities that can take the form of assignments, tests, reports, presentations and projects. The activities should encourage learning through experience, with feedback which must be motivating and constructive in ways that recognise individual needs of learners and their backgrounds (See sub-section 3.8.1 p.66). The 65 (46.4%) participants who did not agree that lecturers give quick feedback on the evaluation of their work

indicate that they are opportunities for improvement that are missed in their learning discourse which further affects the use of action research in teaching and learning.

Influence of physical structure and class organisation on action research

Participants revealed that the physical structure and class organisation influence the use of action research in teaching and learning. 58 (41.4%) agreed, 33 (23.6%) strongly agreed, constituting 61 (65%) of those in agreement. The 49 (35%) on the negative side included 16 (11.4) who strongly disagreed, 20 (14.3%) who disagreed and 13 (9.3%) who were unsure.

Table 5.12: Physical Structure and Class Organisation

	Frequency	Percent
Strongly disagree	16	11.4
Disagree	20	14.3
Undecided	13	9.3
Agree	58	41.4
Strongly agree	33	23.6
Total	140	100.0

Table 5.12 demonstrates the influence of the physical structure and class organisation on the use of action research in teaching and learning. Environmental factors, inclusive of buildings, contribute to shape human behaviour (See sub-section 2.5.2 p.29). The space size and ensuing temperature conditions determine the quality of teaching and learning that take place. The teaching space should allow student teachers to be formed into groups that allow individuals to interact with each other without interfering with other groups in the same building. Class organisation that permits active participation and demonstration by participants would be ideal for using action research as a teaching and learning strategy.

5.3.3 How Competent are Lecturers in Enabling Student Teachers to Teach using Action Research as a Teaching Strategy?

This research question sought the responses of participants about lecturer competency in enabling student teachers to also use action research in teaching and learning. The skills, knowledge and attitudes of lecturers as well as professional development and supervision processes were discussed.

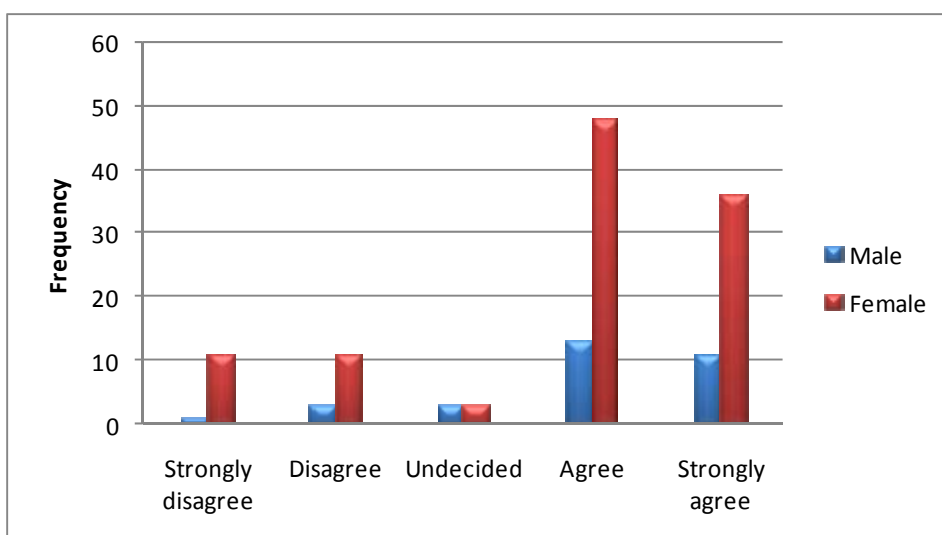
Requisite knowledge, skills and attitudes needed for action research

Action research requires special skills like any activities involved in teacher education. 102 (80%) participants generally accepted this view, with 58 (41.4%) in strong agreement and 54 (38.6%) agreeing. Those who rejected the view included 11 (7.9%) that strongly disagreed and 7 (5%) that disagreed. Only 10 (7.1%) were undecided. Literature supports this position, noting that teachers with positive attitudes to learning are critical as they directly affect the attitude of students. Such teachers contribute a lot to student teacher achievement especially when imbued with the subject knowledge and skills that are to the standard of learners (See subsection 3.14 p.85). In this vein, lecturers have to exhibit the right knowledge, skills and attitudes which the student teachers can model and subsequently apply to address some of the challenges of using action research as a teaching and learning strategy.

Cognitive skills for action research

Participants were asked to rate their responses on the essence of higher order mental skills which support reflection and creative thinking for mastering action research principles. Graph 5.6 shows that 61 (43.6%) participants agreed, 47 (33.6%) strongly agreed that higher order mental skills are required for the mastery of action research principles by practitioners. A sum of 108 (77.2%) generally agreed, composed of 48 (34.3%) females and 13 (9.3%) males who agreed plus 36 (25.7%) females and 11 (7.9%) males who strongly agreed. 12 (8.6%) participants, inclusive of 11 (7.9%) females and 1 (0.7%) male strongly disagreed while 14

participants, made up of 11 (7.9%) females and 3 (2.1%) males disagreed. Only 6 (4.3%) participants broken down into 3 (2.1%) males and 3 (2.1%) females were undecided. This finding is consistent with the view of action research as a reflective process to address issues and solve problems. Action research involves a set of practices that require people to act creatively in the face of pressing concerns in their communities (See sub-section 3.2 p.38). In this regard, lecturers and student teachers need to exhibit higher order mental skills that afford them the chance to be reflective and to think creatively as they participate in action research theory and practice.



Graph 5.6: Cognitive Skills for Action Research

Regular professional development for lecturers

Participants were asked to rate their responses on the need for professional development of staff members for the teaching and practice of action research. The responses are presented in Table 5.13.

Table 5.13: Professional Development for Lecturers

	Frequency	Percent
Strongly disagree	14	10.0
Disagree	6	4.3
Undecided	5	3.6
Agree	57	40.7
Strongly agree	57	40.7
Total	139	99.3
Missing	1	.7
Overall total	140	100

Table 5.13 shows that 57 (40.7%) agreed and another 57 (40.7) strongly agreed, resulting in a total of 114 (81.4%) participants who agreed. 14 (10%) strongly disagreed, 6 (4.3%) disagreed, leaving only 5 (3.6%) who were undecided. Professional development assists lecturers to develop and grow in their abilities to deliver on their mandate. Members of an organisation improve their skills and knowledge in order to strengthen their roles in assigned positions. This can be enacted in response to a new curriculum to offer emotional support to members or to enhance staff collaboration (See sub-section 3.19 p.97). The use of the action research model of staff development, including aspects of peer coaching, mentoring, reflection and dialogue may be helpful for lecturers as they would use the same skills in teaching, supervising and conducting action research.

Motivating lecturers and student teachers in action research

Motivation is arguably the most pertinent element in guiding performance and inspiring individuals to expend energy in executing assigned tasks. The responses of participants in this survey item are presented in Table 5.14.

Table 5.14: Importance of Motivation in Action Research

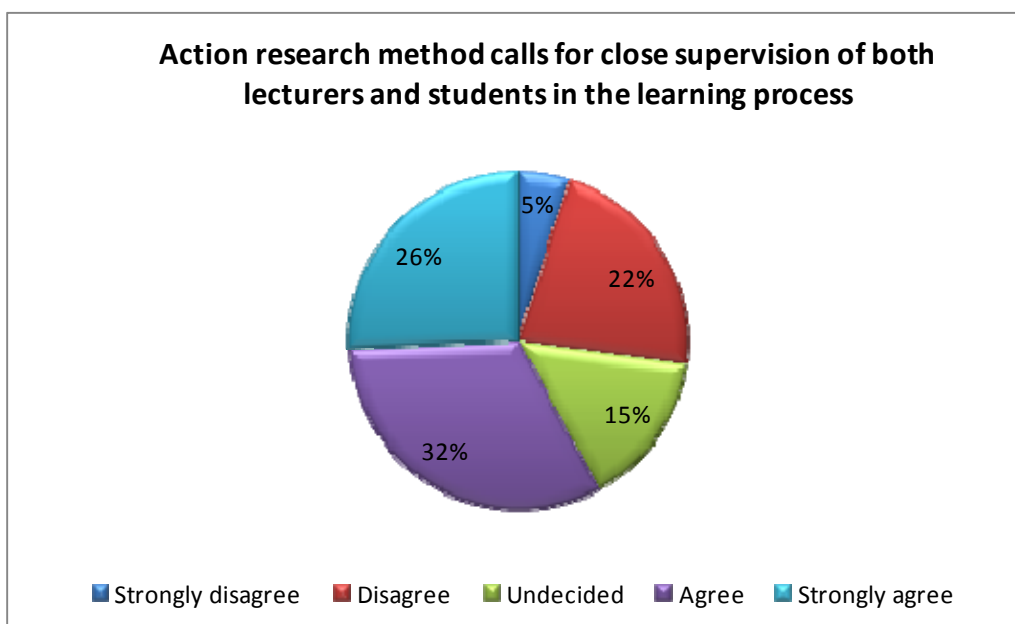
	Frequency	Percent
Strongly disagree	14	10.0
Disagree	11	7.9
Undecided	6	4.3
Agree	56	40.0
Strongly agree	53	37.9
Total	140	100.0

Table 5.14 reveals that 56 (40%) participants agreed that motivation is a pivotal aspect for lecturers and student teachers to engage in action research. 53 (37.9%) strongly agreed. Altogether, 109 (77.9%) participants were positive about the prominent place of motivation in action research. 14 (10%) strongly disagreed, 11 (7.9%) disagreed while 6 (4.3%) were undecided. Literature states that persons who lack the motivation to perform may find it difficult to engage in tasks even when they believe they have the skills, experience and resources to do so (See sub-section 2.6.4 p.36). This result is buttressed by the argument that people are motivated to perform a behaviour if it results in valued ends (See sub-section 2.4.4 p.26). Lecturers and student teachers are, therefore, expected to effectively utilise direct, vicarious and self-produced motivators in using action research as a teaching and learning strategy.

Supervision of lecturers and student teachers in action research

Supervision is an inherent component for successful action research. 45 (32.1%) participants agreed that action research demands close supervision of lecturers and student teachers. 36 (25.7%) strongly agreed, creating a cumulative figure of 81 (57.8%) participants in agreement with the idea. 31 (22.1%) disagreed, 7 (5%) strongly disagreed while 21 (15%) were undecided. Graph 5.7 shows the importance of supervision in action research. Literature describes supervision as the application

of knowledge and skills to leverage student learning (See sub-section 3.15 p.87). It entails providing opportunities to teachers to raise their capabilities while student teachers have to be involved in its process in order to encourage cooperative dialogue with their supervisors (Sub-section 3.15 p.88). In the theory and practice of action research, lecturers and student teachers deserve to be supervised to provide the needed skills, attitudes and motivation that help to achieve the goals of primary teacher education.



Graph 5.7: Supervision of Lecturers and Student Teachers in Action Research

5.3.4 What Challenges do Lecturers and Student Teachers Encounter in Employing Action Research as a Teaching and Learning Strategy?

This research question sought the responses of participants on some challenges that student teachers and lecturers encounter when using action research, and these covered topic formulation, time management, developing a community of practice, data analysis and the involvement of school-based mentors.

Converting problems into research topics or questions

Participants unanimously showed that they experience difficulties in converting teaching and learning problems into researchable topics and translating given questions as shown in Table 5.15.

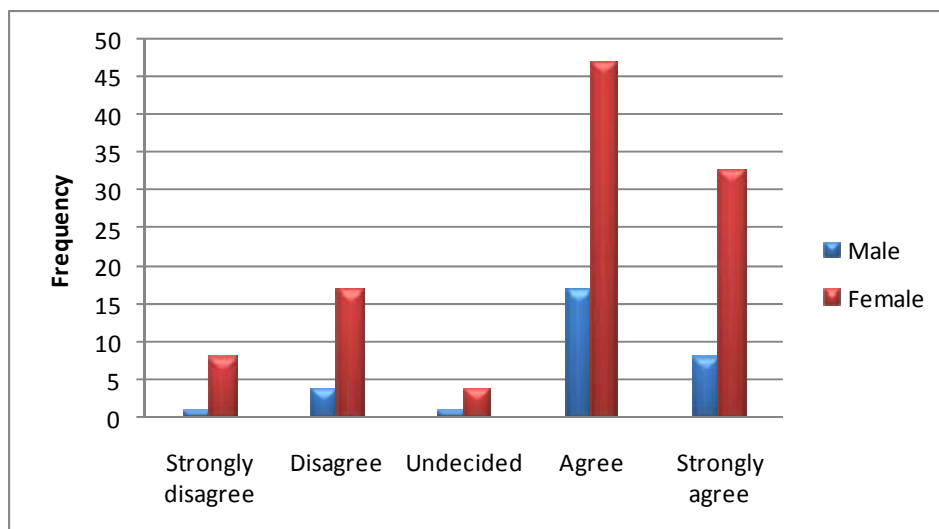
Table 5.15: Difficulty in Formulating Research Topics

	Frequency	Percent
Strongly disagree	21	15.0
Disagree	15	10.7
Undecided	12	8.6
Agree	56	40.0
Strongly agree	36	25.7
Total	140	100.0

Table 5.15 reveals the difficulty that participants encountered in formulating research topics and interpreting questions. 56 (40%) agreed and 36 (25.7) strongly agreed to the survey item. In total, 92 (65.7%) participants were in agreement. However, 21 (15%) strongly disagreed, 15 (10%) disagreed and 12 (8.6%) were unsure. These results are consistent with the observation that the formulation of research questions constitutes the most demanding area of research. Literature that deviates from the outcome of this study also exists, presenting topic formulation as an area of moderate difficulty (See sub-section 3.22 p.104). It is critical, therefore, for student teachers to be able to locate the problem, translate it into a topic that is manageable within the constraints of materials and resources. Inability to craft researchable topics, as attested to by the 36 (25%) participants who disagreed in this survey item contributes to challenges of using action research as a teaching and learning strategy in primary teacher education.

Planning and time management to complete action research tasks

Planning and ensuring that planned tasks are implemented as scheduled present difficulties especially where the job descriptions involve multiple roles. Participants of the study were unanimous in their agreement to this view as shown in Figure 5.8. Although gender variation is not the thrust of this study, Graph 5.9 shows that 47 (33.6%) females and 17 (12.1%) males agreed that time management is a challenge when conducting action research. 33 (23.6%) females and 8 (5.7%) males strongly agreed, resulting in 105 (49.3%) participants that generally agreed. 21 (15%) disagreed, consisting of 17 (12.1%) females and 4 (2.9%) males. 8 (5.7%) females and 1 (0.7%) male strongly disagreed while just 5 (3.6%) participants made up of 4 (2.9%) females and 1 (0.7%) male were undecided. This supports the view that doing action research while performing other duties at school presents difficulties in terms of time management about which teachers are concerned when it comes to going through all the stages of action research (See sub-section 3.22 p.104). Therefore, student teachers are expected to encounter problems in planning and managing time in using action research while doing other duties that are part of their training.



Graph 5.8: Planning and Time Management

Building a community of practice for action research

Participants were asked whether they experience difficulties in creating working relations with other members in the practice of action research. Their reviews are represented in Table 5.16.

Table 5.16: Difficulty in Establishing Working Relations

	Frequency	Percent
Strongly disagree	17	12.1
Disagree	22	15.7
Undecided	10	7.1
Agree	53	37.9
Strongly agree	36	25.7
Total	138	98.6
Missing	2	1.4
Overall total	140	100.0

Table 5.16 shows that 53 (37.9%) participants agreed that they have difficulties in establishing working relationships with their partners in action research. 36 (25.7%) strongly agreed. On the contrary, 22 (15.7%) disagreed, 17 (12.1%) strongly disagreed and 10 (7.1%) were undecided. In total, 89 (63.6%) generally agreed to the view. 2 (1.4%) participants did not indicate their responses. This confirms the hardships that student teachers experience in creating task-tied relations with other members in the work teams. Action research practice, however, demands the building of a community of trust among participants as it also encourages doing research with people rather than on people (See sub-section 3.22 p.105). It is critical to establish working relations as participants bring to the group various skills, knowledge and philosophical orientations (See sub-section 3.23 p.109). The fact that participants face difficulties in establishing conducive working relations for action

research adds to challenges of using action research as a teaching and learning strategy.

Access to relevant data sources for action research

Availability of relevant sources of information is critical in tackling issues of concern in research as reflected in the responses of participants in Table 5.17.

Table 5.17: Access to Relevant Data Sources

	Frequency	Percent
Strongly disagree	17	12.1
Disagree	24	17.1
Undecided	7	5.0
Agree	60	42.9
Strongly agree	32	22.9
Total	140	100.0

Table 5.17 shows that 60 (42.9%) participants agreed and 32 (22.9%) strongly agreed to experiencing problems in accessing relevant information that is needed for investigations. In total, 92 (65.8%) participants agreed. 41 (29.2) effectively rejected the assertion, including the 24 (17.1%) who strongly disagreed and 17 (12.1%) who disagreed. 7 (5%) participants were unsure. These evidences the inaccessibility of relevant materials and sources for action research practice. Available research, however, recommends that considerable resources should be devoted to reviewing literature with students (See sub-section 3.23 p.110). Teachers and student teachers have to derive maximum benefit from the adequate resources that may be provided to them and which assist to transform our thinking, teaching and learning (See sub-section 3.22 p.107). Inaccessibility to relevant sources of information denies student teachers special information, theories and guiding ideas which

consequently impedes the effective use of action research as a teaching and learning strategy.

Analysis and synthesis of data

The skill of analysis and synthesis of research literature is pertinent to understanding and use of scholarly ideas with which to build convincing arguments. This is shown in Table 5.18.

Table 5.18: Difficulty of Data Analysis and Synthesis

	Frequency	Percent
Strongly disagree	19	13.6
Disagree	27	19.3
Undecided	7	5.0
Agree	53	37.9
Strongly agree	34	24.3
Total	140	100.0

Table 5.18 reveals that 53 (37.9%) participants agreed and 34 (24.3%) strongly agreed that they experience hardships in analysing and synthesising information for use in action research processes. In total, 87 (62.2%) participants admitted to having problems in the area. 27 (19.3%) disagreed, 19 (13.6%) strongly agreed while a paltry 7 (5%) were undecided. Through critical reflection and interrogation, student teachers should be able to gather scholarly data and integrate ideas in order to institute positive changes in society (See sub-section 3.2 p.38). Synthesising of research data involves integrating ideas from related literature on a topic in order to account for contradictions and convergence. Student teachers devoid of abilities to synthesise and analyse information for use in resolving issues would logically experience challenges in the use of action research in teaching and learning.

Assistance from school-based mentors in action research

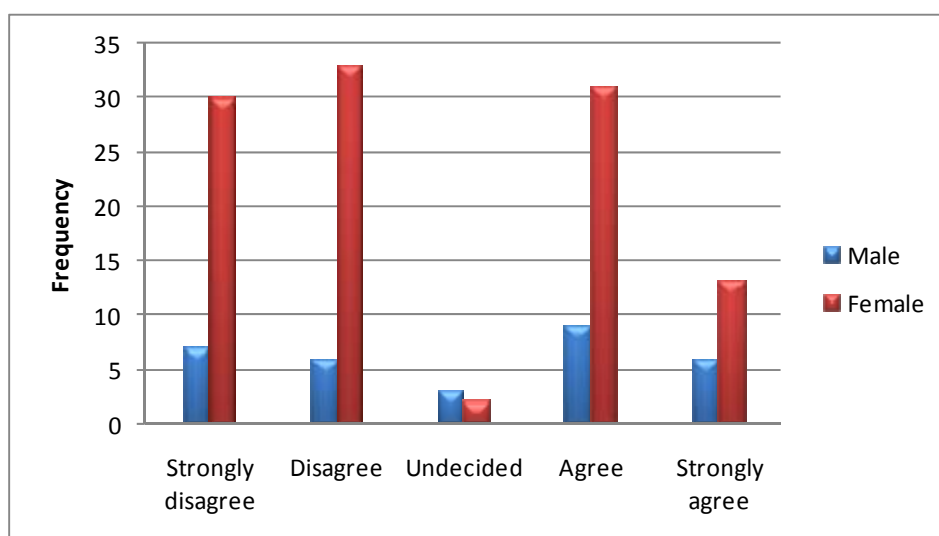
Most participants confirmed that student teachers receive help from schools during their teaching practice in doing action research. 44 (31.4%) strongly agreed and 40 (28.6%) agreed to this survey item, creating a cumulative figure of 84 (60%) participants that agreed. Those who rejected the claim included the 31 (22.1%) that strongly disagreed, 18 (12.9%) who disagreed and 7 (5%) who said they did not receive assistance from school-based mentors. Learning is effective in environments that provide models from which behaviour is emulated and tried out by observers. People learn and reproduce behaviour by observing others (See sub-section 2.3 p.22). The acquired skill will then be adapted and practiced in the confines of given situations (See sub-section 2.4.3 p.25). In this regard, mentors are seen as people who provide the needed knowledge, guidance and direction (See sub-section 3.21.2 p.99). Indication by most student teachers that they were assisted by mentors is a positive feature for action research, provided these mentors possessed the requisite skills in the field. The 56 (40%) that denied receiving help from mentors may suggest a gap in the system of teacher education which breeds challenges in the use of action research as a teaching and learning strategy.

Knowledge of school-based mentors in action research

The survey results indicate that school-based mentors are not knowledgeable in action research. 39 (27.9%) participants disagreed with the claim of school-based mentors having rich information on action research. 37 (26.4%) strongly disagreed, with only 5 (3.6%) taking a neutral position. Effectively, 81 (57.9%) participants did not agree that school-based mentors possessed the required knowledge in action research. On the contrary, 40 (28.6%) participants agreed and 19 (13.6%) strongly agreed to the contention, resulting in 59 (42.2%) participants that agreed as shown in Graph 5.9.

Action research is a process of implementing small changes in teaching through collaborative reflection and dialogue among concerned individuals (See sub-section 3.4 p.42). Student teachers are expected to institute interventions to their teaching,

monitor the process, evaluate and modify the obtained outcome, usually with the assistance of a mentor (See sub-section 3.21.2 p.100). Mentors entrusted with assisting student teachers in the action research experience should have good knowledge undoubted nurturing abilities. The weak knowledge that 57.9% of the participants ascribed to school-based mentors attests to the existence of partially abled action research guides in schools, which add to the list of challenges of using action research as a teaching and learning strategy.



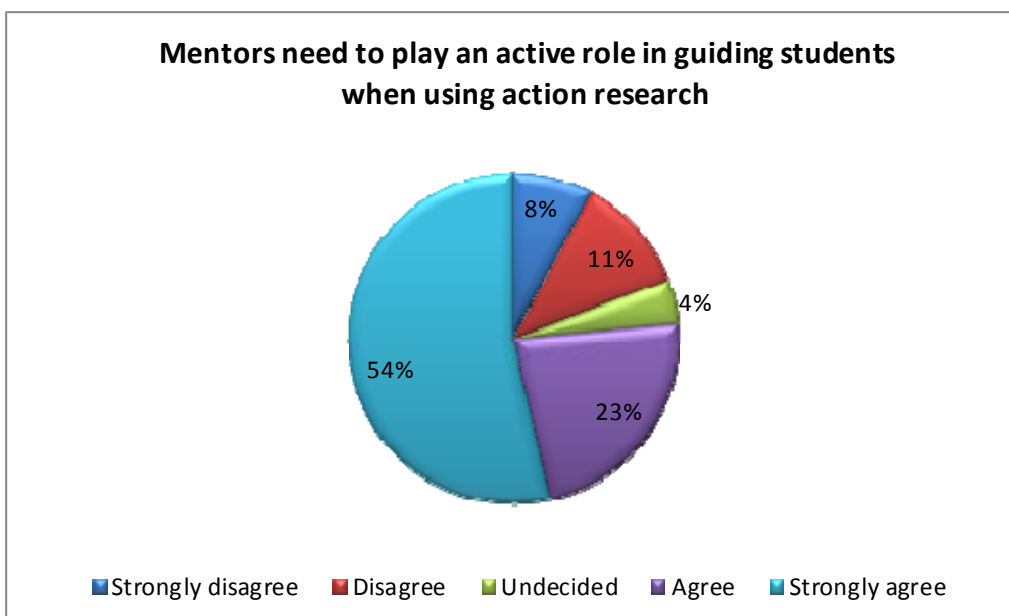
Graph 5.9: Knowledge of Action Research by School-based Mentors

Role of mentors in assisting student teachers in action research

Mentors in schools where student teachers do their teaching practice may be expected to take active roles in offering guidance in action research. 77 (53.6%) participants strongly agreed and 32 (22.9%) agreed that mentors need to be active in helping student teachers to use action research strategy of teaching. In total, 109 (76.5%) participants were in agreement. Those on the negative side included 16 (11.4%) who disagreed, 11 (7.9%) that strongly disagreed and 6 (4.3%) who were undecided.

Graph 5.10 reveals that an overwhelming number of participants indicated the need for mentors to assume an active role in the engagement of student teachers in action

research. This rests on the belief that, while at college, student teachers mainly grapple with theoretical underpinnings of action research as detected by the limited time. They need to get conducive opportunities for practice when out on teaching practice. It is during the five terms of teaching practice that they work closely with mentor teachers who are then expected to lead them through the rigors of teaching and learning, including action research. The 27 (19.3%) participants who openly opposed the active involvement of mentor teachers may indicate a disjunction in the roles and expectations of college lecturers and mentors in schools, forming part of the challenges of using action research in teaching and learning.



Graph 5.10: Role of Mentors in Action Research

5.4 QUALITATIVE DATA ANALYSIS

This section presents an analysis of the qualitative part of the investigation. The first part focused on the biographical data while the second was on the thematic analysis of the gathered information.

5.4.1 Biographical Data of Participants

Nine HODs and the college principal participated in the interviews (See Transcriptions in Appendix L p.255). HODs were coded from HOD1 to HOD9 in accordance with the position each one of them appeared in the interview list. The principal was coded as POC.

Table 5.19 Biographical data of heads of departments

Gender	Category	Total
	Males	4
	Females	5
Average age in years		49
Level of education	Masters Degree	8
	Bachelor Degree	1
Average years in post		8

Table 5.19 shows that nine lecturers participated in the interview on the challenges of using action research as a teaching and learning strategy. The group was composed of 5 females and 4 males, with an average age of 49. Of these, 8 were holders of Masters degrees including those in Special Needs Education, Languages, Peace, Leadership and Conflict Resolution, Counselling and Education. Only one lecturer had a Bachelor of Education degree. The average years of lecturers in the lecturership post was 8 and the range was between 3 and 10 years.

5.4.2 Qualitative Analysis of Contextual Questions

This part presents and discusses data that emerged from the interviews with lecturers and the principal of the institution. The analysis was guided by the questions that informed the conversations, the outcomes from the interactions, the objective of the study and evidence from the review of the related literature. The form

of treatment of the gathered data was shaped by the themes and patterns that emerged from the collected data sets. The following themes emerged:

Theme 1: The teaching of action research at the institution in order to make it understandable to student teachers.

Theme 2: Perceptions of student teachers on the use of action research as a teaching and learning strategy.

Theme 3: Skills, attitudes and knowledge lecturers should possess to assist student teachers in action research.

Theme 4: Challenges of content and implementation of action research.

Theme 5: Ways in which the use of action research can be improved in teaching and learning.

5.4.3 Theme 1: The Teaching of Action Research at the Institution to make it Understood by Student Teachers

Theme 1 sought to establish strategies that were used to assist student teachers to understand action research. The thrust was on classroom instruction, prepared manuals or modules and the other possible forms of support accessible to student teachers to encourage effective learning and use of action research.

Instructional framework for action research at the institution

After students are enrolled at the college, they are taught action research theory during the first two terms of the residential course. Literature states that research methods courses should be taught to teachers at the start of their training (See sub-section 3.12 p.76). During that period, the institution holds lectures on research skills and these skills are taught by selected lecturers who teach in the Professional Studies Syllabus C subject area which is a component of the Professional Studies

Department. The subject is allotted a single slot per week where student teachers are introduced to the concept of action research, the research designs, types of action research and methods of data collection. Students are also taught about the characteristics of action research, the rationale for its inclusion in education, with a bias to teacher education. Three participants said that:

Let me say, action research is taught under a department known as Professional Studies (PS). There is a subject area known as Professional Studies Syllabus C that basically looks at how topics are formed, how problems are identified and how reserach is conducted throughout (HOD4).

We have a group of lecturers who give basic theoretical framework to the students during their residential phase so that when these students are allocated to lecturers they can maneuver form there. They are given in-class instructions. We only have one period a week (HOD2).

Right, in our institution, action research is the baby of Professional Studies Syllabus C (PSC). Those are the people who initiate students into action research, then they allocate them to supervisors and us as supervisors develop them on how to tune their topics, how to make research questions and just going through the research project (HOD1).

The single lesson that is accorded action research teaching indicates that the subject area is not given adequate opportunity to fully expose student teachers to the complexities that are embodied in its curriculum. In order to enhance the coverage of the syllabus, the students need to be given opportunities to do research proposals in groups so that they get a feel of possible research problems they are likely to encounter in their field of practice. Action research is typically a process where groups of individuals or teams work together to solve problematic situations (See sub-section 3.2 p.37). The problems for student practice must be hypothetical situations for mastering the skills of action research prior to the research proper which they engage in when they are in schools. The giving of assignments on specific aspects of action research also enables student teachers to obtain feedback from lecturers on how they are doing and to identify learning areas requiring attention. One HOD who also lectured in action research commented that:

At some time, we gave an assignment on research proposal where we asked some supervisors to mark. It was a once off situation as a result of many constraints. Our research assignments are not presented as part of course work as there is a feeling that, may be, we are using a lot of students' time when we are giving that assignment before proposals. It was then resolved that each individual lecturer will take charge of his or her own students' proposals (HOD5)

This statement makes it clear that the giving of practice work to student teachers was a short-lived strategy as the endeavour was quickly discontinued due to time constraints and the heavy workload of student teachers. This naturally hampers the teaching and learning of action research and its eventual use in improving knowledge creation (See sub-section 3.12 p.77). As a deliberate ploy to maintain the development of action research skills, student teachers are allocated to different lecturers just prior to their deployment to teaching practice. These would then continue to coach the student teachers in various skills during teaching practice. The PSC has a mandate to give student teachers the action research proposal guidelines documents before deployment which clarify expectations in the sections of the problem, research methodology, evaluation, conclusions and recommendations.

Background and student characteristics in action research

This approach requires patience from lecturers who conduct action research with student teachers just as such patience is demanded from student teachers who participate in the action research activities. This is considered a slow method of teaching which places a lot of consideration in the potentials and abilities of students. The transition from one stage to the next and the amount of time and energy that is spent at one given stage rests with the nature of both the teaching content and the student teachers in the class. The composition of groups and the demands of the questions depend on the envisioned capabilities and characteristics of students and how these can be harnessed for effective teaching and learning. Two participants said that:

If they (student teachers) have been taught by teachers who were researching and have seen the benefit of research then they will be

having a different outlook. But they haven't seen this being applied. Teachers out there don't research and thus their background. To them knowledge is already there, and you are not going to add anything to what is there. And it is there in books. Everything is already done so you are not actually creating knowledge (HOD6).

Eh.. it is very important to know the background of the student teacher when you are using action research because it actually enables the educator to move from what the student already knows to what he or she does not know. Since action research is participatory and collaborative in nature, you need to actually stimulate that among the student teachers so that they learn to work together, to find a common solution to a problem that is affecting them (HOD7).

The background factor is worthwhile in action research particularly as it relates to the importance of experiences of student teachers in the field of research and research knowledge (See sub-section 3.5.2 p.48). Student teachers who have been taught by researching teachers and have seen the benefits of research are expected to exhibit a positive outlook in conducting action research compared to those that have been deprived of such an exposure. Most teachers in schools do not research and that is the background their students bring to college. An appreciation that research strives to generate knowledge, to improve practice and to foster informed understanding of issues would stimulate their intrinsic motivation and interest in research (See sub-section 3.5.2 p.43). The engagement of student teachers in action research activities is also shaped by the fact that most of them would not have been exposed to prior teaching, especially as relief teachers. The student teachers are faced with the double burden of learning what teaching entails, in addition to how it can be delivered through the use of the action research strategy. One participant observed that:

It's unfortunate that when we teach, most of them have never taught. They have never been exposed to challenges in the teaching situation. It would really be beneficial if they would understand the meaning and rationale of action research after they have had a feel of teaching practice (HOD5).

This observation is in harmony with research which established that human beings are, in essence, the product of the sum of the environmental situations in which they grew up (See sub-section 2.5.2 p.29). How people perceive and respond to given stimuli depend on their previous experiences with regard to similar occurrences in their life (See sub-section 2.3 p.17). A certain topic or activity may cause a person to react either positively or negatively as detected by past experiences (See subsection 2.4.3 p.25). The attitude that people display as they engage in given tasks can be traced back to their socialisation and it is through an understanding of those influences that efforts to stimulate mastery of a teaching and learning concept, and action research in particular can be achieved. The views expressed below emerged from one of the participants:

We are products of the situations that we grew in or under. At times my background might influence the way I perceive things. Certainly, our background has a bearing on what we are researching about because human beings are made of attitudes, attitudes are founded out of situations and when you interrogate, investigate or research on a certain situation you certainly have sound attachment to it, either negatively or positively depending on our background. Some are extroverts and are outgoing, like to engage, get involved, get hooked up in social groups. Some want to live by themselves and are not out going, which is not good for action research (HOD4).

Taking cognisance of the personal and learning characteristics of student teachers is crucial so that even those who do not like to be engaged in exchanging ideas are either appropriately placed into groups or carefully considered in their individuality in the teaching and learning discourses (See sub-section 3.14 p.85). Physical characteristics like age, sex and body size of people influence the selection of content and teaching styles (See sub-section 2.5.2 p.29). Individuals receive, process information and behave differently as detected by their unique composition (See sub-section 2.5.1 p.27). At times, students who are quiet but present during discussions may gain massive knowledge from such encounters.

Contrary to literature, some participants indicated that the background of student teachers may not be of great significance in their learning as long as they are properly taught at college. People always learn new things and it is up to the

Department of Professional Studies to ensure that appropriately adapted methods are used to improve student learning. Some participants posited that the consideration of the background of student teachers may not be of utmost priority especially after all students would have been exposed to the same selection criteria at enrolment. A keen focus on these criteria may need other student teachers to be exempted from the practice of action research owing to their poor communication skills, weak research skills and organisational abilities that usually go with systematic investigations (HOD2).

Support for student teachers to write assignments and conduct projects

The participants revealed that the most basic form of assistance that student teachers access is in the form of knowledge and skills that are imparted to them through lectures. Teachers need to possess adequate instructional and curriculum knowledge to facilitate student achievement (See sub-section 3.14 p.84). The expectation is that lectures adequately appraise student teachers on the fundamentals of doing research in general, and action research in particular. The rubrics of action research inclusive of its conception, models, characteristics, stages and methods of reporting findings are issues to be covered during theory lessons. Techniques of literature search from various resources which include textbooks, journals and the internet should further be provided to student teachers. This is supported by the contention that teachers that teach at the expected academic standards enhance student performance (See sub-section 3.14 p.85). It is in keeping with the demands of the research process that student teachers should be groomed to explore and discover information independently for use in addressing problematic situations in their spheres of practice. Two participants echoed that:

They are also referred to journals, they can get information from the internet on action research as well as text books in the library, so thus the support they are given while on campus and out of campus (HOD7).

We also try to support them in terms of, may be, indicating the resource materials that they should read so that they are quite aware of what action research is all about, referring them to libraries where they can get

books, journals and other things to read for enrichment purposes (HOD3).

The findings also indicate that before student teachers are deployed to their schools of teaching practice, they are provided with the teaching practice kit which contains the proposal guide and the action research report guide. The action research proposal guide is intended to assist student teachers in the crafting of a research plan while the report writing guide provides the details for compiling the actual research report after carrying out an investigation. This shows the interaction that should occur between student teachers and the subject matter in the prepared documents. This should also be written in ways that estimate face-to-face interaction between the writer and the readers (See sub-section 3.22 p.107). The guides were reported to be fairly detailed and structured to assist student teachers to track the action research process. One participant revealed that:

Normally, before students leave to embark on their TP they are given research proposal guides and research report guides which would help them to write research proposals and then after they have collected data, they will use the research report guides to write the actual research reports. These documents are revised from time to time because they might have gaps, so they are revised after every intake, new inputs are put into those documents to perfect them (HOD7).

It emerged, however, that the college, through the Department of Professional Studies does not have a policy where the students that complete the course, but having produced excellent action research compilations leave them behind as exemplars for reference by both student teachers and lecturers who may want assistance on certain matters in the field. This contradicts literature that amplifies the role of symbolic models, as represented in books and other similar learning media in the social learning process (See sub-section 2.3 p.23). It may, therefore, be a welcome standard procedure that such samples of projects be displayed in the library for future reference. One participant said:

Right now, as we speak, we dont have a sample of the projects displayed in the library which the students can make use of, where one

has not collected, thus when you can help the student have a look at how others have done it (HOD8).

In the process of carrying out the research, student teachers visit the college, normally monthly to consult with their supervisors so that they are assisted to move through the stages of action research. It has to be explained to them how things are to be done and indications given where they would have gone wrong. In fact, the consultations that supervisors have with student teachers provide opportunities for individual tutoring and mentorship (See sub-section 3.21 p.98). The expected student teacher behaviour and attitude need to be clarified at these sessions to ensure the right mindset for doing action research is developed and maintained (See sub-section 3.18 p.97). In essence, a positive supervisor and supervisee working relationship is the key for successful progress in research. Two participants had this to say:

Well, I think the support that we are giving is that of individual tutorial and that of mentorship throughout their stages and then much will depend on how much they have contact with us, because some disappear and appear much later and they are not in a position to be assisted (HOD6)

We don't visit them. We normally ask them to come (for consultation) when they think they have a problem so that we can clarify the problem. They normally come once a month, and preferably when they are supposed to be submitting their assignments, and may be, when they have money to come. When we go out on TP, we don't go out to see our students specifically on their projects, up until, may be, you meet your student there and then you have time before the car comes so that you talk to them about action research (HOD1).

The observations above show that lecturers do not visit student teachers in their schools of teaching practice to understand the research problems in their contexts and to give relevant assistance as informed by their observations. The official consultation rate of once a month may not be sufficient for student teachers, who in most cases, have no previous experience of doing research prior to enrolment at the college. The issue of allowing student teachers to consult with any college lecturer on research work may work well for collaboration.

The clinical form of supervision came out as the ideal strategy to assist student teachers as they engage in action research practice. This is the type that attracts closer collaboration between teachers and their supervisors with the encounters enabling support and confidence to be given to supervisees. Mutual co-operation from planning, implementation and evaluation also entails in the use of clinical supervision (See sub-section 3.15.1 p.89). In this instance, lecturers and student teachers work together even to decide on the eventual mode of reporting the findings. When asked about the kind of supervision they engage in, the participants were not forthright. Some said:

Where we sit together and say, this is not good and may be try and go back. They will be constantly changing and analysing. They will be going back and forth. So it is not very rigid, it's more of a clinical thing (HOD5)

We are involved certainly from the word go because the project is a two men thing, it is the researcher and the supervisor's product at the end of the day. We are involved right through to the end of the project. That is the support we give (HOD4)

5.4.4 Theme 2: Perceptions of Student Teachers on the use of Action Research as a Teaching and Learning Strategy

Action research was portrayed as a method that caters for individual learning differences and affords learners an opportunity to master a skill before proceeding to master another one. That orientation urges learners to be patient as they go through the rubrics of action research. Some student teachers acknowledged that action research enabled them to improve their teaching in schools. This is consistent with scholarly views on the role of action research in improving practice and instruction (See sub-section 1.1 p.1; 3.12.1 p77). This is premised on the understanding that problems of teaching and learning generally intersect to an extent that resolving one of them provides automatic means to unravel others. Areas that can be of interest include composition writing, punctuation, numeracy and the use of local materials in art work (See sub-section 1.1 p.1). Participants also reported that student teachers have often spoken positively about action research as compared to conventional research, where most of them are found to be plagiarising without acknowledging

sources, owing to their poor communication skills and limited sources of information such as the internet.

I have heard, my students are very satisfied (with action research) compared to the conventional research because most of them are very poor in literature review. You find that they are plagiarising, they are not acknowledging their resources (HOD5).

In the beginning they find it difficult to embark on action research, but as they go on during teaching practice some of them find it interesting, that it assists them to solve some of the problems they find in the classroom. So the benefit is that it acts as a problem solver in the teaching and learning process (HOD3).

Action research has taught the student teachers to consider the views of other people who are more knowledgeable in the concepts. This is an aspect of team teaching, where by the student teacher would seek the expertise of another teacher or a colleague in actually teaching a seemingly difficult concept (See sub-section 3.14 p.86). The gain is realised through engagement in collaborative work that emerge from an understanding that no individual teacher can be equally knowledgeable in all instructional areas. The value of team work in organisational and personal achievement can hardly be replaced by any measure of individual excellence. One participant pointed out that:

They actually benefit through collaboration. Because they are able to collaborate among themselves as students, collaborate with pupils and also collaborate with their mentors to find a solution to problems which will be affecting either themselves or the pupils whom they teach (HOD7).

The participants revealed that action research exerts a degree of difficulty to student teachers. This is especially apparent when these student teachers are actually doing research in their schools of teaching practice. The source of the problem may hinge on their weak grasp of concepts and possible absence from class for lessons on action research during the initial residential course. It was, however, observed that other factors also converge to obstruct knowledge mastery in the area. Further discussions showed that student teachers find action research to be very theoretical

than practical, a view contradicting literature which portrays action research as a process of active creative inquiry, linking research with practice (See sub-section 1.1 p.2). Lessons on action research at the college were reported to be missing the practice element that would enable greater concept understanding and joyful engagement. The student teachers tend to treat the conduct of action research as just an act of compliance to satisfy the requirements of the course and not as a critical strategy to improve teaching and learning. Participants stated that:

Normally they find it difficult, they think it is much theoretical. What they are saying is that if we could first of all, after giving them some theory, allow them to work in groups to do some mock researches under the guidance of lecturers. They are looking at this research as a requirement by the college, that you have to do research after that you are going to submit a complete research.(HOD6).

They dont like it. They see it as torture. They say it is too involving in terms of effort at times and they don't even see the purpose of having it. Yah, I haven't heard any one echo such sentiments (that it improves their professional skills, participation and discussion skills) (HOD2).

5.4.5 Theme 3: Skills, Knowledge and Attitudes Lecturers should Possess to Assist Student Teachers in Action Research

Participants were generally in agreement that skills, attitudes and knowledge of lecturers are pivotal in the teaching and learning using the action research strategy. This section then interrogated issues on skills, attitudes and knowledge about the use of action research.

5.4.5.1 Skills of lecturers

The lecturers need to possess skills in action research so that they teach in conjunction with doing action research with their student teachers. They should be competent enough and lead by example. These research skills ideally should encompass abilities in planning, teaching and evaluation, guidance and student support, supervision and the use of educational materials (See sub-section 3.8 p.61;3.8.3 p.64). Research is a taxing endeavour that normally creates frustration to student teachers. It is the ability of supervisors to ensure that student teachers are

able to negotiate through the hectic processes of research. The counselling skills of tutors might need to be called upon at certain moments while good planning and organisational acumen are essential elements for realising convincing outcomes (See sub-section 3.8.1 p.62). Lecturers must be pro-active in their assessment of the readiness of student teachers to do action research as well as the setting up of suitable environment for successful practice. This begins with a careful analysis of the circumstances of student teachers in order to institute a fitting assessment of their work. A participant indicated that:

Lecturers as educators of student teachers need to be pro-active in the way they supervise action research. They need to interrogate the student teachers to find their background, their problems and their concerns so that they can assist them properly. They also need to have analytical skills to identify problems and find solutions (HOD7).

Some participants were doubtful whether lecturers really had the skills on action research practice. That they had not even acted to find solutions to the normally incoherent ideas in the assignments of students raised the concern about their research skills. One participant observed that:

And I don't really know whether we have some skills on this action research thing. We need that skill of developing the whole write up to reporting. And even at times, you find that some of us don't have those skills because, may be, by the time we went to college ourselves, we just did the same project haphazardly like the same students (HOD1)

5.4.5.2 Attitude of lecturers

The conduct of action research, like any practical engagement, develops attitudes among practitioners. A positive attitude assists in the successful performance of plans while a negative attitude demotivates and retards progress. Similarly, the attitude of teachers exerts a significant influence towards the attitude of students to learn (See sub-section 3.14 p.84). Participants indicated that action research creates an extra burden on lecturers who are always laden with tasks and responsibilities. The student teachers appear to be devoid of action research understanding when they approach lecturers for consultations, at times showing lack of grasp even of the difference between action research and traditional research. This situation forces

lecturers to start all over again to re-teach the concept, a duty that participants were convinced should rest with members in the Professional Studies Syllabus C.

When these children come here they are a bit raw. You are teaching the child all over, instead of just having contact with them when they know. They should be coming here with some bit of light, but some will tell you, I dont even know the difference between action research and traditional research (HOD1).

The other issues that participants raised pertained to the lack of an appropriate time that was tabled for action research supervision and a diminished interest in reading by lecturers. The fact that student teachers would appear for consultation at any time of the day, even visiting lecturers at their residences after hours, led some lecturers to detest supervising student teachers in action research work. Lecturers also fail to take advantage to read from the stocks of action research books availed in the college library to be able to assist student teachers in the field. Participants said that:

I don't have a time slot to say, now intake 43 is my student for supervision, they are going for research. They will knock over lunch, over break, over any time and some of them will even say, madam can I come to your house so that you read my research. That becomes a bit hectic (HOD1).

It's a question of one not wanting to read because the books are there, especially the reserach books are there. And even with the advent of this technology, if there is something you dont understand on action research, you find its written. There is quite a lot of information on action research, so it's a question of attitude, may be laziness (HOD8).

5.4.5.3 Knowledge of lecturers

The participants generally agreed that lecturers exhibited skills in research. The majority, however, have only been exposed to orthodox research or none at all in the programmes that they pursued in institutions of their further study. Action research only done superficially during training but is suddenly emphasised for the teaching and supervision of student teachers at the college. This knowledge of the subject and pedagogy are crucial for effective teaching (See sub-section 3.14 p.85).

Participants acknowledged that lecturers were provided with only one workshop on action research around 2011. This meant that many of the lecturers at the station who are expected to conduct action research with students had not received coaching as they joined the college after that once off workshop. The following responses emerged from participants:

Lecturers are generally knowledgeable because the Department of Teacher Education (DTE) came and mounted a workshop for us as staff on how to teach action research (HOD2).

Most lecturers are not engaged in research and, therefore, have problems in understanding action research. This is compounded by the fact that they did orthodox research while at college themselves or some never did any research (POC).

A concern emerged from the participants that while a demonstrated grasp of action research knowledge sustained the conduct of action research at the institution, there was still room for the enhancement of the knowledge of lecturers. Action research is relatively still new in teacher education and this calls for continuous development in the related competencies for lecturers to really do a sound job in the area. This is based on the belief that teachers with subject knowledge produce better student achievement than those with less subject understanding (See sub-section 3.14 p.85). A participant stated that:

We have done our projects in the past but you will find that we are still learning especially with this action research. Lecturers themselves need to be educated about this thing so that they are really hands-on (HOD1).

I have seen there are some lecturers who seem not to be knowledgeable in action research. You find a person has a degree but has a problem interpreting those issues, I just fail to understand (HOD8).

Inadequate action research knowledge on the part of lecturers may cause them to have a negative attitude towards both the student teacher and his or her work. This can stem from supervising a student teacher who fails to apply the right mind and attitude expected in action research. Instances where lecturers are made to teach and supervise in an unfamiliar subject area may also facilitate the development of

dysfunctional attitudes. Participants, however, revealed that they are normally allocated student teachers who pursue research in the areas of their specialty, with the exception of very few cases.

5.4.6 Theme 4: Challenges of using Action Research as a Teaching Strategy

This section presents issues that confront lecturers, student teachers, heads of schools and school-based mentors in using action research in teaching and learning. The nature of teaching, attitudes, level of knowledge and skills, supervision and resources made up points for discussion.

5.4.6.1 Challenges for lecturers

Participants viewed action research as a very good approach to teaching and learning (HOD3). It, however, emerged that the practical niche of action research was not being utilised at the college which is the main context for this kind of research. It would be better if college staff could be more practical about the conduct of action research. Lecturers are expected to carry out action research, either as individuals or in collaboration with their peers and student teachers to instill a research culture at the college (See sub-section 3.21 p.98). Participants indicated that they are usually pressed for time to fully employ action research principles to address teaching and learning problems in their classes. This was as a result of the single lesson that is allocated for action research on the college master timetable per week and the congested activities that take most of student time. The action research teaching is, by and large, a theory issue that leads to student teachers being sent out to experience it first time during teaching practice. Some lecturers, especially those with a short period of tenure conceded that because of their hazy understanding of action research, they may even be using action research in their classes without realising it. Two participants said that:

Yes, well, the challenges we are having are that we are not using it here where we are researching, where we are getting some results. We talk about action research, something that is out there which they (student teachers) should do when they go out (on TP) whereas here we have nothing to do with action research. We are into the theory part of it

without results that we can also use to plough back into our own processes (HOD6).

During the teaching and learning process we may identify problems that are there in the classrooms, but due to (lack of) time to draw up proper action plans to try and solve that problem, it will remain unsolved. I think, basically in our practice, we may be using action research without knowing, that is the other challenge that I am seeing (HOD3).

The college introduced a system where student teachers spend the first two weeks of the second term of training doing community teaching in their home schools. This is a period where they are supposed to have a feel of the teaching and learning processes since the majority of them come for training without any teaching experience, either as temporary or relief teachers. During that time, they are supposed to acclimatise themselves to the teaching experience and discern learning problems that can be addressed through the action research process. Participants revealed that this system is still not adequate to assist student teachers with the knowledge of how to identify in-class problems that they can solve using action research. One participant remarked that:

Now they go out on community teaching for two weeks. The first week they are just seating there to know the situation, looking at records, seeing how the mentor is teaching and trying to teach themselves. They will have hardly identified a problem then they come back to college (HOD5).

Participants indicated that lack of workshops aimed at staff developing lecturers contributed to challenges of using action research as a teaching and learning strategy. This finding contradicts research which reveals that teachers need to be constantly appraised on action research so that they grasp the concept and apply the skills involved to raise the teaching and learning bar (See sub-section 3.21.3 p.100). Workshops enable lecturers to learn together, operate at the same level of understanding as well as collaborate to reduce contradictions when they teach and supervise student teachers in class activities and research projects (See sub-section 3.19 p.97). Holding regular workshops also assists in developing and maintaining a positive group attitude in lecturers so that they are able to invest more time and effort

in conducting action research (See sub-section 3.21 p.98). On workshops, two participants reported that:

I think if we are to come up with sound action research, we need as lecturers to be staff developed so that we get those skills, then the attitude will also change because in most cases a person will have an attitude because he is not knowledgeable (HOD8).

I can't remember any one of its kind, even in 2015. May be, in the past 2013 or 2012, but from there it has not been regular. People just believe that everyone knows, but you will find that there are even some lecturers who are knew here who have not been introduced to that, but they are given 13 to 14 students to manage and they have never been into that workshop (HOD1).

The above excerpts show that workshops on action research are irregular and that some lecturers have not had the opportunity of attending such workshops in order to appropriately assist student teachers in its practice. Literature states that teachers rarely meet to consult with one another but do so at staff meetings and in-service professional growth programmes (See sub-section 3.21.5 p.103). The load of tutees allocated to each lecturer is also large and exacerbates the challenges involved in the teaching and learning using action research. The provision of a limited context where lecturers can engage each other on action research encourage a situation where divergent views in the field linger on. One participant said:

But then also you will notice that the problem with lecturers is that they have varied opinions about what research is about (HOD6)

The participants revealed that lecturers are not motivated to do research. Some of them were said to be afraid to engage in research with other colleagues, a situation which also indicated their lack of confidence. This lack of confidence is a draw back as it deprives the individual of the zeal and energy for committed involvement. The additional system where lecturers are made to supervise student teachers even in fields they are not comfortable in may further stifle participation. This is informed by the conviction that success in research is usually determined by researching in an

area of interest, so that the challenges of the process become overwhelming to the researcher. Two participants stated that:

Now they are not really motivated to research, actually they are scared, they do not really believe they can research (HOD6).

The other challenge is that at times the lecturers are made to supervise topics they have no interest in. They don't have the enthusiasm to carry out a research. The lack of love for research is the undoing of most supervisors and supervisees (HOD4).

However, being able to create new knowledge serves as adequate motivation for some lecturers to engage in research. There is value in being at the centre in the genesis of knowledge that will be disseminated the world over through publications in journals and various publishing houses. One participant said:

Yes, there will be a motivation, that enthusiasm to create new knowledge and boast of possessing that knowledge. It is me exactly that brought this up (HOD4)

5.4.6.2 Challenges for student teachers

This section focuses on the issues that curtail effective use of action research as a teaching and learning strategy in primary teacher education. These encompass the methodological, content and implementation aspects that combine to shape the level at which action research is mastered and applied in real life educational environments.

5.4.6.2.1 Theoretical and content aspects of action research

The study participants revealed that student teachers have difficulties in identifying problems that hinder their effective teaching and learning. This concerns the activities they engage in while at college and those that they encounter when on teaching practice in schools. However, the ability to reflect in teaching and on teaching results in constant review of the teaching and learning discourse, which is a quality for spotting learning gaps (See sub-section 3.11.1 p.73). The picture that emerges is that student teachers are not reflective in their practice. This contributes

negatively to their capacity to spot anomalous classroom or school practices. One participant said that:

I think the most difficult thing for students here is problem identification. Students are failing to identify the problems. (When) they are teaching in the classroom they fail to realise the gap that will be existing so that they try to solve the problem using action research (HOD3).

Inability of student teachers to identify precise problems in their teaching and learning further compounds the challenge of articulating those problems. This correlates with literature which states that formulating research topics presents the most demanding aspect of action research (See sub-section 3.22 p.104). Inappropriately stated topics tend to be difficult to work on, owing either to a lack of context specificity, loose boundary or unclear variables. Well formulated questions can allow investigations to be conducted within specific time frames. In-class topics can attract investigations of various duration depending on the demand of the topic. Participants pointed out that some student teachers struggle to distinguish between a research problem and a topic, to the extent that these are used interchangeable as to cause confusion. It is advisable that any member wishing to do research has to be trained in the art to do it well (See sub-section 3.22 p.104). This lack of the art on the part of student teachers is further evidence of challenges that they face in crafting researchable topics. Two participants revealed that:

They find it very difficult to formulate researchable topics with regard to action research (HOD9).

By failing to identify a clear problem, in the long run students fail to come up with a proper or correct research topic (HOD3).

The actual implementation of actions for change also came up as an area presenting difficulties to student teachers. While some students have problems in selecting options for actioning, those that do also experience problems in their implementation. The challenge with action research is that participants in the study have to be active such that the process becomes a shared engagement. The outcomes are collectively owned (See sub-section 3.22 p.105). At college, the student teachers

and lecturers have a joint role to play in addressing teaching and learning issues, while the same applies when student teachers and pupils get into partnerships in tackling learning setbacks at schools (Lumby, 2001:7). The teaching methods used, nature of interactions, type of tasks given and materials used to solve the problem are all critical issues in using the action research strategy. Two participants observe that:

Eh, the actual implementation, how to go about solving the problem. And this has to do with the actual teaching methods, the actual exercises given, the tests given, all instruments that are involved, the exercise books and whether the registers are there. And the marking of the work (HOD4).

They (student teachers) put in very little understanding, the flesh that will make me see what major interventions they were able to come up with. Telling in detail what strategies they were using, the media and so on, how students were interacting. May be paying attention to the little reactions children make during the lesson and being critical and analytical why this is being so (HOD5).

Data collection and the presentation of findings were other areas that participants reported to be creating problems to student teachers. The choosing of appropriate instruments for collecting specific forms of data is an issue that puzzled a number of student teachers. At times, they fail to distinguish instruments for gathering qualitative data from those for collecting quantitative information. In gathering data for use in action research, a number of methods are available. These include questionnaires, observations, interviews and documentary analysis which includes the written exercise books, progress records and biographical information records. (See sub-section 3.8 p.61). Data for problem diagnosis and the results from performed activities are normally obtained through the employment of these instruments. Two participants commented that:

In coming to instruments again, well, they still have a problem on which instruments to use, then the reason why you are using more than one instrument or you are just using this instrument, then perhaps another, when I get bored then I stop (HOD6).

Some leave out very important instruments that would have given them the required data (HOD4).

On the evaluation or analysis of the outcome of the actions for improvement, the participants revealed that student teachers encounter difficulties in producing detailed descriptions. The results of the action research process need to be given in thick descriptions that mirror the actual situation as derived from the activities that were conducted (See sub-section 3.21.5 p.103). It was further revealed that student teachers tend to create results instead of reflecting meanings from the gathered data (See sub-section 3.22 p.105). Two participants of the study said that:

You find they are not able to give detailed explanations or analysing what they came out with when they were implementing their action or action plan (HOD8).

Then the data analysis again is a serious problem because that is where they start writing what they believe they know away from data gathered. So we still have a problem on the link now of the literature with the whole process (HOD6).

5.4.6.2.2 Implementation of action research processes

Student teachers were reported to be denied opportunities to visit college supervisors for action research consultations by school headmasters. The heads of schools are naturally concerned with the engagement of teachers in activities that drive forward the mission and vision of the schools as derived from the responsible ministry. They would want to see student teachers working on their teaching practice documents, teaching, marking and participating in core-curricular activities. The tension arises when student teachers are not allowed time to visit the college to consult with their tutors and libraries to review literature or to access the internet. This need is necessitated by the fact that most schools where student teachers do their practice are in remote areas with poor library facilities and internet services. As a result, student teachers find it challenging to do their research. Studies show that research requires wide reading in order to situate the study and to guide it towards

the achievement of convincing results (See sub-section 3.23 p.110). One participant said:

Okay, yes they are problems because Heads do not allow them to come to college as they would want. Heads would be saying you are running away from doing your duties in schools. To a certain extent, they need to visit libraries and get to places where there is internet connectivity so that they read widely on what they want to research (HOD8).

The problem of class sizes also appeared on the list of challenges that affect student teachers in the use of action research. The class sizes in schools are so large that the execution of research is hampered. This is especially so for the novice practitioners. In the Zimbabwean context, the standard teacher-pupil ratio is one to forty, which makes it difficult for student teachers to use action research to teach a 30 minutes lesson. While pupils can be placed into smaller groups for strategic instruction, action research demands active participation from each member of the group (See sub-section 3.7 p.55). To achieve this feat, teachers have to maintain closer supervision to ensure active involvement of all learners in the group. One participant expressed that:

Most students have alluded to the fact that action research demands fewer students than those that they have in their regular schools. Our teacher/pupil ratio is one to 40 and to carry out action research with 40 pupils within a stipulated time of 30 minutes seems to be a challenge to most of our teachers. Action research demands that you attend to individual differences (HOD9).

It emerged from the discussion that student teachers exchange topics or plagiarise the work of others. Similar questions or problems may characterise the work of a particular intake. This suggests that student teachers copy from each other and have challenges in identifying problems during their teaching and learning activities. It is crucial that student teachers be capacitated with reflective and creative skills that enable them to apply a critical eye in the teaching and learning discourse in order to locate anomalies in the learning process. A reflective teacher is able to assess his/her teaching in the classroom and the school and to specify learning gaps in the

form of questions for resolution (See sub-section 3.21.4 p.101). Three participants stated that:

The challenges now are on topic; you find the same kind of topics. I think that is a challenge especially for students and us (HOD8).

Where they have friends out there, ones who are qualified will give them complete projects... marked by somebody else within a different context, so they would like to import that and use it (HOD6).

Students generally are not reflective of the entire research process...(POC).

The most ideal way of teaching student teachers to use action research needs to be one in which they get exposed to theory lessons and proceed to participate in practical sessions. Participants revealed that micro-teaching and peer-teaching programmes are not provided at the college. This obtaining situation worsened the plight of student teachers in mastering hands-on skills in action research, especially considering that lecturers experience challenges in effectively teaching the methodology and applying it in lecture rooms. Engaging student teachers in peer-teaching and micro-teaching provides them with the opportunity to teach in typical classroom situations, to practice skills, build confidence and to review and be reviewed by peers (See sub-section 3.10.1 p.70). Confidence and self awareness are values that are further fostered in student teachers (See sub-section 3.10.1 p.71). The absence of this facility weighs down on the use of action research in teaching and learning. Two participants said the following on micro-teaching:

No, we don't do that. We have never done that (HOD2).

If they would be given practicals to do before they go out, suppose you are in a class, just think of any problem and then in those sessions together (peer and micro-teaching) highlighting what they are supposed to do before they go out (HOD8).

Again, the communication challenges were cited by participants as another barrier to effective use of action research as a teaching and learning strategy. Action research

requires participants to be able to communicate with each other on the problem to be resolved, in the collection of the needed data, making of decisions on plans to be implemented and in presenting findings to the audience. This finding does not resonate with some studies which state that the best thing in action research is to open forums for communication and dialogue (See sub-section 3.15 p.88). Communication skills are required to build collaboration and team work in instances where action research tool is used to deal with problematic situations (See sub-section 3.7 p.56). The inability of student teachers to communicate effectively hampers action research delivery as discussion and debate, which are central to action research, are curtailed in the process. One participant said:

But then they have got hindrances when it comes to language, actually I find it important in as much as they will need it to understand the various stages. And then also when they are collecting data, they need to communicate so as to get what they want, and then in the phrasing of the questions also (HOD6).

5.4.6.3 Challenges for Heads of Schools

The interaction with the participants revealed that heads of schools are particularly worried about the research that is done at their schools but whose results are never ploughed back to benefit the host schools. The purpose of research is to understand situations, explain practices and to alter the *status quo* for the better. Student teachers conduct research on their teaching and learning in schools in order to generate new knowledge on the best practices that can be applied to improve the learning and achievement of learners. The issue with student research is that it is done in schools, at times with the co-operation of mentors, heads and pupils, but once outcomes are obtained, they are not taken back to those schools for their own benefit. The student teacher just takes the finished product to the college supervisor for marking and presentation of a diploma without concern for the schools that promoted that research. This situation does not do well to motivate the participation of schools in action research that student teachers do. One participant revealed that:

Once results are found, they are never shared with any one, say, the mentor or school. They are shared with the person marking, thus a serious challenge we are having, because the results should be used. I

think, thus how we can get the schools being motivated to assist, to be part of the research because the research would have been done in schools (HOD6).

Most heads of schools are not in the right stead to assist student teachers with regard to action research. From the responses of participants, the heads either did not do action research or proper arrangements were not done to facilitate their involvement in the work of student teachers. The majority of heads of schools undertook training before action research was introduced in the curriculum and were not accorded the opportunity to develop skills in the area. As a result, they are unable to adequately assist student teachers even if they might be interested in doing so because they lack the required knowledge or expertise. Ideally, supervisors should develop requisite skills, knowledge and dispositions for effective practice (See sub-section 3.15 p.87). Colleges, however, have not harnessed the potentials of heads and mentors in the guidance and supervision of student research. Heads do not know the roles they should play as they have not been seriously mandated to assist in this regard. Two participants highlighted that:

Heads. did not do this kind of research and so when students are in need of these you find that they don't get that knowledge, so it means the students get assistance from supervisors only yet in a normal situation we are expecting that they can get help from those (HOD9).

They look at themselves as not being part of it. I went to one school to find out whether they knew that our students were doing action research and they said we know there is something like that, but they have never consulted us about what is happening (HOD6).

Mm, they may not have really mentioned them soundly per se, but those that do they are always saying we don't know how we can assist these students (HOD5).

The predicament of school heads also involves establishing a balance between performing activities to achieve the goals of the institution and creating adequate conditions for action research. They have deadlines to meet and schedules to follow, such that an extended focus on action research would deprive attention on other functions. This is further complicated by the fact that the execution of action

research operates under unclear roles in schools since it is not on the time table. The heads of schools are generally suspicious and critical of action research practice. Participants expressed that:

For the Head of the institution, that is not the core business of the day. So, if anything else is done outside the core business of the day, the head becomes suspicious. It has nothing to do with the day to day running of school institutions (HOD4).

They always say action research creates a lot of problems. It overburdens their teachers. Instead of working on school work, the student will tend to divert and work on action research. At times they can even dodge from the school to come and consult without permission (HOD2).

5.4.6.4 Challenges for school-based mentors

Teachers who mentor student teachers in schools were reported to be quite abreast and involved in the goings on in those institutions. They are reported to be participating in both core-curricula and extra-curricular activities. The running of the institutions fundamentally revolves around their enlisting as staff members. They even mentor student teachers on documentation and classroom teaching, but surprisingly, they are excluded from the action research that student teachers conduct and document using pupils in their classrooms. Ideally, action research demands that all relevant participants be actively engaged in the process so that their voices are included in the research outcomes (See sub-section 3.7.2 p.56). It focuses attention on the classroom teacher and the learner in the process. The mentors need to assist student teachers in all the processes as they have the knowledge of the research context, pupils, learning strategies and the evaluation of teaching and learning. One participant stated that:

If you discuss with the mentors, they are actually connected to what the schools are doing, the students are doing college work, the research is happening at their schools but they are doing research products with their lecturers. It's quite disconnected from the school. This is a college thing (HOD6).

The school-based mentors have no motivation to assist student teachers in action research as the system effectively leaves them behind. This contradicts literature which emphasises that mentors counsel, sponsor and motivate mentees (See sub-section 3.21.2 p.99). College lecturers possess the exclusive role of supervising student teachers. This implies that no communication exists between lecturers and teachers in schools on the conduct of action research by student teachers. Consequently, student teachers are made to travel to college regularly to consult lecturers on a research context they are not familiar with. The team building aspect or the collaborative tenet of action research becomes lost in the process. One participant noted that:

The moment they say can you help us, they will say, I am not well versed in this, you see your supervisor, I don't know anything about this. Their sole helpers are the supervisors and so they will be always forced to come to college to seek information or guidance because at schools there is no one who would be in a position to help them (HOD9).

Participants revealed that mentors have not attended workshops on key aspects of action research. Normally, these should be exposed to the action research rubrics for them to employ and evaluate action research activities in their classes. Mentors need to master the concept in order to guide student teachers in teaching, research as well as establish a connection with expectations from college. They should assist with an array of processes from problem identification, data search, designing activities for change, implementation, evaluation and reporting of results. A participant indicated that:

Most of the mentors were not workshoped in action research. They are not well versed in action research and most of them are saying they cannot help the students because they are not aware of what they are expected to do (HOD7).

5.4.7 Theme 5: Ways of Improving the use of Action Research in Teaching and Learning

This section presents the ideas of participants on how the teaching and learning of action research can be enhanced. These include the teaching of action research, mindsets of participants, research culture, establishing research in schools, conducting outreach programmes, creating partnerships in research, resources and valuing the backgrounds of student teachers in teaching and learning.

5.4.7.1 Quality teaching of action research

The college needs to ensure that student teachers are exposed to the complete teaching and learning of action research. They must be provided with effective teaching in action research where details of the methodology are provided (See sub-section 3.14 p.84). In addition, opportunities have to be availed for student teachers to experience the use of action research in the lectures that lecturers conduct at college. Learning naturally occurs as students model the behaviours of their teachers (Sub-section 2.3 p23). Practical classroom sessions where student teachers and their lecturers really go through the processes of using action research are essential to give student teachers practice and to help them to master the learning concepts (See subsection 3.8 p.66). This may entail engaging them in some mini-projects. The outcomes of the projects that are developed in the course of training have to be utilised or published in order to motivate performance. Three participants stated that:

A practical approach where groups of students are involved in some research and not just exercises before they go out on TP may help (POC).

When we are teaching these students, as they have suggested, that they need to have some practice. We must work with them while they are here doing some mini-projects (HOD7).

I think, basically, we need to see students practicing this action research before they go out on TP. In our lectures as lecturers, we should start using action research to give students that room to practice how to solve

problems when they are in the college before they go out on TP. When they go out they will be knowing what to do after they will have done it at college (HOD3).

5.4.7.2 Changing the mindsets of student teachers in action research

The mindset of student teachers has to be reoriented towards a deeper understanding and use of action research. A positive perception of this teaching strategy needs to be cultivated to enable them to develop an interest in its committed adoption in their instructional endeavours. The adoption of action research would also avail some perspectives on salient teaching, learning and school issues (See sub-section 3.4 p.43). Student teachers have to act and talk persuasively about the power and influence of action research. They should view action research as an ideal technique to address real classroom and school-wide problems (See sub-section 3.2 p.38). Student teachers must be provided with samples of excellent projects where they will be able to check how things are done and to use as a standard of good practice. Two participants highlighted that:

Once the mindset is changed, it's actually a benefit for students to use action research during TP because it enables them to solve problems they will be finding in their teaching (HOD3).

They should even be able to see other projects. Here, students write their research, then after marking those old students take their projects, nothing is left for other students just to refer. I think, we should improve by saying instead of a student submitting one copy they should submit 2 copies or 3 so that I also remain with some copies (HOD1).

5.4.7.3 Staff development programmes

Inadequate staff development programmes were sighted as contributory problems impacting the use of action research in teaching and learning at the college. Staff development sessions and workshops have a mediating role in providing requisite knowledge and skills in action research. These provide contexts in which lecturers are able to engage in peer review for the purpose of teaching and clearing certain misconceptions that may have crept into their functions. Workshops are also used as environments to motivate members, change attitudes and to build collegial relations

for effective running of organisations (See sub-section 3.19 p.97). Two participants articulated that:

I think, if our structures are to come up with sound action research, we need us as lecturers to be staff developed so that we get those skills. If one has those skills, then the attitude will also change because in most cases a person will have an attitude because he is not knowledgeable (HOD8).

There is a lot of singing, we need staff development but practically there is really nothing that is being done. We need to staff develop each other regularly so that we sing from the same hymn book when we supervise these projects (HOD4).

5.4.7.4 Developing a research culture among lecturers

It also emerged that the majority of lecturers were not interested in membership to a Research Unit which is supposed to assist in developing research skills and facilitating attendance to conferences and the publication of manuscripts. This indicated a weak functioning of the unit. Literature state the need to track and record research that is carried out at schools to ensure that it is disseminated and put into practice. Lecturers must be engaged in inquiry to create new knowledge for global success (See sub-section 3.21.5 p.104). The apathy by lecturers on membership to the Research Unit may be symptomatic of the lack of understanding and use of action research tool in classroom teaching and projects at the college. One participant said that:

Even though we have a Research Unit in the college that constantly meet, it is only those who belong to the research committee who are active but the rest of the lecturers who supervise these projects are not yet members of the committee, hence there is need that they be constantly reminded on the latest trends in so far as research is concerned (HOD4).

5.4.7.5 Creating partnerships in action research through outreach programmes

The essence of outreach programmes was emphasised by participants of the study. These were reported to be inexistent. It was suggested that workshops should be arranged where the key stakeholders in action research could meet to appraise each

other about the nature of the strategy and clarify the principles guiding the conduct of action research in teacher education. This is supported by literature which states that stakeholders should build partnerships and mutual sharing strategies that form a network of responsibility for student success (See sub-section 3.21.5 p.103). Parties need to meet regularly to review operations and to iron out any grey areas that develop in the course of time. The interests of the college, mentor teachers, heads of schools, student teachers, and pupils should be accorded significance in the research process. The school heads and mentors should be free and open to talk about and be involved in the work of the student teacher and to contact college in case of a misunderstanding. Likewise, student teachers should establish mutual cooperation with the school staff on matters concerning action research practice. Two participants pointed out that:

We need some outreach especially with the mentors so that they appreciate what is required of them in the project. They should be part of the system. It should not be a question where we are saying we are only getting data from the school and we have nothing to do with the school and the mentor and the children. The children should be benefitting, the mentor should be part of it, the head and even the clusters of schools should actually be working together sharing these ideas, but it's not like that (HOD6).

I think action research can be improved by way of mounting frequent workshops for teaching staff in colleges and also for mentors and heads out there so that they are also equipped with the skills. There is no direct exchange of ideas between college and schools and this incapacitates some of the mentors and teachers there (HOD2).

5.4.7.6 Establishing action research in schools

There was a suggestion that action research should be widely used in the teaching and learning in schools so that student teachers find a fertile ground for developing skills they would have acquired from college. The broader action research presence among the usual methods of teaching would give school teachers ample time to familiarise themselves with the procedure. They would be able to teach using action research principles and meaningfully assist student teachers when deployed to their

classes. The gap between college expectations and school practices would be narrowed, if not closed. One participant suggested that:

May be, if the concept can be accepted in skills so that it's not just used by students who come for TP to solve teaching problems, but they also use the research approach as well in practical day to day activities, as a way of teaching like they do with cyclic method of teaching reading. So that it's not a college thing alone (HOD5).

5.4.7.7 Access to relevant resources

The teaching and learning resources on action research require improvement in order to maximise student teacher understanding. The library and related internet facilities are important in the teaching of action research. The books have to be relevant and up-to-date while internet access should be unlimited. Assistive gadgets and life examples simplify complex learning activities (See sub-section 3.8 p.65). The bulk of student teachers are deployed in rural schools which do not have reliable internet services and where libraries are poorly stocked with recommended study materials. Action research requires student teachers to read widely so that they possess comprehensive knowledge on the best options available to address concerns and to reinforce already acquired knowledge (See sub-section 3.22 p.106). Their actions have to be informed by extant literature in the field. Appropriate class space should also be availed where student teachers can be organised into groups that facilitate discussion, collaboration, participation. Proper arrangements for feedback to the audience has to be provided. Two participants said:

I think action research can be improved by providing resources that would facilitate its smooth running (HOD9).

We used to teach them in smaller groups but due to the shortage of space we are teaching them all at a time in a tent outside (HOD2).

5.4.7.8 Background of student teachers in teaching and learning

Participants had mixed views on the importance of the background and characteristics of student teachers in the teaching and carrying out of action research. Some believed that the background indicated the degree of readiness and ease with which students can master the principles of action research. Students

from environments that cultivate independence, confidence and an enquiry are better candidates for action research participation compared to those that stifle exploration and creativity. Lecturers need also to exude skills to supervise student teachers in spite of their different backgrounds and characteristics. There was agreement among participants that clinical supervision is the best option for guiding student teachers in their research activities. This involves establishing rapport with the student and this is crucial for the two parties to work closely as partners in the provision of support and guidance to the tutee (See sub-section 3.15.1 p.88). Lecturers should actually visit the classes that student teachers teach in order to experience the situations and the problems that students proceed to research on. Two participants pointed out that:

They need to interrogate the student teachers to find their background, their problems and their concerns so that they can assist the students properly. Yes, the clinical type of supervision is needed so that the student and lecturer plan and implement together, discuss after, and map a way forward (HOD7).

If lecturers were also going to get into the classrooms and see the problems emanating from the general teaching, then you agree that certainly there is a problem. But the problems are identified by students and some identifying problems that are not in existence (HOD4).

5.5 DOCUMENT ANALYSIS

This section presents findings of a review of documents that relate to action research delivery at the college of study. The selected records covered the guiding policy issues and materials for use in the teaching and learning of action research. These included the course outlines, lesson plans, research guides and lecture notes.

The perusal of records revealed that the policy on research is promulgated by the Department of Teacher Education (DTE) at the University of Zimbabwe, which is the authority charged with the provision of legal regulatory and quality assurance framework for all colleges affiliated to the university. Chivore, Mavundutse, Kuyayama-Tumbare, Gwaunza and Kangai (2015:vi) state that the vision of the Department of Teacher Education is "to be the leading teacher education institution for scientific-

based accreditation, research and teaching nationally, regionally and internationally". Consistent with this vision is the declaration that the Professional Studies Syllabus C (PSC) provides opportunities and experiences for student teachers to research, explore, reflect and report on educational issues (Chivore et al., 2015:17). It is also reported that the curriculum depth studies that evolved at the introduction of the ZINTEC programme has been misinterpreted to mean action research. Affiliate colleges, however, are mandated to carry out a research project which is a wider research approach that is meant to introduce student teachers to the fundamentals of research.

The College Strategic Plan 2016-2020 annunciates a strategic thrust that focuses on the consolidation of continuous research and development. The commitment is to develop a two-pronged research path, but with a terminal point of intersection. The college has a Research Unit where lecturers have a platform to research for the development and enhancement of key training areas inclusive of the curriculum, administrative and the general life at the college. Student teachers on the other hand are provided with research tools to explore, resolve and understand practices as they are unveiled in schools and classrooms of their teaching practice. It is basically in the interest of the institution that all research works that are produced are shared with the wider world in seminars, workshops and publications in various forms (Joshua Mqabuko Nkomo Polytechnic Strategic Plan 2016-2020:4).

The research area (PSC) falls within the structure of Professional Studies (Section iv) which is composed of Professional Studies Syllabus A (PSA), Professional Studies Syllabus B (PSB) or General Foundations (Special Needs Education), Professional Studies Syllabus C (PSC) and Professional Studies Syllabus D (PSD). PSA focuses on classroom practice, theories of teaching, public service regulations and conditions of service. PSB covers subjects content, methodology, planning, scheming, micro-teaching and peer-teaching. Health and Life Skills (HLS), Information and Communication Technology (ICT) and National Strategic Studies (NASS) make up Professional Studies Syllabus D (PSD). It was observed that there are no values that are tabulated with a precise focus on the conduct of action research at the college. It may however, be logical to think that these are shared

and drawn from those listed for the offering of the general teacher education from the Department of Teacher Education, and also muted in the PSC syllabus. Student teachers are expected to develop diagnostic, analytic and evaluative skills, to apply strategies for solving classroom problems, to report on the findings of research and to use research strategies for effective teaching.

The PSC subject area states unequivocally that student teachers must spend the first term of the five terms of deployment to their schools of practice becoming familiar with the teaching environment, culture of the school and teaching problems which exist in their classrooms. The second term should see the student teacher developing a research proposal that should be approved by the supervisor before engaging in actual research. At the lapse of the five terms of teaching practice the student teacher should have gone through chapter three on research findings, leaving only chapter four on evaluation, conclusions and recommendations for the last two terms of residential work and submission of finished research reports. The documents are, however, silent on actions to be meted on student teachers who fail to meet the expectations of the progress of research.

Documentary analysis revealed that action research project marking guide is provided to direct and guide student teachers on the crucial aspects of research to be considered in the assessment. This is intended to convey the general outlook of the project, the amount of effort and time to be committed to the defined sections of the process and most importantly, the evaluations that are proposed. A perusal of availed documents, however, exposed a dearth on the rationale for the allocation of supervisors to student teachers for research. The criteria are not documented but a verbal discourse with research coordinators revealed that student teachers are allocated to lecturers who are knowledgeable in the subject area in which they intend to locate their research problem. A quick scan of the few research reports that were available showed anomalies where some student teachers were supervised by lecturers who were not in the subject area of the research. This suggested that the expected expertise for a worthwhile supervision process was absent.

The main college time-table showed that PSC, the area hosting action research, was allocated a single slot of 1:30 minutes per week on a Friday between 10:30 and 12 noon. The plans for the week are therefore guided by that provided time frame. It was found that the syllabus provided the general components of the course which are presented in greater detail in the scheme-cum-plan in use at the college. The break down in the course outline indicated the components that were to be taught for the term but the lecturers to teach those discrete topics were not indicated. This is a management deficit which is likely to result in ineffective lectures as a result of lecturers being told to prepare for a lecture within a short time.

Reference lists for further reading by student teachers on specific content areas were presented by authors and the year in which the cited source was published. The approaches and methods of teaching were just listed and not matched with particular concepts of action research. This is indicative of a lack of visionary planning for effective teaching and learning. The relevance of the cited sources was not immediately clear as the titles of the publications were not provided. Some of the indicated sources were not even available in the college library to ascertain their appropriateness. The commitment to provide lists for further study is a recommended approach to encourage and entrench student teacher research.

Spaces for comments were provided to ensure evaluations were made at the end of each lecture, presumably citing the strengths, weaknesses and opportunities for improving the teaching and learning as informed by what transpired in the conducted lesson. There was, however, no room provided for student teachers to evaluate the lecturer after the lesson. Silence on the importance of student teacher evaluation of the lecturer serves to protect mediocre content delivery which further hurts the learning and achievement of students.

Two research guides were produced and availed to student teachers to assist them as they engage in action research. One of them is a guideline on the writing of an action research proposal while the other one is for producing a research report. The guide for the proposal addressed issues to do with the definition of a proposal and the four well-sequenced sections of the problem and its setting; research

methodology; definition of terms, references, proposal presentation, length of the proposal and then the contents of the cover page which completed the information on the proposal design.

The action research report guidelines document contains information on the general presentation of the project in section A. Section B identifies the required four chapters and provides the details thereof. Chapter One includes among other things the background to the problem, statement of the problem and the research questions. Chapter Two highlights methodology issues which embrace the design, population, sampling, action plan and ethical considerations. The implementation of the plans and research findings constitute the Third Chapter, while evaluation, conclusions and recommendations make up chapter Four.

The two guides contain adequate detail for the successful conduct of an action research by a dedicated and disciplined student teacher. The guides, however, do not articulate the preferred behaviours, skills and attitudes that student teachers need to demonstrate when carrying out action research. An inclusion of these would most likely set the tone for the successful execution of action research. It is critical that student teachers and lecturers adopt a positive attitude to doing action research so that they seek the needed motivation and skills.

The analysis of the lecture notes exposed details in the preparation of the selected content for the teaching of student teachers. The sequence of the data was obviously visible from the distinctive subheadings that were provided in the prepared instructional materials. Most of the notes did not show the objectives to be achieved in the lessons, serve for few instances where lecturers told the class what they were expected to grasp at the end of the lessons. Activities for student teachers to engage in during the lectures were absent. This was evidence that student teachers were not encouraged to participate in the learning process. The teaching that is action research oriented provides ample opportunity for student involvement. Group work activities were sometimes given in the main subject areas but were rushed to save time as the conditions primarily favoured the use of the lecture method.

5.6 CLASSROOM OBSERVATION

This section presents findings from the participant observation process conducted for the purpose of examining the challenges of using action research as a teaching and learning strategy in teacher education. The exercise involved the physical settings, human settings, interactional settings and programme settings. The use of action research method was generally missing during classroom teaching as lecturers basically relied on the lecture method. There were few instances where group work or tasks were given to students to explore and solve. The lessons on action research teaching were then viewed in detail as they are presented in this part.

5.6.1 Physical Settings

The classrooms which were used for lectures were structured in blocks that were about ten metres from each other. This resulted in noise being transmitted from one classroom affecting the proceedings in those rooms. The college had no specialised rooms for practical subjects like Music, Physical Education and Art which allowed activities in those areas to affect the effective teaching and learning environment. Lecture rooms were very small creating discomfort for student teachers. This situation is not conducive for action research activities which require discussions and sharing of ideas in order to find solutions to given problems. Student teachers need to think and reflect as they carry-out action research.

Each class for the main subjects had about 150 students that were divided into groups from the entire intake population. The lecturers had limited space in the front and this curtailed their movement to various areas of the classroom for ease of supervising student activities. Student teachers, likewise, were fixed in positions as they were more desks in the rooms than the available space could accommodate. This made the use of the class discussion the only possible method and prevented lecturers from paying attention to individual learning differences of student teachers through close monitoring of their work. In-class activities favoured individual and pair work.

5.6.2 Human Settings

Observations showed that few group work activities were given during the instructional process. This strategy is usually the most popular one in involving student teachers in the teaching process. Issues to do with mixed ability or same ability group compositions were never a concern as the focus was on whole class teaching and learning. Student teacher participation was low as they appeared concerned with taking down notes which were dictated to them by lecturers. Student teachers were also not encouraged to have productive dialogue among themselves. This could have been created by lecturers who were keen to cover the planned teaching materials during the allocated time. The absence of active student teacher engagement militates against the use of action research as a teaching and learning strategy.

5.6.3 Interactional Settings

Student interaction was low. They rarely directed questions to the lecturer or sought clarifications on concepts of the study. The introverts were not encouraged to contribute while the extroverts dominated the lessons. The lecturers showed understanding of their subject matters but had challenges in motivating student teachers to learn. The student teachers were not powerful in interrogating the issues raised during instruction which further reflected their weak skills of reflection. Most student teachers experienced difficulties in communicating in English and constantly resorted to the mother tongue to clarify their ideas. This situation created conditions that impeded the use of action research in teaching and learning. Student teachers need to be adequately motivated to learn and to communicate effectively on their learning experiences and solutions they ascribe to given problems.

The observation revealed that most lecturers do not use teaching and learning resources during their lectures. Learning materials and assistive equipments were common in some practical subjects. Action research requires that student teachers share resources and manipulate objects to enhance their grasp of the taught concepts.

5.7 DATA INTEGRATION

This section integrated findings from quantitative and qualitative data collection methods that were used in this study. Bryman (2007:8) views integration as a strategy in which quantitative and qualitative components are analysed, interpreted and reported in a way that presents them as mutually enlightening. The two sets of data were connected in order to realise a product which is greater than the sum total of each individual method (Guetterman, Fetters & Cresswell, 2015:555). Integration involves linking or merging the quantitative and qualitative parts in order to bring new insights into the research results. This study integrated information that was obtained from a survey of the views of student teachers, interviews with Heads of Departments, observation as well as an analysis of selected documents.

5.7.1 How do Student Teachers View Action Research as a Teaching and Learning Strategy?

Action research emerged as a method that caters for individual learning differences and affords learners an opportunity to master a skill before proceeding to the next one which could be more difficult. 116 (82.8%) survey participants affirmed the tackling of problems in a sequential manner through the use of action research. This ensured that the decisions that are acted upon are discussed, debated and accepted by those involved in the process. Some student teachers acknowledge the benefit that action research has given them in relation to improved teaching in schools. This use of action research to enhance instruction is backed by literature (See sub-section 1.1 p.1). Student teachers are encouraged to collaborate and seek the expertise of colleagues or other teachers in actually teaching a concept which may be difficult to them. This is because collaborative learning is significant as an instructional option (See sub-section 3.11.1 p.69). One participant said:

They actually benefit through collaboration. Because they are able to collaborate among themselves as students, with pupils and also with their mentors to find a solution to problems...(HOD7).

Further discussions with HODs showed that student teachers find action research to be very theoretical than practical, a view not reflected in literature which portrays action research as a process of active creative inquiry (See sub-section 1.1 p.1,2). Student teachers were also unanimous in viewing action research as a method requiring their active participation. This was confirmed by 121 (86.4%) participants and the outcome of interviews with the HODs. Class observation also exposed the researcher to low student teacher participation as they rarely directed questions to the lecturer or even interacted actively among themselves. They exhibited a gullible appetite for note-taking rather than engaging in scholarly discourse. The weak communication skills of student teachers that were evident during lesson observations may serve to account for the passive interactions that characterised the sessions.

Most participants indicated that the background of student teachers should be considered when action research is used as a teaching and learning strategy. 87 (67.1%) participants agreed while 47 (33.5%) opposed the idea. Findings from interviews corroborated the survey results in emphasising that background determined what the student teacher already knows and the related readiness to learn new information. A participant said:

... it is very important to know the background of the student teacher when you are using action research because it actually enables the educator to move from what the student already knows to what he or she does not know (HOD7).

Literature states that human beings are a product of the sum of the environmental situations in which they grew up (See sub-section 2.5.2 p.29). How people perceive and respond to given stimuli depend on their previous experiences with regard to similar occurrences in their life (See sub-section 2.3 p.17). Individuals receive, process information and behave differently as detected by their unique characteristics and composition (See sub-section 2.5.1 p.27). Some interviewees, however, suggested that the background of students may not be of greater significance provided teachers adopt effective strategies and motivation for teaching.

5.7.2 What is the Nature of Action Research Teaching that is Provided to Student Teachers at Colleges of Primary Teacher Education?

Student teachers are taught action research theory during the first two terms of the residential course. Literature states that research methods courses should be taught to teachers at the onset of their training (See sub-section 3.12 p.76). Lectures are conducted by selected lecturers in the Professional Studies Syllabus C subject area which is part of the Professional Studies Department. The policy on research is crafted by the Department of Teacher Education (DTE) at the University of Zimbabwe and contained in the Hand Book for Quality Assurance in Associate Teachers' Colleges (Chivore et al., 2015:vi). The policy states that the Professional Studies Syllabus C (PSC) provides opportunities and experiences for student teachers to research, explore, reflect and report on educational issues. The College Strategic Plan 2016-2020 further states a strategic thrust that focuses on the consolidation of continuous research and development, with two targets being independent research of lecturers and student research. Research is allotted a single slot per week which 77 (55%) survey participants viewed as inadequate for effective study. HODs corroborated this view as they decried the negative impact of a single slot in the college time-table which deprives student teachers the opportunity to master the critical aspects of action research.

The sampled participants acknowledged the primacy of planning in the teaching and learning using the action research strategy. 116 (82.9%) participants affirmed this view, consisting of 63 (45%) that agreed and 53 (37.95%) who strongly agreed. As an off shoot of good planning, it also emerged that lessons on action research began with lecturers outlining the objectives for each lesson prior to the delivery of the planned instruction. 101 (72%) participants generally attested to this practice. The document analysis, however, showed that most of the lecture notes did not show the objectives which were to be achieved during the lessons. There were also few instances during lesson observation where lecturers told the class what they were expected to grasp at the end of the lessons as they tended to rush into the business of the day. On evaluation of the work of student teachers, 74 (52.8%) participants indicated that feedback was provided on time, a practice which fostered the

internalisation of sound practices and implementation of intervention strategies for mediocre performance. The absolute silence in the reviewed documents on the evaluation of lecturers by student teachers denies lecturers the time to reflect on their practice for improved action research teaching.

The participants raised concerns with regard to time and material resources for action research theory and practice. The scarcity of time, particularly for action research deprived student teachers the opportunities to do practicals and the development of research proposals in groups prior to actual assignments in their field of practice. Action research demands groups of individuals or teams to work together to solve problematic situations (See sub-section 3.2 p.37; 3.7.2 p.56). Interviews with HODs showed that student teachers are referred to journals, the internet and the library and guided on how these sources should be used profitably. The teaching practice kit containing the proposal guide and the action research report guide, form part of the support rendered to student teachers for use during teaching practice. This explains the position of 100 (71.4%) participants who indicated the existence of adequate material resources to support the use of action research. Literature states that these resources should be written in ways that estimate face-to-face interaction between the writer and the student (See sub-section 3.22 p.107). The researcher further attests to reviewing documents that included the proposal and action research guides. However, the use of material resources was absent during lectures. The lessons were generally characterised by the reading of notes and student teachers writing them down. It also emerged that the college has no policy allowing for the retention of excellent action research compilations as exemplars for reference by both lecturers and student teachers. This is in contrast with reviewed literature which heightens the role of symbolic models, as represented in books and other similar learning media in the social learning process (See sub-section 2.3 p.23).

5.7.3 How Competent are Lecturers in Enabling Student Teachers to Teach using the Action Research Strategy?

The survey results revealed that 102 (80%) participants are generally convinced that lecturers should possess special skills, knowledge and attitudes to assist student teachers in the theory and practice of action research. This is consistent with research literature which show that teachers with positive attitudes to learning directly affect the attitude of students towards learning (See sub-section 3.14 p.84). The knowledge of the subject and pedagogy are also crucial for effective teaching. It is expected that the research skills ideally should encompass abilities in planning, teaching, evaluation as well as guidance and student support (See sub-section 3.8 p.61). High order skills as attested to by 108 (87.2%) participants are particularly essential as action research demands participants to discuss, analyse, apply and evaluate the outcomes of interventions going forward. Classroom observations further showed that lecturers had knowledge in their subject areas. However, it was affected in its dissemination to student teachers by the limited time and compromised student abilities.

Supervision acts to channel the competency of practitioners towards the targeted ends. 81 (57.8%) participants consented to the need for close supervision of lecturers and student teachers in the process of action research. This position is confirmed by the HODs who indicated that supervision provides the motivation and guidance required for action research especially for those lecturers who did not do action during their training or have challenges with its principles. The set time schedules on which student teachers should have achieved observable milestones in their research work stand as motivators for continued engagement. However, the absence of opportunities to publish or disseminate the results of research projects to the wider world was raised in interviews as a demotivating factor.

Interviews with most participants revealed that inadequate staff development programmes were contributing to problems affecting the use of action research in teaching and learning at the college. One participant said:

We need staff development, but practically there is really nothing that is being done. We need staff to develop each other regularly so that we sing from the same hymn book when we supervise these projects (HOD4).

Those who claimed to have attended to some workshops in the institution could not remember the period when the programmes were staged or link them to action research activities. This was stated by 114 (81.4%) participants who categorically affirmed the need for lecturers to receive regular professional enhancement opportunities in action research. These sessions help members to engage in peer reviews and to clear misconceptions that may have crept into defined job functions (See sub-section 3.19 p.97).

5.7.4 What Challenges do Lecturers and Student Teachers Encounter in Employing Action Research as a Teaching and Learning Strategy?

Lecturers were not adequately motivated to be more practical about action research as the results are not being utilised at the college beyond the assessment and presentation of student teachers. The partnerships that are established in the conduct of research should ideally culminate in the presentation of outcomes in posters, before an audience or in publications. The practice should revolutionise research activities at the college. It would be fitting for lecturers to carry out action research, either as individuals or in collaboration with their peers and student teachers to instill a research culture at the college (See sub-section 3.21 p.98). The number of tutees allocated to each lecturer was large with some supervising student teachers even in the fields in which they lack skill.

Student teachers showed that they have problems identifying learning gaps during their training period at college and during teaching practice. This shows their weak reflective skills which blur efforts to evaluate learning encounters as well as scheming interventions for improved practice. Literature confirms that teachers who are reflective in their teaching are able to pick up aspects of instruction that either enhance or hinder content mastery (See sub-section 3.8 p.63). One participant observed that:

Students fail to realise the gap that will be existing so that they are able to solve the problem using action research (HOD3).

The challenges in formulating topics for research, time management, establishing relations with colleagues and analysing information were uncovered from both the surveys and interviews. This was also established from the review of documents. Literature further supports this view, indicating that formulating research topics presents the most demanding aspect of action research (See sub-section 3.22 p.104). The challenge of large classes which was cited in interviews was further confirmed through lesson observations, where the whole intake was observed in an action research lecture that was conducted in a large outdoor tent. 116 (82.9%) survey participants indicated that student teachers get the opportunity to use action research in peer-teaching and micro-teaching sessions, an assertion which interviewees denied. One HOD said:

No, we dont do that. We have never done that (HOD2).

This scenario shows that student teachers may not be aware of what micro-teaching and peer-teaching entails and so confused them with some other learning strategies. Literature, however, states that peer-teaching and micro-teaching provide students with the opportunity to teach in typical classroom situations, to practice skills, build confidence and to review and be reviewed by peers (See sub-section 3.10.1 p70).

Mixed responses emerged on the knowledge and the involvement of heads of schools and mentor teachers in action research which student teachers continue to do while on teaching practice. 84 (60%) participants confirmed receiving help from school-based mentors while 56 (40%) indicated otherwise. 81 (57.9%) participants revealed that mentors are not knowledgeable in action research. This is supported by the results of interviews which emphasised that mentors in schools have problems in action research as most of them did not do it at training and had not been workshopped in the concept. This contradicts literature which indicates that mentors should possess skills to counsel, sponsor and motivate mentees (See sub-section 3.21.2 p.99).

5.8 CONCLUSION

This chapter presented and discussed the findings of the study as guided by the research questions and objectives. The chapter considered the two sets of data which were obtained from the quantitative and qualitative methods of data collection. In the first instance, the quantitative and qualitative data were analysed separately, and then integrated. The study revealed that the teaching of action research is allocated a single lecture per week at the college which is inadequate to cover its theory and practical aspects. Student teachers are deprived the chance to master and demonstrate principles of action research in peer-teaching and micro-teaching which are not available at the institution. The competency with which lecturers are endowed is not well complemented by the low communication skills of student teachers and the inadequate resources for teaching and learning through action research. Lecturers and student teachers require the necessary motivation to ensure the activation of higher order cognitive skills which are desired in discerning learning gaps and the application of related interventions. The background and characteristics of student teachers were also considered to be critical in the teaching process as they influence the goals they set and the teaching styles they prefer. The aspects of action research which were revealed as creating difficulties for student teachers encompassed the formulation of research topics, time management and analysis of data. School-based mentors assisted student teachers in the use of action research despite their possession of limited knowledge in the area. The next chapter focuses on the summary, conclusion, recommendations and suggestions for further study.

CHAPTER 6

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS AND SUGGESTIONS FOR FURTHER STUDY

6.1 INTRODUCTION

This chapter provides the summary, conclusion, recommendations and suggestions for further study as guided by the research questions, literature review and the empirical investigation. Conclusions drawn from the findings of the study enabled recommendations to be made about the challenges of using action research. Limitations observed in the study as well as suggestions for future study culminated in the design of a proposed model for an enhanced use of action research as a teaching and learning strategy.

6.2 SUMMARY

The summary of the study is informed by the research questions, literature review and empirical findings.

6.2.1 How the Study Responded to the Research Questions

The study was guided by the following main research question: What challenges confront lecturers and student teachers at colleges of primary teacher education in Zimbabwe in using action research as a teaching and learning strategy? The following subsidiary questions were raised:

Research question 1: How do student teachers view action research as a teaching and learning strategy?

The study established that student teachers are convinced of the step-by-step process that is contained in the action research process. Those who participate in action research are expected to play active roles in order for the outcomes of the

project to reflect the democratic spirit that guides its conduct. It was highlighted that engagement in action research improves the confidence and self-esteem of student teachers which are essential ingredients for productive teaching and learning. Interviews with the Heads of Departments showed that student teachers consider this strategy to be more theoretical than practical, a position which probably emanated from the limited practical experiences that are availed to them while attending lessons on campus and attested to by the low participation seen during class observations. The background and characteristics of student teachers influence the teaching and learning using the action research strategy. Participants also cited effective communication as marshalling successful use of action research, which was, however, weakly displayed by student teachers in class activities.

Research question 2: What is the nature of action research teaching that is provided to student teachers at colleges of primary teacher education?

Documentary analysis revealed that the teaching of action research is enunciated in the Department of Teacher Education policy at the University of Zimbabwe which is, however, silent on the number of teaching hours that should be accorded to research. A single one-hour slot was given in the main college time-table for action research which hindered its effective teaching and practice. Participants were unanimous that lecturers need to plan well before conducting lessons in action research. It was emphasised that objectives should be set prior to instruction in order to guide the delivery of action research processes. A perusal of lecture notes and classroom observations showed that these were not always a feature of the teaching and learning proceedings.

Participants were generally aware of the principles of action research, particularly with regard to its cyclic nature and its intent in the teaching discourse. The importance of evaluating the work of student teachers was highlighted, with participants further recording that it was done on time. There was, however, no standing provision for student teachers to evaluate the performance of lecturers as a way of establishing the wellness of their performance. The scarcity of material resources affected student teachers the most while on teaching practice.

Consequently, the college is striving to provide them with a teaching practice kit containing research guides and skills to use the internet. Interviewees said that an increased use of exemplars in action research should be adopted to enable student teachers to improve their performance through modeling best practices.

Research question 3: How competent are lecturers in enabling student teachers to teach using the action research strategy?

The possession of requisite skills, knowledge and attitudes for action research emerged as central to teaching and learning in primary teacher education. Lecturers hold basic knowledge in research as reflected by their qualifications and classroom observations. Mastery of action research abilities was weighed down by the fact that most of them had not done it during training and the limited time for its teaching at the college of study. It would be appropriate for lecturers to partner with student teachers in the practical pursuits of action research as a mentoring and skill sharpening process. This may also empower student teachers to employ action research principles in their schools of practice without being closely monitored by lecturers.

Action research was also viewed as a strategy which courts the use of higher order cognitive skills as it involves scheming, applying knowledge and evaluation. The absence of regular professional development sessions, therefore, affected the planting and development of the needed skills in the field. This increased demand for the supervision of both lecturers and student teachers in the process. This was particularly so, as lecturers were at times made to supervise student teachers in projects which were alien to their areas of specialisation.

Research question 4: What challenges do lecturers and student teachers encounter in employing action research as a teaching and learning strategy?

Both lecturers and student teachers experienced low motivation in the use of action research as a teaching and learning strategy. A large number of tutees were allocated to each supervisor as a result of bloated student enrolments at the college

and that outcomes of practices in action research are never published or used as feed-back in the system. Participants also highlighted that student teachers experience difficulties in converting teaching and learning problems into topics for investigation. This betrays their weak skills of reflection. A closer look at the topics for their action research projects showed gaps in terms of stating the problems, establishing the scope and delving on appropriate content in the specific fields.

The study established that student teachers encounter hurdles in planning and managing time for action research activities. Their involvement in core-curricular and extra-curricular activities in schools hampers their engagement in action research. The large classes they teach coupled with the varied levels of knowledge of people they work with in action research activities, present obvious challenges. Data analysis was another aspect which was cited as giving problems to student teachers. It was also shown that some school-based mentors assisted student teachers in action research despite the majority of them lacking requisite skills in the area.

6.2.2 Summary of the Literature Review

The review of literature exposed that learning takes place in the social context through observation. People learn not just from their own experiences but from observing the behaviours, attitudes and outcomes of those behaviours. The behaviours that are copied and emulated are mostly from the significant others, inclusive of friends, parents and teachers. These people constitute centres upon whom new actions and attitudes are modeled. This conceptualisation of learning is based on Bandura's social cognitive theory. It should be noted that the competency level of the model is crucial in determining the effectiveness of learning by observation (See sub-section 2.3 p.23; 2.5.1 p 28).

Literature indicates that observation has a sound effect on motivation, process and performance. This is particularly true for the development of new creative skills. Individuals can use a live model, symbolic model or a verbal instructional model not only to reproduce actions as children do but to imitate rules, organisation and

strategy. This is ideal for student teachers who have to acquire skills, principles and attitudes from lecturers on the most effective ways of using action research in teaching and learning (See sub section 2.3 p.23).

The triadic reciprocal interaction of factors of behaviour, person and environment is the flagship of the social cognitive theory of learning. The factors interact with each other as does the points of a triangle (See sub-section 2.5 p.26). These forces carry different weights and can variously exert their influence on behaviour as situations demand. Personal beliefs, goals, perceptions, interests and feelings determine the styles with which individuals learn and the amount of effort they apply to their work (See sub-section 2.5.1 p.27; 3.14 p.85). The neural systems in the human body cause the brain to adapt to the environment as to influence the ability to evaluate, reflect and use symbolic communication (See sub-section 2.5.1 p.28). The interplay of personal and environmental factors ultimately determines the teaching and learning of action research.

Action research as a self-reflecting and problem-solving strategy consists of individuals or teams that work together to understand and solve problems related to teaching and learning in schools and classrooms (See sub-section 3.2 p.37). It is composed of cycles which are repetitive and has at times been presented in education as a "Look, Think, Act" model. This involves the collection of information regarding gaps in the teaching and learning discourse, planning for change, delivering instruction and evaluating the learning outcomes (See sub-section 3.8 p.61).

Student teachers perceive action research as improving learning performance through collaborative participation with colleagues (See sub-section 3.11.1 p.72). The subject knowledge of the teacher exerts a significant impact on student achievement. This knowledge embraces supervision skills and the provision of an individualised curriculum (See sub-section 3.14 p.85). Professional development programmes emerge as crucial lifelong learning experiences to improve understanding and instructional delivery (See sub-section 3.19. p.97).

6.2.3 Summary of the Empirical Findings

This section presents a summary of empirical findings as follows:

Research question 1: How do student teachers view action research as a teaching and learning strategy?

The findings of the study revealed that student teachers are aware of the cyclic process of action research (See sub-section 5.3.1 p.131). The participants were unanimous that this teaching and learning strategy requires active participation of those involved in its processes. Membership to an action research team raises confidence through discussions, debates and sustained interactions. Student teachers viewed action research as more theoretical than practical. Interviews with Heads of Departments did confirm that action research is a theory laden process. Open and effective communication emerged as an important entity in the execution of action research but the weak skills exhibited by students in this aspect militates against sound action research practice (See sub-section 5.3.1 p.132). The background of student teachers was highlighted as essential for action research teaching and practice as it influences what students should learn, when to expose them to a given content and how to serve them with that knowledge. Student teachers were also seen as being overloaded with work in a way that hindered successful performance in action research tasks.

Research question 2: What is the nature of action research teaching that is provided to student teachers at colleges of primary teacher education?

The participants showed that apt planning for action research teaching and practice was pivotal for one to achieve the desired ends (See sub-section 5.3.2 p.139). It was also revealed that lecturers began lessons in action research with clearly stated objectives (See sub-section 5.3.3 p.141). Classroom observation and an analysis of documents exposed that this was not always the norm (See sub section 5.5 p.188). Lectures at times started without lesson objectives provided to student teachers while some lecture notes were also silent on objectives. The single slot that was

accorded to action research in the main college time-table was observed as an impediment to engagement in action research activities during teaching and learning discourses. There was a commitment to avert the negative effect of the scarce resources through encouraging student teachers to make use of the internet, journals and the library. It was also revealed that feedback on the evaluation of the work of student teachers was given on time but the absence of opportunities for students to evaluate the performance of lecturers created a noted challenge. The college had no policy to facilitate exposure of student teachers to exemplars of excellent action research projects upon which they can model their practice (See sub-section 5.4.3 p165).

Research question 3: How competent are lecturers in enabling student teachers to teach using the action research strategy?

The skills, knowledge and attitudes of lecturers were presented as pertinent to the use of action research in teaching and learning (See sub-section 5.3.3 p.146). Some lecturers, however, doubted their own abilities in action research knowledge (See sub-section 5.4.5 p169). Lecturers that are knowledgeable and have a positive attitude to action research are likely to exert a positive influence on student teachers. Action research demands the use of higher order cognitive skills which are fundamental for reflection, discussion, analysis and the reporting of results. Most participants indicated that lecturers and student teachers should be supervised in the practice of action research in order to ensure that appropriate principles are adopted and to meet set time lines. Professional development opportunities were considered a priority to improve conceptual understanding and to harmonise the practice of action research (5.3.3 p.147; 5.4.5 p.171).

Research question 4: What challenges do lecturers and student teachers encounter in employing action research as a teaching and learning strategy?

The findings of the study showed that those who participate in action research should be provided with the necessary motivation (See sub-section 5.4.6.1 p.174). Some lecturers indicated their lack of motivation to conduct research. They also

revealed that they are allocated a large number of student teachers to supervise and are even made to supervise projects in fields they are not conversant with (See sub-section 5.4.6.1p.173). There were no micro-teaching and peer-teaching opportunities at the college which deprived student teachers the chance to experience the use of action research in teaching and learning (See sub-section 5.4.6.2.2p.179). Challenges were also registered about formulating topics, planning and managing time, building work teams and analysing data. Some school heads and mentor teachers were found to assist student teachers in action research despite having limited knowledge in the field (See sub-section 5.4.6.3 p181).

6.3 CONCLUSIONS

This study examined challenges that confront lecturers and student teachers at colleges of primary teacher education in Zimbabwe in using action research as a teaching and learning strategy. Based on the findings of the study, the following conclusions are made:

Research question 1: How do student teachers view action research as a teaching and learning strategy?

Lecturers are aware of the importance of planning for action research teaching and practice although at times they proceeded to give instruction on action research without well stated objectives. The background of student teachers deserves to be considered in the use of action research as a teaching and learning process. This is because they come for training with varied interests, perceptions, expectations and goals which then influence their individual learning styles. As such, lecturers need to modify the curriculum to cater for the diverse needs of student teachers in the classroom. Lecturers and student teachers at times slacken in their expected active participation in action research to allow for the outcomes of the exercise to reflect the democratic spirit inherent in the strategy. It was highlighted that engagement in action research improves the confidence, self esteem and communication skills of student teachers which are essential ingredients for productive teaching and

learning. Student teachers are generally loaded with work while on teaching practice and as a result they are deprived adequate time to engage in action research.

Research question 2: What is the nature of action research teaching that is provided to student teachers at colleges of primary teacher education?

The main college time-table does not give lecturers adequate time to effectively teach action research to student teachers and to mentor them in its conduct. There are deficits in the provision of material resources to facilitate effective teaching and learning of action research at the college. It was also revealed that feedback on the evaluation of the work of student teachers is given on time but the absence of opportunities for student teachers to also evaluate the performance of lecturers created a serious challenge. The absence of a policy to sanction the availability of exemplars of quality action research reports to lecturers and student teachers for reference militates against the realisation and maintenance of expected standards.

Research question 3: How competent are lecturers in enabling student teachers to teach using the action research strategy?

Some lecturers at colleges of primary teacher education do not possess adequate requisite skills, knowledge and attitudes on the theory and practice of action research to produce well-grounded and groomed teachers. Lecturers also need to provide excellent models to student teachers and be beacons of good practice. The supervision of lecturers and student teachers in the practice of action research is critical in ensuring that appropriate principles are adopted and in meeting set time lines. Professional development efforts in the form of staff development and in-service training are not regularly conducted to help lecturers gain knowledge in action research. Clinical supervision is the most ideal form of supporting student teachers in using action research as a teaching and learning strategy.

Research question 4: What challenges do lecturers and student teachers encounter in employing action research as a teaching and learning strategy?

The large class sizes and the numbers of student teachers that lecturers supervise present problems in the use of action research as a teaching and learning strategy. This is exacerbated by the fact that lecturers are at times made to supervise research projects in fields alien to their training. The absence of micro-teaching and peer-teaching sessions also denies student teachers the chance to practice the use of action research in teaching and learning. This ultimately constrains their ability to carry out action research during teaching practice. Some heads of schools and teachers do provide assistance to student teachers in action research even though they might have limited knowledge in the area. The outcome of research work done in schools also need to be made available in those contexts as a gesture of appreciation and as a way of improving teaching and learning.

6.4 RECOMMENDATIONS

The study finally recommends that:

Research question 1: How do student teachers view action research as a teaching and learning strategy?

- Lecturers should always plan well for effective teaching and practice of action research in ways that enhance active participation, confidence and communication skills of student teachers.
- Lecturers should take cognisance of the background and characteristics of student teachers in the teaching and practice of action research.
- Lecturers and school-based mentors should ensure that student teachers are not overloaded with work so that they have adequate time for action research activities.

Research question 2: What is the nature of action research teaching that is provided to student teachers at colleges of primary teacher education?

- The Department of Teacher Education and colleges of primary teacher education should ensure adequate time is provided on the time-table for action research curriculum.
- Colleges of primary teacher education, through the library should procure relevant current materials for action research and guide student teachers on how to access literature in the field.
- Colleges of primary teacher education need to provide student teachers the opportunity to evaluate the performance of lecturers in the use of action research. Such practice helps lecturers to get feedback about their performance and to see areas that need improvement.
- Colleges of primary teacher education through the Department of Professional Studies should craft a policy to sanction the retention of exemplars of quality action research reports for future reference by lecturers and student teachers.

Research question 3: How competent are lecturers in enabling student teachers to teach using the action research strategy?

- The Ministry of Higher and Tertiary Education, Science and Technology Development and colleges of primary education should ensure that lecturers that are recruited for primary teacher education have the requisite skills, knowledge and attitudes.
- The Department of Teacher Education and colleges of primary education need to schedule regular supervision exercises for lecturers and student teachers in the use of action research to ensure that appropriate principles are adopted and standards met.
- Colleges of primary teacher education, through the Staff Development Committees have to organise regular workshops and in-service training for lecturers.

Research question 4: What challenges do lecturers and student teachers encounter in employing action research as a teaching and learning strategy?

- Colleges of primary teacher education, through the Department of Professional Studies Syllabus C (PSC) should rationalise the number of student teachers allocated to lecturers for supervision and ensure that they provide tuition in their areas of specialty.
- Colleges of primary teacher education should avail micro-teaching and peer-teaching sessions to student teachers which afford them a chance to practice using action research in teaching and learning.
- The Department of Teacher Education and colleges of primary teacher education need to organise outreach programmes that are meant to appraise school-based mentors on action research principles and to forge partnerships involving DTE, colleges and schools.

6.5 LIMITATIONS OF THE STUDY

The study encountered some limitations which are discussed as follows:

The study was based on one college of primary teacher education out of eleven colleges that are spread throughout other provinces in the country. The school-based mentors could have been included in the sample of participants so that they elicit their views on the use of action research as a teaching and learning strategy.

There was difficulty in soliciting research data from some participants. The data collection period coincided with the time when lecturers were busy attending meetings that were organised by the Department of Teacher Education at the college. The Heads of Departments could only be interviewed when they broke off from meetings during lunch or prior to the start of meetings, which characterised the problem of the exercise. The distribution and collection of questionnaires from student teachers again was frustrated by the fact that they had no free time even for study. Lecturers occupied them with work, making it difficult to access them for the purpose of this study. This prompted the researcher to collect questionnaires either before the start of lessons in the morning or at the point of dismissal in the afternoon.

6.6 SUGGESTIONS FOR FURTHER STUDY

This mixed methods research on the challenges of using action research as a teaching and learning strategy opens up opportunities for similar studies to be conducted in the employment of qualitative and quantitative research designs. Action research can also be carried out about the teaching of particular subjects, topics or concepts. A related investigation with school-based mentors forming part of the study participants can also be pursued as another rich avenue.

6.7 PROPOSED MODEL OF ACTION RESEARCH AS A STRATEGY OF TEACHING AND LEARNING

This section presents a proposed model on how action research could be used effectively as a teaching and learning strategy.

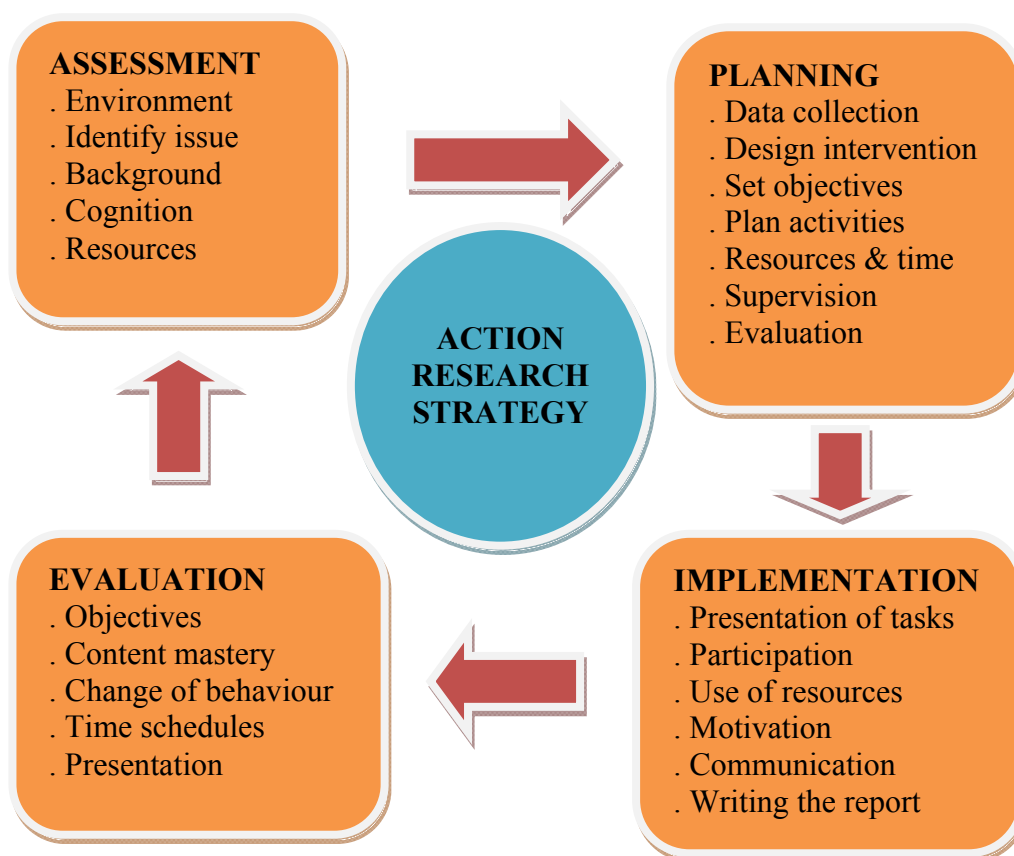


Figure 6.1: Proposed Action Research Model of Teaching and Learning

Figure 6.1 presents the features of the proposed model on how to mitigate challenges that confront lecturers and student teachers in using action research as a teaching and learning strategy as discussed hereunder.

6.7.1 Assessment

This stage involves an assessment of the environment in which the problem or topic under investigation resides. The issue of concern can emanate from the various practices and activities that constitute the curriculum. The identified problem is supposed to be formulated into a researchable question. This also has to be diagnosed, which is a process to establish its nature, extent and impact on teaching and learning. Brainstorming is critical at this point to ensure the issue of investigation is substantive. It is also vital to assess the availability of relevant instruments to access information which will provide direction to appropriate interventions. The required data can be collected formally or informally. Written work of student teachers in the form of tests, assignments and projects can be used to inform action. Questionnaires, surveys, and observations may be utilised to assist in identifying the problem that needs to be resolved or improved. It is also pivotal to consider the provision of resources for use during the action research process. Colleges of primary teacher education should avail suitable structural resources, teaching and learning materials, and services to address identified problems. This covers buildings, textbooks, internet facilities and a competent staff. The background of student teachers further forms an important part of the process as it helps to understand what they already know, their cognitive abilities and preferred learning styles.

6.7.2 Planning

Reflection is central in planning as in the other stages of action research. This stage involves thinking about the activities and processes needed to redress the area of concern. It focuses on the results of assessment to consider the instruments to collect data to be used to ameliorate the problem. In this stage, lecturers need to set achievable objectives and decide on the activities which can be done in the action

research process. It is important also to set the activities within reasonable time frames in order for them to be attainable. These activities have to be structured depending on the extent to which the previous one was achieved instead of lining up all the possible ones prior to implementation. The status quo requires all activities to be arranged before actions for improvement are done, thereby deflating effective action research practice. The resources also should be gathered and put in place in readiness for action.

The amount of time for the theory and practice of action research has to be adequate to enable student teachers to fully master the principles of the strategy. The nature of participation and collaboration demanded in action research are also crucial aspects of planning. Techniques for supervision and evaluation further constitute pertinent considerations for effective use of action research as a teaching and learning strategy.

6.7.3 Implementation

This stage involves putting into action the plans to redress the problem or topic. Teaching and learning activities are acted upon. Lecturers should provide effective instruction to student teachers, who in turn, must model their behaviour to present lessons during micro and peer-teaching sessions prior to deployment to schools for teaching practice. The competency of lecturers is critical at this stage. The presentation of tasks should be paced well to foster understanding. Activities to be undertaken by student teachers need to take cognisance of their characteristics and learning styles. They should provide opportunities for participation, collaboration and demonstration in a primarily discovery inclined engagement. Student teachers also have to interact meaningfully with relevant resources to ensure objectives are achieved.

Action research, as a reflective and creative process, desires that those who engage in its activities be motivated enough to sustain their efforts. While the urge to solve a nagging problem is in itself a motivator for performance, college administrations should find ways and means to boost activity in action research. Lecturers, for

instance, can be regularly workshopped and assisted to publish action research projects they accomplish in collaboration with groups of student teachers. Effective verbal and written communication should entail among lecturers, student teachers and between lecturers and student teachers to drive the process. Continual lessons in communication skills are preferred for student teachers, in addition to increased opportunities for practice as a means to enhance the use of action research in teacher education. Action research practice should culminate in effective presentation or reporting of results in the form of projects, posters, oral discussions or publication in journals.

6.7.4 Evaluation

This stage concludes the action research process but also provides a basis for the continual of the problem solving endeavour. It should focus on the extent to which objectives were achieved, knowledge of the issue of concern, principles of action research as well as the use of resources. The change in the behaviour of student teachers as a result of exposure to action research theory and practice must also be monitored. Lecturers need to continuously track the performance of student teachers as they engage in action research activities and account for the progress in relation to set time frames. There should be room for student teachers to evaluate the performance of lecturers in the conduct of action research instead of the current practice where only lecturers evaluate their students. It may also be ideal to evaluate student teachers both in practicals and written documents to come up with a comprehensive evaluation.

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APPENDICES

APPENDIX A

A SURVEY OF VIEWS OF STUDENT TEACHERS ON CHALLENGES OF USING ACTION RESEARCH AS A TEACHING AND LEARNING STRATEGY

SECTION 1: Demographical data

Kindly complete each item below by filling in the required information:

Gender: Male Female

Age(in years) :

Level of education attained :

SECTION 2: Statements that relate to the use of action research as a teaching and learning strategy.

General statements are listed hereunder. Choose a category that closely represents your understanding or perception with regard to the use of action research as a teaching strategy in colleges of primary teacher education by marking with an **x** in the appropriate space from "strongly disagree", "disagree", "undecided", and "agree" to "strongly agree".

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1. Action research involves working out problems in a step by step process					
2. I understand that this teaching method requires my active participation as a learner					
3. Action research activities require open and					

effective communication from participants					
4. Participation in action research has given me confidence and self-esteem					
5. I have gained individual and professional growth through the use of action research					
6. Teacher education has given me opportunity to use action research through micro-teaching and peer-teaching					
7. Lecturers using the action research strategy need to plan well before delivering instruction					
8. I feel they are adequate action research lessons on the college timetable					
9. Lessons on action research begin with clearly stated objectives.					
10. I am aware that they are different types of action research					
11. Feed back on the evaluation of my work does not take a long time					
12. Understanding of action research principles requires the use of high order cognitive skills					
13. I feel that students need to set clear goals for themselves as they engage in action research					
14. The use of action research requires the motivation of lecturers and students					
15. My background should be considered when action research is used in teaching					
16. I believe the physical structure and class organisation influence the use of action research in teaching and learning					
17. I have access to the performance of other students through sampled research works					
18. I feel overloaded with work to have time for					

action research.					
19. I feel students should receive continuous support from lecturers on action research while on teaching practice.					
20. Action research method calls for close supervision of both lecturers and students in the learning process					
21. The use of action research in education requires special knowledge, skills and attitudes from lecturers					
22. I feel that lecturers should receive regular professional development to enhance their abilities in the use of action research strategy					
The following research aspects present me with difficulties in employing action research strategy in teaching and learning					
23. Formulating a topic or interpreting given questions					
24. Planning and managing time to ensure tasks are completed on time					
25. Building a community of practice or establishing a working relationship with those that I work with					
26. Accessing relevant information and data sources to address questions for investigation					
27. Data analysis and interpretation (synthesising of available information)					
28. School-based mentors helped me to use action research in teaching and learning					
29. School-based mentors are knowledgeable in action research					
30. Mentors need to play an active role in					

helping students when using action research					
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APPENDIX B

INTERVIEW SCHEDULE FOR HEADS OF DEPARTMENTS ON CHALLENGES OF USING ACTION RESEARCH AS A TEACHING AND LEARNING STRATEGY

Background information

1. What is your age?
2. What is your level of education?
3. How long have you been in the lectureship post at the college?

Contextual research questions

4. How is action research taught at the institution to ensure that it is understood by student teachers?
5. How do student teachers perceive the use of action research as a teaching and learning method?
6. How important is it to consider the background and characteristics of students when using action research as a teaching strategy?
7. What form of support do you give to students as they use action research to write assignments and do project work?
8. What skills, attitudes and knowledge do you think lecturers should possess to adequately assist student teachers in action research?
9. Which aspects of action research do you think present the most difficulties to student teachers?
10. What other challenges do you see as affecting lecturers and student teachers in the use of action research in learning and teaching?
11. What challenges have Heads of schools and mentors mentioned as impacting action research practice by student teachers?
12. In what ways can the use of action research in teaching and learning be improved?

APPENDIX C

INTERVIEW SCHEDULE FOR THE PRINCIPAL ON CHALLENGES OF USING ACTION RESEARCH AS A TEACHING AND LEARNING STRATEGY

Background information

1. What is your academic qualification?
2. How long have you served in this post as principal?

Contextual research questions

3. How is action research taught at the institution to ensure that it is understood by student teachers?
4. How do student teachers perceive action research as a method of teaching and learning at the college?
5. What aspects do you think are important in the teaching of action research to student teachers?
6. Why do you think it is important for student teachers to set goals for themselves, believe in their capacities and regulate their performance when engaged in action research?
7. (i). What skills, attitudes and knowledge do you think lecturers should possess to adequately assist student teachers in action research?
(ii). How do you think the skills you identified above can be developed and improved?
8. How important is the DTE policy on action research and other course materials (course outline, action research guides and lesson plans) in the teaching of action research to student teachers?
9. What do you see as challenges of using action research as a teaching and learning strategy for lecturers and student teachers at the institution?
10. In what ways can the use of action research in learning and teaching be improved?

APPENDIX D

DOCUMENTARY ANALYSIS ON CHALLENGES OF USING ACTION RESEARCH AS A TEACHING AND LEARNING STRATEGY

This instrument reviews college policy on research, course outlines, research guides and lesson plans.

College policy on action research

- The explicitness of the policy on the teaching of action search in colleges of primary teacher education.
- The existence of set structures for the running of research at the college.
- Outline of values which action research seeks to develop in students.
- Setting of time frames on which research should start and end.
- Provision of guidelines on how students should be supervised and evaluated/assessed.

Course outlines

The focus will be on the following:

- Number of times lessons on action research are planned per week.
- Components of action research to be taught.
- Sequence in which the components of the research are organized.
- Distribution of lecturers on the course outline.
- Methods/strategies to be used in teaching.
- Relevancy and currency of suggested sources.
- Period covered by the course outline.

Research Guides

The analysis will centre on the following aspects:

- The evidence of all the relevant aspects of action research.
- The specification on the period of time to be spent at each aspect of the research process.
- The level of detail that is reflected in the proposal guide document.
- The identification of preferred student behaviour, skills and attitudes for success in conducting action research.

Lesson plans

The review of lesson plans will take note of the following important elements:

- The relation of the topic with the broader action research curriculum.
- The stating of objectives for the lessons.
- The selection of methods to be used as instructional techniques.
- Location of sources for gathering data.
- Guidance on organization or classification of sourced materials.
- Suggested ways in which research results are reported (feedback).
- Evaluation/Assessment of the lesson

APPENDIX E

CLASSROOM OBSERVATION GUIDE ON CHALLENGES OF USING ACTION RESEARCH AS A TEACHING AND LEARNING STRATEGY

Instructions to the observer

Observe closely and intensely the relevant settings, behaviours and activities focused on in this study.

Location.....

Date.....

Physical setting

Observation aspects	Comments
Closeness of classrooms to each other	
Amount of space for lecturer and students	
Type of desks and chairs	
Arrangement of furniture	

Human setting

Observation aspects	Comments
Composition of groups	
Nature of group activities	
Amount of student participation	
Level of group discussion	
Teaching position of lecturer	

Interactional setting

Observation aspects	Comments
Level of lecturer-student interaction	
Lecturer knowledge reflected	
Student interest and motivation	
Nature of communication	
Sharing of resources	

Programme setting

Observation aspects	Comments
Clarity of topic/question	
Objectives of the lesson	
Use of teaching/learning resources	
Time management	
Feedback of lesson activities	

APPENDIX F

THE PRINCIPAL: CONSENT FORM

CONSENT FORM FOR INTERVIEW

I....., consent to participation in interviews designed by Buyisani Dube for his study on: Challenges of Using Action Research as a Teaching and Learning Strategy: A Case of a College of Primary Teacher Education in Zimbabwe.

I understand that:

- Participation is voluntary
- As an individual, I may withdraw from the study at anytime.
- No information containing my identity will be included in this research report, and my responses will remain confidential.

Signed :.....

Date :.....

APPENDIX G

HEADS OF DEPARTMENTS: CONSENT FORM

CONSENT FORM FOR THE INTERVIEW

I....., consent to participate in the interview designed by Buyisani Dube for his study on : Challenges of Using Action Research as a Teaching and Learning Strategy: A Case of a College of Primary Teacher Education in Zimbabwe.

I understand that:

- Participation is voluntary
- As an individual, I may withdraw from the study at anytime.
- No information containing my identity will be included in this research report, and my responses will remain confidential.

Signed :.....

Date :.....

APPENDIX H

LECTURER: CONSENT FORM

CONSENT FORM FOR CLASSROOM OBSERVATION

I....., consent to participate in the classroom observation conducted by Buyisani Dube for his study on : Challenges of Using Action Research as a Teaching and Learning Strategy: A Case of a College of Primary Teacher Education in Zimbabwe.

I understand that:

- Participation is voluntary
- As an individual, I may withdraw from the study at anytime.
- No information containing my identity will be included in this research report, and my responses will remain confidential.

Signed :.....

Date :.....

APPENDIX I

LECTURER: CONSENT FORM

CONSENT FORM FOR DOCUMENT ANALYSIS

I....., consent to participate in the documents analysis exercise conducted by Buyisani Dube for his study on : Challenges of Using Action Research as a Teaching and Learning Strategy: A Case of a College of Primary Teacher Education in Zimbabwe.

I understand that:

- Participation is voluntary
- As an individual, I may withdraw from the study at anytime.
- No information containing my identity will be included in this research report, and my responses will remain confidential.

Signed :.....

Date :.....

APPENDIX J

STUDENT TEACHER: CONSENT FORM

CONSENT FORM FOR QUESTIONNAIRE

I....., consent to completing the questionnaire designed by Buyisani Dube for his study on : Challenges of Using Action Research as a Teaching and Learning Strategy: A Case of a College of Primary Teacher Education in Zimbabwe.

I understand that:

- Participation is voluntary
- As an individual, I may withdraw from the study at anytime.
- No information containing my identity will be included in this research report, and my responses will remain confidential.

Signed :.....

Date :.....

APPENDIX K

LETTER OF INTRODUCTION

University of Venda
School of Education
Private Bag X5050
Thohoyandou, 0950

My name is Buyisani Dube, a registered Doctor of Education student in the Department of Curriculum Studies at the University of Venda. My area of study is on the challenges of using action research as a teaching and learning strategy in primary teacher education. This study was inspired by the realisation that research informs teaching and that teachers need to enhance their teaching and the learning of students through being well grounded in research principles.

Participation in this study would involve the principal, heads of departments, lecturers and student teachers. Interviews which are expected to last 20 minutes would be conducted with the principal and 9 heads of departments. Lesson observations would be conducted to assess the teaching of action research and how it is used in the teaching and learning at the college. Questionnaires would be administered to the student teacher sample.

You are assured that participation in the study would be voluntary with information obtained in the process kept in utmost confidence and used solely for the purpose of this study.

Yours Sincerely

.....

Buyisani Dube

APPENDIX L

TRANSCRIPTION OF INTERVIEWS WITH HEADS OF DEPARTMENTS AND PRINCIPAL

Participant 1

1. Age: 54
2. Level of Education: Master of Counselling
3. Experience: 7 years
4. Right, in our institution, action research is the baby of Professional Studies Syllabus C (PSC). Those are the people who initiate students into action research, then they allocate them to supervisors and us as supervisors develop them on how to tune their topics, how to make research questions and just going through the research project.
5. Mm, you know with this action research it does not seem like the students really understand it very well. You ask them what are the challenges in the classroom, what is it you have seen that you think needs to be filled. The gap that you have seen. They will tell you that no, I dont know but I just want to do this topic.
6. May be for us as an institution, it will be difficult to consider this issue of background because we want all of them to do action research. If we start to consider the background you might find that some of them should be exempted from doing research. Because, may be, where they learnt they had no library.
7. Mm, normally, we help them from the start. From helping them to identify the problems that they have in the classroom that (they) think would need us to

action on. Then we encourage them to also read, to review literature. We help them also with research questions. We need to really teach them on coherence of the whole work so that this thing is flowing.

We don't visit them. We normally ask them to come when they think they have a problem so that we can clarify the problem. They normally come once a month, and preferably when they are supposed to be submitting their assignments, and may be, when they have money to come. When we go out (on TP) we don't go out to see our students specifically on their projects, up until, may be, you meet your student there and then you have time before the car comes so that you talk to them about action research.

8. We also need to have the skills ourselves in action research because we are saying as we teach here we should also be doing action research with our students. And I don't really know whether we have some skills on this action research thing. We need that skill of developing the whole write up to reporting. And even at times, you find that some of us don't have those skills because, may be, by the time we went to college ourselves, we just did the same project haphazardly like the same students.

When these children come here they are a bit raw. You are teaching the child all over, instead of just having contact with them when they know. They should be coming here with some bit of light, but some will tell you I don't even know the difference between action research and traditional research.

(It creates an attitude) To the lecturer to say ha but these students are not serious about themselves, especially on research, because to us it's almost like double work because we don't really have time to do that. Like right now intake 43 is here, they are finalising their projects, I don't have a time slot to say now intake 43 is my student for supervision they are going for research. They will knock over lunch, over break, over any time and some of them will even say madam can I come to your house so that you read my research. That becomes a bit hectic.

Mm fine. We have done our projects in the past but you will find that we are still learning especially with this action research thing. Lecturers themselves need to be educated about this thing so that they are really hands-on. Students will bring their work and you don't know whether this is correct or not correct. I for one, when I started with this action research, I did not understand it myself. We lecturers should have been taught research because you can't assume that because I am a lecturer, then I know research. I may have learnt it the hardest way myself.

(On workshops) I can't remember any one of its kind, even in 2015. May be, in the past 2013 or 2012, but from there it has not been regular. People just believe that everyone knows, but you will find that there are even some lecturers who are knew here who have not been introduced to that, but they are given 13 to 14 students to manage and they have never been into that workshop.

9. Mm the students do not go back to their research questions, even to their literature review. They think in literature review they are just saying what other people have said.
10. The students have a lot of anxiety about it. They are not too sure about what they are doing. And again, the lecturers themselves are not very sure of what the students are supposed to do, that is why you will find that there is no movement. I think it is the knowledge that we are lacking for both the lecturers and students.
11. They don't know about it. They say the project is your baby. Mine is, may be, to look at the schemes. There is really a gap between the practicing schools and the requirements of the college. Now it should be a trio; the college, the mentoring school and the student. That combination is not there. I also come on TP as a visitor and those members are not inducted on the requirements. Some of them don't even know that those students are doing projects. Who

tells them other than the student. And sometimes you find that even that student is not telling the mentor so that the mentor can help. May be what they know is that this is my project, I will be going to my supervisor. It's my business and the college because research here is partial fulfillment of the course.

12. May be, we need a lot of workshopping on action research from the lecturers themselves. PSC should beef up the level of preparedness of students before they allocate them to lecturers

They should even be able to see other projects. Here, students write their research, then after marking those old students take their projects, nothing is left for other students just to refer. I think, we should improve by saying instead of a student submitting one copy they should submit 2 copies or 3 so that I also remain with some copies.

Participant 2

1. Age: 56
2. Level of Education: Master of Education
3. Length of service: 7 years
4. We have a group of lecturers who give basic theoretical framework to the students during their residential phase so that when these students are allocated to lecturers they can maneuver from there. They are given in-class instructions. We only have one period a week (HOD2).
5. They don't like it. They see it as torture. They say it is too involving in terms of effort at times and they don't even see the purpose of having it. Yah, I haven't heard any one echo such sentiments (that it improves their professional skills, participation and discussion skills).

6. I think it is very important because if a student comes from an enriched environment then they are certain aspects that can assist the student to cope up with this programme. Some want to be assisted as individuals, and if you teach students in large groups some don't even get what to say. They need individual assistance. We used to teach them in smaller groups but due to shortage of space we are teaching them all at a time in a tent outside.

(On micro or peer-teaching) No, we don't do that. We have never done that.

7. We give them handouts. We even give them any other additional material that is relevant to action research. We photocopy and give them when they are at college so that they take it with them for TP.

8. I think they should be positive about action research because if students see that the lecturer is positive, they are also likely to be positive in a way. They give attention to action research in the way they conduct it. Lecturers are generally knowledgeable because the Department of Teacher Education (DTE) came and mounted a workshop for us as a staff on how to teach action research. (On workshops) Ha, rarely, we had this only once...once.

9. To understand the meanings of data presentation, analysis and interpretation is confusing to students. These are some of the hassles.

10. Very demanding, action research is expensive in time and effort. To students, coming to college and spending a lot of money in terms of bus fare to and from college. We have a heavily congested time table and at times we tend to hate their coming especially considering their big numbers.

11. They are saying they are not knowledgeable. They don't know what action research is all about and they cannot help our students on how to write action research. They always say action research creates a lot of problems. It overburdens their teachers. Instead of working on school work the

student will tend to divert and work on action research. So that is one of the problems. At times they can even dodge from the school to come and consult without permission.

Mentors say instead of marking you find a student writing action research. They always question. They are not interested. They are saying they never came through it. Therefore, for something that anyone did not come through, it's very rare for someone to like it. It's a new introduction.

12. I think action research can be improved by way of mounting frequent workshops for teaching staff in colleges and also for mentors and Heads out there so that they are also equipped with the skills. There is no direct exchange of ideas between college and schools and this incapacitates some of the mentors and teachers there. If they are shallow they cannot be able to assist the students.

Participant 3

1. Age 42
2. Level of Education: Master of Education
3. Position: 10 years
4. Action research is taught through lectures, students are taught on how to carryout action research when they go out on TP.
5. In the beginning they find it difficult to embark on action research, but as they go on during teaching practice some of them find it interesting, that it assists them to solve some of the problems they find in the classroom. So the benefit is that it acts as a problem solver in the teaching and learning process. In a way, I can say there is room for creativity and innovativeness.

6. I think the background is important in the sense that if you just take a student who does not have any understanding of what action research is all about, it may be difficult to go and implement it.

A student should go out there on teaching practice, teach the class and should be able to identify problems that are emanating from the class or any gaps that are there.

7. We give moral support to students. They need to be given confidence that action research is not a monster. It is actually a tool that we as classroom practitioners can effectively use to solve problems that we are having in class.

And we also try to support them in terms of, may be, indicating the resource materials that they should read so that they are quite aware of what action research is all about, referring them to libraries where they can get books, journals and other things to read for enrichment purposes.

8. Lecturers should have supervision skills and writing skills. He/she should be in a position to do that action research himself/herself, so that he will be in a position to guide that student that he is working with.

Lecturers should have a positive attitude towards the use of action research in the teaching and learning process. Once lecturers have that positive attitude, they will be able to impart the same attitude to the students. So we need the knowledge for use to solve the problem that we would have identified either in the lecture room or in the classroom.

9. I think the most difficult thing for students here is the problem identification. Students are failing to identify the problems. (When) they are teaching in the classroom they fail to realise the gap that will be existing so that they try to solve the problem using action research.

In addition to that by failing to identify a clear problem, in the long run students fail to come up with a proper or correct research topic.

10. Action research seems to be a very good approach to teaching and learning but, I think, the major challenge that we have as lecturers is the time constraints. During the teaching and learning process we may identify problems that are there in the classrooms, but due to (lack of) time to draw up proper action plans to try and solve that problem, it will remain unsolved. I think, basically in our practice, we may be using action research without knowing, that is the other challenge that I am seeing.

(Mindsets) Once the mindset is changed, it's actually a benefit for students to use action research during TP because it enables them to solve problems they will be finding in their teaching.

11. Mentors and heads of schools have often indicated that they don't know how to assist these students. They don't know what action research is all about. As a result students do the work on their own without getting any assistance from the mentors and the heads because they will be telling them that they don't know all this.

So mentors should actually support the students and they should actually guide and assist to say if this is the problem that you are finding, may be, this teaching strategy can assist, this teaching media if put into place can assist. The role that they play in the day to day activities as they are mentoring the students also comes in as far as research is concerned.

12. All the stakeholders, the lecturers, mentors and students should interact through workshopping each other so that at the end of it all a fruitful action research is done.

I think, basically, we need to see students practicing this action research before they go out on TP. In our lectures as lecturers, we should start using

action research to give students that room to practice how to solve problems when they are in the college before they go out on TP. When they go out they will be knowing what to do after they will have done it at college.

Participant 4

1. Age
2. Level of Education
3. Position
4. Let me say, action research is taught under a department known as Professional Studies (PS). There is a subject area known as Professional Studies Syllabus C that basically looks at how topics are formed, how problems are identified and how research is conducted throughout. They basically teach all the college on the foundations and basics of research.
5. Some think that it is a mere requirement to fulfill the course as it were and you are given a diploma.
6. We are products of the situations that we grew in or under. At times my background might influence the way I perceive things. Certainly, we are saying our background has a bearing on what we are researching about because human beings are made of attitudes, attitudes are founded out of situations and when you interrogate, investigate or research on a certain situation you certainly have sound attachment to it, either negatively or positively depending on our background. Some are extroverts and are outgoing. Those are people who would like to engage, get involved, get hooked up in social groups. Some want to live by themselves and are not outgoing, which is not good for action research.

7. We are involved certainly from the word go because the project is a two men thing, it is the researcher and the supervisor's product at the end of the day. We are involved right through to the end of the project. That is the support we give. Actually, what we are doing, probably because of the lack of resources, that they identify their problems right in schools and they will come and tell you what you have not experienced. One other good method would be, if lecturers were also going to get into the classrooms and see the problems emanating from the general teaching, then you agree that certainly there is a problem. But the problems are identified by students and some identifying problems that are not in existence.

Yes, yes, yes, a participative approach where we are also saying we experienced that kind of problem. For a lecturer certainly, you dont need to have 3 weeks there but you can tell there is a problem even from one lesson, equally as the student who has experienced it for probably few weeks, month or 3 months

8. Eh eeh, as for skills, you certainly have to be a researcher yourself, know what research entails. You must always have a correct or positive attitude towards both the student and his or her work so that you are able to help.
9. Ehh, the actual implementation, how to go about solving the problem. And this has to do with the actual teaching methods, the actual exercise given, the tests given, all instruments that are involved, the exercise books, whether the registers are there and the marking of the work. Some leave out very important instruments that would have given them the required data.
10. The other challenge is that at times the lecturers are made to supervise topics they have no interest in. Students are doing it out of necessity, it is a question of saying it is one of the requirements in the fulfillment of the course, if I dont do it I won't pass. The other challenge is that at times the lecturers are made to supervise topics they have no interest in, They don't have the enthuse to

carry out a research. The lack of love for research is the undoing of most supervisors and supervisees

Yes there will be a motivation, that enthusiasm to create new knowledge and boast of possessing that knowledge. It is me exactly that brought this up.

11. They always say action research creates a lot of problems. It overburdens their teachers. Instead of working on school work, the student will tend to divert and work on action research. At times they can even dodge from the school to come and consult without permission.

So the head sees it (research) as their thing, something that belongs to the college. It has nothing to do with the day to day running of school institutions. When the recommendations are made they are supposed to make the school grow but that connection is not there. That is why the teachers, the mentors and the heads at the schools also have a negative attitude towards these things, because at the end of the day they seem not to benefit anything.

(On staff development) We need to constantly remind each other to staff develop each other on how to conduct research and how to supervise researches that are conducted by students, but in the majority of cases some of these things are only said than done. There is a lot of singing, we need staff development but practically there is really nothing that is being done.

Even though we have a Research Unit in the college that constantly meet, it is only those who belong to the research committee who are active but the rest of the lecturers who supervise these projects are not yet members of the committee, hence there is need that they be constantly reminded on the latest trends in so far as research is concerned.

12. There is a lot of singing, we need staff development but practically there is really nothing that is being done. We need to staff develop each other

regularly so that we sing from the same hymn book when we supervise these projects.

Participant 5

1. Age:55 years
2. Education: Master of Education
3. Experience: 10 years
4. Action research is taught in Theory. At some time, we gave an assignment on research proposal where we asked some supervisors to mark. It was a once off situation as a result of many constraints. Our research assignments are not presented as part of course work as there is a feeling that, may be, we are using a lot of students' time when we are giving that assignment before proposals. It was then resolved that each individual lecturer will take charge of his or her own students' proposals.
5. I have heard, my students are very satisfied (with action research) compared to the conventional research because most of them are very poor in literature review, where you find that they are plagiarising, they are not acknowledging their resources.
6. It's unfortunate that when we teach them most of them have never taught. They have never been exposed to teaching challenges in the teaching situation. It would really be beneficial if they would understand the meaning and rationale of action research after they have had a feel of teaching practice. This is my feeling. So we teach them from a vacuum. You see, it's so abstract to them.
7. Ok, we prepare them hand outs in the form of a guide for a research proposal and we also prepare a handout for a research report. And then we also ask them to come for consultation at least once a month during their term of

teaching practice when they are doing the projects. And when possible, the supervisors when they go out they also rub some shoulders with students. We have said they should be free to seek help from any lecturer or supervisors when they come around.

Mmm, You mean as models, may be the clinical approach. Where we sit together and say, this is not good and may be try and go back. They will be constantly changing and analysing. They will be going back and forth. So it is not very rigid, it's more of a clinical thing

In some cases, I have said Yes, I delay my students too much in a certain phase because when he comes back, I discuss with him or her that don't you think this is lacking. I listen to the students' understanding of his or her own problem with the pupils or what the challenge is with the pupils and then I think at times this was not the best way. This could have been better why dont you also try this or also that.

8. We should be competent in actual research skills that are basic. I really think at times, we really dont treat students well.
9. Ehh, I think the major challenge that I have observed is, dialogue, creating understanding with each other. They (student teachers) put in very little understanding, the flesh that will make me see what major interventions they were able to come up with. Telling in detail what strategies they were using, the media and so on, how students were interacting. May be paying attention to the little reactions children make during the lesson and being critical and analytical why this is being so

May be, being critical of what their pupils are doing and paying attention to the little reactions children make during the lesson and being critical and analytical why this is being so.

10. There is the time limitation factor. And some students have said that time is not permissible looking at some obligations that they have towards TP and the fact that they cannot have pupils 24/7. There is a time when children should dismiss and sporting activities. The idea that action research should be carried out as they teach makes it become very difficult. We talk about it in theory but we have not demonstrated it ourselves.

Micro-teaching time is only one or two days and you are done. Now they go out on community teaching for two weeks. The first week they are just seating there to know the situation, looking at records, seeing how the mentor is teaching and trying to teach themselves. They will have hardly identified a problem then they come back to college. We say they identify a problem after they stay for a month or two.

11. Mm, they may not have really mentioned them soundly per se but those that do they are always saying we dont know how we can assist these students. Some of them, if ever they did research, they may either have forgotten or, maybe they did not do the kind of research like action research we are doing these days. It depends on whether the head is studying or the mentor is studying to keep abreast with research.
12. May be, if the concept can be accepted in skills so that it's not just used by students who come for TP to solve teaching problems, but they also use the research approach as well in practical day to day activities, as a way of teaching like they do with cyclic method of teaching reading. So that it's not a college thing alone.

Participant number 6

1. Age: 61 yrs
2. Education: Master of Education

3. Experience: 10 yrs
4. Ok, the way I see it being taught is that we have the theory part of it which is done by the PSC, and then we have students being assigned to different tutors to do their research and these are the ones who supervise them throughout and then later on when they come back after teaching practice they are supposed to have completed their research.
5. Normally they find it difficult, they think it is much theoretical. What they are saying is that if we could first of all, after giving them some theory, allow them to work in groups to do some mock researches under the guidance of lecturers. They are looking at this research as a requirement by the college, that you have to do research after that you are going to submit a complete research. They say they have no access to some complete researches and they don't see the practical part of it.

I wouldn't say really that they have seen the benefits. They are looking at this research as a requirement by the college. As more of compliance than an activity of somebody trying to find out answers to questions

6. Yes, I think the background really matters. I think they are like this because they haven't seen people researching. If they (student teachers) have been taught by teachers who were researching and have seen the benefit of research then they will be having a different outlook. But they haven't seen this being applied. Teachers out there don't research and thus their background. To them knowledge is already there, and you are not going to add anything to what is there. And it is there in books. Everything is already done so you are not actually creating knowledge.
7. Well, I think the support that we are giving is that of individual tutorial and that of mentorship throughout their stages and then much will depend on how much they have contact with us because some disappear and appear much later and they are not in a position to be assisted.

Where they have friends out there, ones who are qualified will give them complete projects... marked by somebody else within a different context, so they would like to import that and use it.

8. Well, I think they should be skilled researchers themselves so that when they teach about research they are very practical about how they approach it. But then also you will notice that the problem with lecturers is that they have varied opinions about what research is about. And at times they themselves are not very clear and so this will impart on how students will do the research. Now they are not really motivated to research, actually they are scared, they do not really believe they can research.

Lack of confidence yah, and where they have attempted their pieces of work have been disastrous.

Yes, they should be having a positive attitude towards research. They should be leading by example, researching and also once they are that positive they can also collaborate with students. I think what is important is to have that mindset of saying we are not doing it for the diploma, we are doing research for knowledge's sake.

9. Well, I would say basically the whole process because they will have problems with especially the coining of topics. Now if you look at most of the projects, the topic is presented as the problem where as the problem should be quite separate from the topic. So most of these you find where it's said topic, something is stated as the problem and where the problem is required, the topic is given again. Do you see, I think we have a problem.

In coming to instruments again, well, they still have a problem on which instruments to use, then the reason why you are using more than one instrument or you are just using this instrument, then perhaps another, when I get bored then I stop.

Then the data analysis again is a serious problem because thus where they start writing what they believe they know away from data gathered. So we still have a problem on the link now of the literature with the whole process.

10. Yes, well, the challenges we are having are that we are not using it here where we are researching, where we are getting some results. We talk about action research, something that is out there which they (student teachers) should do when they go out (on TP) whereas here we have nothing to do with action research. We are into the theory part of it without results that we can also use to plough back into our own processes.

Once results are found, they are never shared with any one, say, the mentor or school. They are shared with the person marking, thus that thus a serious challenge we are having because the results should be used and , I think, thus how we can get the schools being motivated to assist to be part of the research because the research would have been done in schools.

But then they (students) have got hindrances when it comes to language, actually I find it important in as much as they will need it to understand the various stages. And then also when they are collecting data, they need to communicate so as to get what they want, and then in the phrasing of the questions also.

11. Action research practice, well I won't say they have said anything because they are not part of it. They look at themselves as not being part of it. I went to one school to find out whether they knew that our students were doing action research and they said we know there is something like that, but they have never consulted us about what is happening.

If you discuss with the mentors they are actually connected to what the schools are doing. The students are doing college work but actually the research is happening at their schools but they are saying we know that they are doing research products with their lecturers. It's quite disconnected from

the school where as it should be something that should benefit the school. Meaning that also after completion, the qualified teachers have nothing to do with research. This is a college thing.

12. I think, we need to start here at college. Eh eh, when we are teaching these students, as they have suggested, that they need to have some practice. We must work with them while they are here doing some mini projects.

And also we get most of our lecturers (as being) involved in action research so that when they are talking about whatever they are teaching in action research it should be something that is practical and we make use of this.

We need some outreach especially with the mentors so that they appreciate what is required of them in the project. They should be part of the system. It should not be a question where we are saying we are only getting data from the school and we have nothing to do with the school and the mentor and the children. The children should be benefitting, the mentor should be part of it, the head and even the clusters of schools should actually be working together sharing these ideas, but it's not like that.

Participant 7

1. Age: 38 yrs
2. Education: Master of Science Degree in Peace, Leadership and Conflict Resolution
3. Experience: 6 yrs
4. When students are enrolled at the college they are taught eh action research during their first two terms of residential course. During that period they will be introduced to the concept of action research, the research design and types of action

research. They are also taught the research methods especially the instruments they will use to collect data as they go on TP

5. Action research is quite helpful to the students because it helps them to solve problems as they emanate in classroom situation because it is problem based. They actually benefit through collaboration. Because they are able to collaborate among themselves as students, collaborate with pupils and also collaborate with their mentors to find a solution to problems which will be affecting either themselves or the pupils whom they teach.

6. Eh.. it is very important to know the background of the student teacher when you are using action research because it actually enables the educator to move from what the student already knows to what he or she does not know, so that creates a common ground between the educator and the student. Since action research is participatory and collaborative in nature, you need to actually stimulate that among the student teachers so that they learn to work together, find a common solution to a common problem affecting them.

7. They are also referred to journals, they can get information from the internet on action research as well as text books in the library, so thus the support they are given while on campus and out of campus. Normally, before students leave to embark on their TP they are given research proposal guides and research report guides which would help them to write research proposals and then after they have collected data, they will use the research report guides to write the actual research reports. These documents are revised from time to time because they might have gaps, so they are revised after every intake, new inputs are put into those documents to perfect them.

8. Lecturers as educators of student teachers need to be pro-active in the way they supervise action research. They need to interrogate the student teachers to find their background, their problems and their concerns so that they can assist the students properly. They also need to have analytical skills so that they are able to identify problems and find solutions. Eh, it would be appropriate for the lecturer to also go

into the schools and observe to students teaching a particular lesson as a way of solving that problem, unlike the approach where by the lecturer receives data from the student without having contact with the class.

(On supervision skills) Yes, the clinical type of supervision is needed so that the student and lecturer plan together and implement together and discuss a after and map a way forward.

9. Eh, normally student teachers have problems with data collection and presentation. Since action research is qualitative in nature it requires them to have narrative thick descriptions as they present their data but in most cases they switch on to quantitative type.

10. Most of the lecturers have problems with the supervision of action research since their background has got a gap, they are not exposed to action research. Some of them were exposed to applied research and traditional reserach hence action research is coming in as a new research paradigm.

11. Most of the mentors were not workshopped in action research. They are not well versed in action research and most of them are saying they cannot help the students because they are not aware of what they are expected to do.

Yes, they are not aware of their expectations in the supervision of action research. They are not knowledgeable some of them because they were not exposed to action research during their training.

12. Eh, there is need for collaborative work with the student. The educator needs to collaborate with the student whom he or she is supervising so that a clinical type of supervision obtains in the colleges for action research to be effective. Then in the schools the mentors and heads of schools need to be workshopped on the systems of action research so that they assist the students meaningfully. As of now some of the mentors and school heads are not aware of their expectations in as far as action research is concerned, so they are not helping the student meaningfully.

Participant Number 8

1. Age: 49

2. Education: Master of Development Studies

3. 12 yrs experience

4. Eh, we have got, a department which is responsible for that, the PSC so there is a slot that is once a week when students are taught how to carry out action research.

5. Mmm, I don't know, ...they do seem to have problems... whether that is to say they do not understand or they dodge lessons because there are many factors that can occur to cause that but I think their level of understanding shows that they have problems.

Okay, yes, some say they benefit because they end up helping pupils in writing essays.

6. It's not always the case that a person must have a background about a concept, you always learn new things. Some things will be new, so I don't think there is a problem as long as they are probably taught in the PSC

I think, yes, it's important that you consider those (learning characteristics) but at times even those who do not like to be engaged in exchanging ideas their presence there will help them somehow. A person can be quiet but being with those who are able to discuss or share ideas with others, he or she can benefit from those.

7. Okay, I think the form of assistance we give is that of explaining to them where they have problems. Right now, as we speak, we don't have a sample of the projects displayed in the library which the students can make use of, where one has not

collected, thus when you can help the student have a look at how others have done it.

When they are out there (on TP) we ensure that they continue engaging in action research by way of giving them guidelines, like in the PSC department, they are given handouts when they are guided on how they can go about it. We then further explain so that they understand. I think, the guidelines are fairly detailed

8. Yah, I think thus a good question because I have seen there are some lecturers who seem not to be knowledgeable in action research. You find a person has a degree and has a problem interpreting those issues, I just fail to understand. I think it's a question of attitude where a person feels is being overloaded or does not want to take time to understand that, but I also feel that the department needs to give us some workshops so that we understand.

It's a question of one not wanting to read because the books are there, especially the reserach books are there. And even with the advent of this technology, if there is something you don't understand on action research and you find it's written, there is quite a lot of information on action research, so it's a question of attitude, may be laziness.

9. You find they are not able to give detailed explanations or analysing what they came out with when they were implementing their action or action plan.

10. The challenges now are on topics, you find the same kind of topics. I think that is a challenge especially for students and us. If you find students coming up with the same topics then it means we are not moving headway.

11. Ya, I think thus a good question because I have always noted that the Heads and some mentors did not do this kind of research and so when students are in need of these you find that they dont get that knowledge because they will tell them NO, we did not do this, we did traditional, so it means the students get assistance from supervisors only yet in a normal situation we are expecting that they can get help

from those. The moment they say can you help us, they will say I am not well versed in this, you see your supervisor, I dont know anything about this.

Okay, Yes they are problems because Heads do not allow them to come to college as they would want. Heads would be saying you are running away from doing your duties in schools. To a certain extent, they need to visit libraries and get to places where there is internet connectivity so that they read widely on what they want to research.

If they would be given practicals to do before they go out, suppose you are in a class, just think of any problem and then those sessions together (peer and micro-teaching) highlighting what they are supposed to do before they go out. That way I think it will help them understand action research better so that they do not have problems when they go out.

12. Yah, I think that is an area (workshops) which I think needs to be spruced up because we have them there put in the time table, but then you find that you don't have time for such things. But I think, if we are to come up with sound action research, we need as lecturers to be staff developed so that we get those skills, then the attitude will also change because in most cases a person will have an attitude because he is not knowledgeable.

I think the ways in which it can be improved is by way of having workshops with someone who is knowledgeable so that they can get all information. As supervisors we are supposed to have sound knowledge on how to carry out action research. Students should get adequate knowledge before they get out to schools and being given books that talk about action research.

Participant 9

1. 35 yrs

2. Masters of Special Needs Education

3. 3 yrs

4. Our institution holds lectures on research skills and these skills are taught by selected lecturers. When students proceed for teaching practice they are allocated to different lecturers who will supervise them as they conduct action research.

5. Student teachers view it as a method that caters for individual learning differences because through action research learners are afforded an opportunity to master a skill before proceeding to master another one which could be more difficult.

Right, students learn to be patient through the use of action research and these are also taught or assisted to consider the views of other teachers who are more knowledgeable in the concepts and this is called high profile team teaching, where by the student teacher or her teacher would seek the expertise of another teacher in actually teaching another concept.

6. Students need to be patient because this is a kind of a slow teaching method that caters for individual differences, so only a patient person will be able to wait until has mastered the concept before moving to a more difficult task.

7. Our college has books on research at the library so they use those when they write their assignments and they also use knowledge that would have been imparted to them through lectures. And when they start doing project work they are given guides, the proposal guide and the action research guide. And during the process of carrying out the research they visit the college monthly to consult their supervisors.

8. Lectures should have research skills, guidance skills, supervision skills and counseling skills. And then for the attitudes, I feel that lecturers should have positive attitudes to every student and consider the fact that their students would not master concepts at the same time, they should actually have that room that celebrates the differences that exist among the students.

9. They find it very difficult to formulate researchable topics with regard to action research.

Most students have alluded to the fact that action research demands fewer students than those that they have in their regular schools. Our teacher/pupil ratio is one to 40 and to carry out action research with 40 pupils within a stipulated time of 30 minutes seems to be a challenge to most of our teachers. Action research demands that you attend to individual differences.

10. The time allocated for action research does not seem to be so adequate at the college. Yes, the time allocated even on the college time table for research itself, not even action research only, but for research skills, I feel it is not adequate that is why at times most of our students would go out on teaching practice without even fully mastering or grasping the concepts that surround action research.

11. Heads... did not do this kind of research and so when students are in need of these you find that they don't get that knowledge, so it means the students get assistance from supervisors only yet in a normal situation we are expecting that they can get help from those.

The moment they say can you help us, they will say, I am not well versed in this, you see your supervisor, I dont know anything about this. Their sole helpers are the supervisors and so they will be always forced to come to college to seek information or guidance because at schools there is no one who would be in a position to help them.

12. I think action research can be improved by providing resources that would facilitate its smooth running.

INTERVIEW WITH THE PRINCIPAL

1. 50 years

2. 20 years

3. Research is allocated an hour's lecture per week. Lecturers prepare lecture notes for presentation. An action research guide has been developed to assist students. The guide is a step by step approach to doing the research. Students are given practice exercises to concretize the content in the guide.

4. Action is the most popular form of research among students. The general perception among students is that it helps them to understand their practice as they can reflect on methodological issues where new methods of approaching a subject, topic or content can be tested.

5. Action research helps students to focus on school-based issues, professionally develops them, creates collegial contacts and imports school change.

6. It is important to set goals so that they can visualise a trajectory of looking at a problem, designing interventions and reflecting on the effectiveness of the interventions as defined in their goals. Goal setting thus enables the student to have a sense of accomplishment in the process of doing action research, which essentially will enable them to have a positive self-concept. A positive self-concept enhances the development of positive attitude towards classroom-based research hence improving the student's overall performance.

6 (i) Lecturers should have computer skills to access information quickly and research skills to guide students towards relevant literature that builds the students' understanding of action research. They should also have the practical ability to do research so as to share with students real experiences. A research mentality, that is, a positive attitude towards doing research as a means of solving problems.

6 (ii). Lecturers can be periodically workshopped on action research based issues and be encouraged and supported to attend research symposia.

7. There is currently no DTE policy particularly on action research. However, the current position is that students should be exposed to all types of research including action research.

8. Most lecturers are not engaged in action research and therefore have problems in understanding action research. This is compounded by the fact that they did orthodox research while at college themselves or some never did any research.

Students generally are not reflective of the entire research process and do it as a mere ritual for course requirements.

9. A practical approach where groups of students are involved in some research and not exercises before they go on TP may help.

APPENDIX M

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@mhct.ac.zw
Telegraphic address: "EDUCATION"



ZIMBABWE

Reference:

MINISTRY OF HIGHER AND TERTIARY
EDUCATION, SCIENCE AND
TECHNOLOGY DEVELOPMENT
P. BAG CY 7732
CAUSEWAY

REF: P/DUBE. B. (MR)
E.C. NO: 0885318 B

5 October 2015

STAFF CONFIDENTIAL

Mr. B. Dube
C/o Joshua Mqabuko Nkomo Polytechnic

Dear Mr. Dube,

REQUEST TO CONDUCT RESEARCH STUDY AT JOSHUA MQABUKO NKOMO POLYTECHNIC: MR B. DUBE: E.C. NO: 0885318 B: FORMER LECTURER: JOSHUA MQABUKO NKOMO POLYTECHNIC: DEPT/STN: 3760/1550: MINISTRY OF HIGHER AND TERTIARY EDUCATION, SCIENCE AND TECHNOLOGY DEVELOPMENT.

The above subject refers.

Reference is made to your application for authority to conduct research study at Joshua Mqabuko Nkomo Polytechnic dated 4 September 2015.

I am glad to inform you that the head of Ministry has approved your application to conduct research study at Joshua Mqabuko Nkomo Polytechnic for the period 1 October 2015 to 30 November 2015.


E. Faindani (Ms)
Human Resources Officer
FOR: PERMANENT SECRETARY.



APPENDIX N

RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:

Mr B Dube

Student No:

14010775

PROJECT TITLE: Challenges of using action research as teaching strategy: A case of a college of primary teacher Education in Zimbabwe.

PROJECT NO: SEDU/16/CSEM/02/2706

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Dr MP Mulaudzi	University of Venda	Supervisor
Dr RJ Monobe	University of Venda	Co-Supervisor
Dr T Runhare	University of Venda	Co-Supervisor
Mr B Dube	University of Venda	Investigator - Student

ISSUED BY:

UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE

Date Considered: June 2016

Decision by Ethical Clearance Committee Granted

Signature of Chairperson of the Committee:

Name of the Chairperson of the Committee: Prof. G.E. Ekosse

UNIVERSITY OF VENDA DIRECTOR RESEARCH AND INNOVATION 2016 -07- 19 Private Bag X5050 Thohoyandou 0950



University of Venda

PRIVATE BAG X5050, THOHOYANDOU, 0950, LIMPOPO PROVINCE, SOUTH AFRICA
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APPENDIX O


Editing and Proofreading Report

24 February 2017

This letter serves to confirm that I, Dr I. Ndlovu of the English Department, University of Venda, have proofread and edited a PhD thesis titled "Challenges of Using Action Research as a Teaching and Learning Strategy: A Case of a College of Primary Teacher Education in Zimbabwe" by Buyisani Dube to be submitted to the Department of Curriculum Studies in the School of Education at the University of Venda.

I carefully read through the thesis, focusing on proofreading and minor editorial issues. The recommended suggestions are clearly highlighted and can either be accepted or rejected using the Microsoft Track Changes Function.

Yours Sincerely



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