LIST OF ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
ANA	American Nurses Association
CAPS	Curriculum and Assessment Policy Statement
DBE	Department of Basic Education
FRESH	Focusing Resources on Effective School Health
HIV	Human Immunodeficiency Virus
HPE	Health and Physical education
KZN	KwazuluNatal
MRC	Medical Research Council
SC	Situated Cognition
SCT	Social Cognitive Theory
UNCRC	United Nations Convention on the Rights of the Child
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations International Children's Emergency Fund
UPISMC	University of Pretoria Institute for Sustainable Malaria Control
WHO	World Health Organisation

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CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE RESEARCH

1.1 INTRODUCTION

Malaria is endemic in South Africa, in the northeastern areas of three provinces namely KwaZuluNatal (KZN), Limpopo and Mpumalanga. The possibility of infection is high during the summer rainy season between the months of September and May (Morris et al., 2013). An important case to consider is the impact of malaria on the health of young school children within these endemic areas. This study identified the Limpopo province as an area of research interest. The aim was to the possibility of promoting malaria education awareness through the Life Skills curriculum in the Foundation Phase. This strategy was informed by the decision taken by the World Health Organisation (WHO) in addressing dilemmas pertaining to health issues. The WHO strongly promotes the implementation of a health programme aimed at assisting issues related to health in schools. However, the achievement of such health benefits is difficult to evaluate among children in the primary school setting (Leger, 1999). One of the reasons for this, as identified by Leger (1999) is the absence of a well designed health programme, linked to the curriculum.

Effective Life Skills programmes are suggested by Gachuhi (1999) to be capable of putting an end to dreaded diseases such as HIV/AIDS among children between the ages of 5 and 14. Leger (1999) consolidates the drive to explore the possibility of using the Life Skills curriculum in the Foundation Phase as a tool that addresses this concern. The Department of Education recommends the Life Skills subject area as one of the learning programmes in the Foundation Phase. The Life Skills subject area is a programme, aimed at developing children into responsible and disciplined adults who would be able to take control of their lives in a speedily transforming world (DBE, 2011). This study seeks to promote malaria awareness through the Life Skills subject area in the Foundation Phase.

1.2 BACKGROUND TO THE STUDY

The drive to embark on this study was initiated by a call made by the University of Pretoria Institute for Sustainable Malaria Control (UPISMC) and findings in the literature. The goal of the UPISMC was to harmonise and encourage shared research on secure and viable malaria control and management strategies in an attempt to generate new knowledge to inform practice. The UPISMC was exploring a multidisciplinary approach capable of tackling the continuously emerging challenges associated with the ongoing malaria scourge in the Limpopo province of South Africa.

An example of literature-based motivation to conduct this research study is the Ottawa Charter for Health Promotion, in which the school is seen as a medium of achieving better health among school children (cited in Baric, 1994; Kickbusch, 1989). Similarly, empirical studies (such as Brooker, et al., 2000; Atkinson, Fitzgerald, Toaliu, Taleo, Tynan, Whittaker, Riley, & Vallely, 2010) have revealed a direct influence of the school on malaria education and surveillance programmes. Schools have been the focus in key interventions, in particular, health-related issues such as HIV/AIDS and nutrition (e.g. Ansell, 2009). In addition, classroom health instruction was one of the main areas around which school health in the United States was shaped (National Professional School Health Organizations, 1984). The report of the WHO Expert Committee on School Health Services (WHO, 1951) argues for the development of more comprehensive programmes in the curriculum to address health issues.

Equipped with the reports of these findings, this study explored the role of the curriculum in promoting health development, with particular attention to malaria. The study was conducted among children in the Foundation Phase in the Vhembe district, Limpopo province in South Africa. This study explored the prospects of improving children's health through the medium of classroom instructional activities in the Life Skills subject area with particular reference to malaria fever. Apart from the learners in the Foundation Phase, teachers and parents became sources of data collection.



1.3 STATEMENT OF THE PROBLEM

Malaria is a major health dilemma with over 90% deaths occurring in Africa, South of the Sahara (WHO, 2016). The Limpopo province of South Africa is one of such areas ravaged by malaria (Morris et al., 2013). Children's stage of development makes them particularly more vulnerable to attacks than adults. Our responsibility is to allow children grow up with a good understanding of their environment and the world they live in. Sanders and Stewart (2004:205) reiterate this, in asserting that it is our duty to ensure that children understand the world around them. This declaration presents prospects for stakeholders (school, teachers, learners, and parents) who are concerned about children to help them accomplish optimum health status as they grow up in their environment. In this study, the school is considered as one of such stakeholders capable of assisting children to achieve this aim. The idea of incorporating malaria education into the Life Skills curriculum thus becomes an attempt to yield to the dictates in the extant literature because it is the right of learners to understand what they would be contending against as they grow up to become adults.

Children in the Foundation Phase are still at an early stage of development. Attention should be given to sensitise and safeguard them against deadly diseases such as malaria, which poses a threat to their survival. This corresponds with the aims of the Curriculum and Assessment Policy Statement (CAPS), which asserts that the Life Skills subject area is designed to channel and get learners in the Foundation Phase ready for life and equipped to live a worthy and flourishing life (DBE, 2011). The school thus becomes an ideal place for valuable partnership in programmes, aimed at controlling diseases (WHO, 1951). It has been observed that health issues strive to be located within the curriculum alongside other traditional subjects such as mathematics, sciences and languages (O'Neill, Clark, & Jones, 2011). This calls for an intentional move in the course of implementing malaria health education in the South African primary school curriculum, particularly in areas where the incidence of malaria infection is predominant. It is also imperative to develop various interventions and examine the effectiveness of these interventions among children in the Foundation Phase. Furthermore, due to the propensity of parents and children to move from one region of South Africa to another, it becomes a dilemma to furnish learners in South Africa and their parents with an understanding of the risks they are prone to, when they migrate from a non malaria endemic region to an endemic region.

This study anticipates the school setting as a vehicle through which young children could develop "health knowledge, attitude and practices" (Wilder-Smith, Khairullah, Song, Chen, & Torresi, 2004:9). It is further suggested that schools are the main locale for educating children on health matters compared with hospitals (Lurie, 1998; Thies & McAllister, 2001). The school is conceptualised as a natural environment where children can settle and learn what is necessary for their growth and survival via the curriculum proviso. The dilemma in this study entailed understanding the role of curriculum in raising awareness about malaria among learners in the Foundation Phase through the Life Skills subject area in the Limpopo province.

1.4 RESEARCH QUESTIONS

Considering the above stated problems, this research is guided by the following main research question:

• What is the role of the curriculum in promoting malaria awareness among children in the Foundation Phase?

An attempt is made to answer the main research question by unravelling the following research subquestions:

1.5 RESEARCH SUBQUESTIONS

(a) How is malaria health education addressed in the Life Skills subject area in the Foundation Phase curriculum?

(b) How do teachers in the Foundation Phase sensitise learners in grasping an understanding of the relevance of malaria to their health issues?

(c) To what extent do learners in the Foundation Phase educate their parents to achieve maximum health condition with regards to malaria?

(d) What are the cultural practices impacting the knowledge, attitude and practice of learners in the Foundation Phase with regards to malaria?

(e) What is the level of knowledge of malaria health issues among children in the Foundation Phase?

1.6 RESEARCH OBJECTIVES

The main research question assists in clearly stating the main objective of the study:

The main objective of the research study is to investigate the role of the curriculum in improving malaria awareness among children in the Foundation Phase.

The following research objectives are a culmination of the research subquestions of the study:

(a) To discuss in detail how malaria health education is addressed in the Life Skills subject area in the Foundation Phase curriculum.

(b) To delineate how teachers in the Foundation Phase sensitise learners in grasping an understanding of the relevance of malaria to their health issues.

(c) To ascertain the extent to which learners in the Foundation Phase educate their parents to achieve maximum health condition with regards to malaria

(d) To describe the cultural practices impacting the knowledge, attitude and practice of learners in the Foundation Phase with regards to malaria.

(e) To expound the level of knowledge of malaria health issues among children in the Foundation Phase?

1.7 RATIONALE AND THEORETICAL SIGNIFICANCE OF THE STUDY

The initial idea to conduct this study came out of the need for the University of Pretoria Institute for Sustainable Malaria Control (UP ISMC) and Medical Research Council (MRC) collaborating centre for malaria research to gain, from an educational perspective, a solution to the scourge of malaria in malaria regions of South Africa. The UP ISMC endeavours to create innovative awareness to secure malaria vector control in Africa. One of the ways the institute aims to achieve this is through its involvement in research collaboration with other departments at the University of Pretoria. This was envisioned to enable the institute advice policy makers towards making policies that would advance safe methods of controlling malaria infection.

There is a general saying that a healthy nation is a wealthy nation. The awareness to stay healthy should start from childhood in order that a nation may have citizens who are capable of living a sustainable healthy lifestyle. The effective role of children in health matters cannot be overemphasised. Children are seen as valuable agents of change that are capable of improving the degree of responsiveness and imbibition of healthy ways of living at the home front (Freeman & Clasen, 2011). In their study on assessing the impact of a school-based safe water intervention on household adoption in India, Freeman and Clasen (2011) reported that messages about effective water treatment were transmitted to household members through the children. This resonates with one of the views of the WHO (1951) document that when a child is educated in matters of health he or she is capable of informing his or her parents. Also, such a child would grow up to raise a healthy family. A child's health is influenced from conception to childhood and adolescence. In view of these reports and assertions, this study explores the extent to which the teaching of Life Skills in the Foundation Phase curriculum is able to provide children with the knowledge they need about malaria. The study also explores the influence of such knowledge acquisition on the children's parents and the community.

There is a plethora of studies that focus on raising awareness among children on health issues that affect them, especially in the areas of diet and physical education (Seal & Seal, 2011; Shaw, Marshak, Dyjack, & Neish, 2005; Sheffield & Landrigan, 2011; Taras & Potts-Datema, 2005). However, there is rarity of studies that address pressing health issues, such as malaria, which are particular to children in the sub-Saharan region. To the best of the researcher's knowledge, there is a scarcity of studies that focus on the integration of malaria education in the South African school curriculum. In his speech on World Malaria Day (April 25th, 2014), the director of the UP ISMC, Professor De Jager, pointed out people's attention to the lack of malaria education in malaria endemic provinces of South Africa. Professor De Jager reiterated, "By teaching children and their parents how to avoid the hazards of the disease, we hope to lessen the burden of malaria" (Pretoria News, 2014). In view of the above statement, this study is significant in its intention to explore strategies that could promote effective education about malaria among young children in the Foundation Phase. It is envisaged that effective education about malaria could lead to a sustainable health situation in South Africa.

This study becomes imperative in a country like South Africa where people living in zones of high malaria incidence may be subjected to high threats of malaria infection. Such infection is the result of low levels of immunity, which in turn results in a scourge of diseases such as HIV/AIDS and tuberculosis (Grimwade, et al., 2004; Patnaik, et al., 2005). The integration of malaria health education into the Foundation Phase school

curriculum could have a covert capacity to become useful to the community and to the nation in future. The influence of the curriculum to change children's perspectives cannot be overemphasised. Anning (1998), and Bennett and Wood (1999) explain that a legislated curriculum that specifies worthy knowledge for the child in a way that efficiently relates to the child's customs, norms and values can change the way a child learns. However, "textbook content related to malaria education has received little attention" (Nonaka, et al., 2012:1). This declaration by Nonaka et al. (2012) gave credence to the current study, which explores the content of the Life Skills curriculum as it is reflected in Life Skills textbooks used in the Foundation Phase. This study is thought to be capable of providing insight to the level of inclusion of malaria health education in the Life Skills curriculum. In the same vein, Nankabirwa et al. (2014), propose that the instruction about malaria prevention, diagnosis and treatment should constitute a vital part of the school curriculum in places where school-age children are at risk of malaria infection.

Temperly et al. (2008) in their study of the cost-effectiveness of delivering intermittent preventive treatment of malaria concluded that school-based and teacher-managed malaria interventions as an approach can prospectively reduce costs. Consequently the implementation of malaria education in the school curriculum among children in the Foundation Phase is envisaged to be a money-saving venture for the government. Such funds saved may be useful in servicing other sectors of the economy.

1.8 CLARITY OF KEY CONCEPTS

The key concepts used in this study are defined next:

1.8.1 Malaria

The Medical News Today (online) defines malaria as a life-threatening disease caused by a parasite, which is transmitted to people through the bites of the *Anopheles* mosquito. Malaria results from an infection with protozoan parasites, belonging to the family referred to as *Plasmodium*, spread by female anopheles mosquitoes (Cox, 2010).

1.8.2 Malaria Education

For the purpose of this study, malaria education is defined as intentional classroom instructional activities capable of providing children in the Foundation Phase with adequate knowledge about the causes, symptoms and the prevention of the malaria disease.

1.8.3 Life Skills

Life Skills is a subject taught in the Foundation Phase, fundamental to the development of the entire person of the child as an individual, socially, cognitively emotionally and physically. The Life Skills approach is generally defined in terms of the required competencies needed for human development. The acquisition of such skills prepares children to take a positive stance towards combating the daily challenges they encounter as they grow up to adulthood (Mangrulkar, Whitman, & Posner, 2001:5). In the current study, "Life Skills" is identified as a subject that promotes the acquisition of constructive competencies among children in the Foundation Phase through a repertoire of classroom experiences that enable them to espouse a positive disposition that, in turn, empowers them to protect themselves against the malaria scourge.

1.8.4 Curriculum

According to Schwab (1983:240)

Curriculum is what is successfully conveyed to differing degrees to different students, by committed teachers using appropriate materials and actions, of legitimated bodies of knowledge, skill, taste, and propensity to act and react, which are chosen for instruction after serious reflection and communal decision by representatives of those involved in the teaching of a specified group of students who are known to the decision makers.

Similarly, Oliva (1997) proposed a number of definitions. For the purpose of this study the term "curriculum" refers to what Oliva (1997) defines as the materials or choice of programmes included in the syllabus of learning in the Foundation Phase.

1.8.5 Foundation Phase

The Foundation Phase is the first stage of formal education in the South African system of Education. Children in this educational phase range between the ages of six and nine.

1.8.6 Self-Efficacy

Self-efficacy is generally applied to people's conviction of their competence to create a certain extent of achievement, which controls events concerning their existence (Bandura, 1977). Self-efficacy, as it applies to the current study implies the ability of children in the Foundation Phase to accomplish an efficient skill in malaria health education during their childhood period. This skill is capable of aiding them in gaining mastery over malaria infection as they grow into adulthood. Similarly, self-efficacy denotes teachers' demonstration of the knowledge about malaria and their cleverness to use the principles of curriculum to achieve learning outcomes among learners in the Foundation Phase.

1.9 THEORETICAL FRAMEWORKS

The theoretical frameworks used in this study are Social Cognitive Theory (SCT) (Bandura, 1977) and Situated Cognition (Brown, Collins & Duguid, 1989).

1.9.1 Social Cognitive Theory (SCT)

Social Cognitive Theory (SCT) is a theory which attempts to explain how humans engage in tasks to perform and to produce what they intended to achieve (Bandura, 1997). This theory hinges on self-confidence and the results of actions taken, the culmination of which are referred to as self-efficacy and outcome anticipation (Bandura, 1986). Self-efficacy denotes humans' assurance about what they can do to attain a definite level of achievement within that situation (Bandura, 1986, 1997). The implication of this theory is that people who exhibit self-efficacy move away from their comfort zones to try out new ideas by going the extra mile, and by remaining resilient when the going gets tough (Bandura, 1997). Four avenues of information influence the awareness of self-efficacy: completion of performance, clear experiences, unwritten influential communication, and signals pertaining to natural cues (Bandura, 1986, 1997). Efficacy is usually consolidated when an individual successfully engages in doing something, such as observing a model, receiving positive commendation from an achiever, or decoding body language as predictors of upcoming achievement (Bandura, 1997). Bandura's (1986) perspective of outcome expectancy illustrates that an action will culminate in one or more results. These results can be grouped into physical, social, or self-judgment (Bandura, 1986, 2001).

Physical outcomes in this study imply learning that evolves from an experience, for example, teaching and learning dynamics at school level. In the context of this study, the teacher takes on the position of an actor by demonstrating an understanding of particular concepts, which the learners would have to emulate through the process of scholastic repertoire to achieve an outcome. Scholastic repertoire in the context of this study would be directly linked to the established principles governing the curriculum namely, the planned, enacted, and assessed curricula (Kurz et al., 2010).

The behaviour shown by the learners in the Foundation Phase would imply another dimension of outcome, which would specify their acquisition of self-efficacy to guarantee and exhibit their agentic predispositions. Feelings depicting incompetence at performing defined tasks could imply an undertone of self-judgment (Bandura, 1997). Individuals that have self-efficacy always see the positive side of things and are never negative about the challenges they confront. In the face of vehement challenges such people bring out their innate stamina to counteract unfavourable challenges. They are thus described as having strong self-efficacy (Bandura, 1997). In the context of this study, the teachers of the learners in the Foundation Phase would be regarded as efficacious if they have mastery of content about malaria, and are capable of overlooking imminent challenges to reach the learners in the Foundation Phase with specified content knowledge. Evidence of inadequacy to confront subject matter would be equated to lack of self-efficacy. Feelings of inadequacy would also imply lack of self-efficacy. When the learners in the Foundation Phase are capable of demonstrating an understanding of content knowledge by becoming the agents of change at the home front, they would be regarded as exhibiting the selfefficacy they acquired through their engagement with their teachers.

1.9.2 Situated Cognition

Situated Cognition (SC) is a theory of learning that draws on the principles related to the fields of philosophy, psychology, anthropology and sociology. The core line of reasoning of SC is that knowledge is situated in activities that are socially, physically or culturally located (Brown, Collins & Duguid, 1989). Drawing on the scholarship of Brown et al. (1989), the researcher sees a convoluted link between Social Cognition and the curriculum. Since the core line of reasoning of SC stipulates that knowledge is embedded in activities that are socially, physically or culturally located, the curriculum is considered a domain of Social Cognition. This line of thought arises from a critical engagement with the principles of curriculum development, which entail knowing what needs to be taught, to whom it should be taught and under which context it should be taught (Dillon, 2009). Therefore, the display of self-efficacy by teachers is critical in the cognitive development of learners to exhibit what has been set out in the curriculum.

Situated Cognition proposes that knowledge is a result of the activity, context and culture in which it is developed. Thus knowledge acquisition cannot be separated from the context from which it is received (Brown, et al., 1989). Brown et al. (1989) referred to the ingenuity of the curriculum because it can shape the understanding of specified content and how the content should be disseminated. Brown et al. (1989) argue that the knowledge acquisition surpasses the theoretical transfer from teacher to learner. For knowledge to be used effectively, social and environmental factors must be considered. Lave (1991) argues that a situated activity such as teaching or learning does not occur in isolation but is intricately interrelated with other aspects of the social environment in which learning or teaching occurs.

In their explanation of Situated Cognition, Brown, et al. (1989) argue that it is impossible to detach what is learned from the manner in which it is learned. How a learning activity takes place hinges on the teacher's knowledge of suitable teaching methods to guarantee learning. This discourse is confirmed by Dillon's (2009) specification about the curriculum. Dillon (2009) elaborates on the importance of how the curriculum is presented. An important aspect here is that the association of stakeholders with the curriculum content cannot be underestimated.

The activities and the environment in which that knowledge is constructed are not secondary to learning and cognition. Rather than to give attention to individual behaviour and way of knowing, Situated Cognition takes the larger system into account (Greeno, 1998). The larger system, as conceptualised in this study, comprises the school and the communities within which they are located. Attention is directed towards interrelated cognitive individuals and other self-existing systems within the larger system. In this perspective, learners in the Foundation Phase and their teachers fall directly under the description of interrelated cognitive individuals because they are involved in meaning making exercises of the curriculum.

Foremost in the argument of Brown et al. (1989) is the conceptualisation of knowledge as a "tool" (Brown, et al., 1989:33). Just as the effectiveness of any tool is proven in its ability to solve a problem in a particular situation, the effectiveness of knowledge gained is demonstrated in a relevant situation, which necessitates the display of what is acquired. In this notion, the clear demonstration of the efficacy of acquired knowledge is a measure of how valuable it is. The tool, the person handling the tool, the environment in which the tool is used, the specific context in which the tool is used, and the culture of the people all mutually depend on one another (Durning & Artino, 2011). The interrelationship that exists between these entities connects them intricately in a way that it becomes almost impossible to understand one without the other.

Lave (1988) highlighted the relevance of the expertise of the user of a tool. She argued that the conventional route of acquiring knowledge presents insignificant proof of learners' ability to transfer acquired knowledge from one situation to another. Arguably, this problem of transmission might be attributed to the incapacity of the custodian of the tool to know the right timing and right way to use the tool (Durning & Artino, 2011). It thus becomes important for both the teacher as executor of the curriculum to administer Life Skills curriculum content in a way that enables Foundation Phase learners to understand the relevance of what they are being taught in the classroom to their daily lives. The relevance of the knowledge they acquire can propel them to become useful agents of change within their community.

Durning and Artino (2011:189), in an attempt to highlight the interactive nature between knowledge, learning and the environment used a relevant example of scrabble players. The tile chosen by a participant and the words arranged will determine the other list of research project topics and materials

participants' next move. This suggests that interacting members not only learn from one another, but also watch each other's actions and moves. The action of one community member will determine what another will do subsequently. The implication with regards to malaria health issues is that the curriculum informs teachers' actions in terms of the knowledge to be disseminated, and the development of unforgettable learning activities for learners. This in turn influences how teachers propagate this knowledge to learners.

1.10 OVERVIEW OF RESEARCH STRATEGY

This section discusses the paradigmatic assumption on which this study is premised. The sampling method, data collection, and data analysis are also discussed. The section is concluded by quality measures and ethical considerations.

1.10.1 Meta Theoretical Paradigm

A paradigm is perceived as a system of ideas, or a world perception engaged by a group of investigators to produce knowledge (Rossman & Rallis, 2003). The term "paradigm" also signifies an array of cognitively associated assumptions, principles or propositions that inform thinking during research (Bogdan & Biklen, 1998). Another perspective of paradigm is to view it as the truth-seeking intent or stimulus for embarking on research (Cohen & Manion, 1994). Denzin and Lincoln (2005) are of the opinion that a paradigm is the container that encapsulates the researcher's epistemological, ontological, and methodological assumptions. In the case of Shulman (1986), a paradigm is not a theory, but an avenue of reasoning, capable of culminating in a theory. In the context of the current research a paradigm is taken as a wide-ranging belief system, global view, or structure to navigate the research and practice in an area of interest. The researcher briefly discussed two meta-theoretical paradigms, namely constructivism and interpretivism. See Chapter Four, sections 4.2.1.1 and 4.2.1.2 for a detailed discussion.

Constructivism

A constructivist's reality is based on his or her understanding of tangible things, retrieved via thinking about his or her own individual experiences, attitude, and perceptions of life. Constructivists insist that the knowledge of happenings and the reality about contexts do

not have objective or total value (Baxter & Jack, 2008). In other words, constructivists campaign that there is no way through which the truth can be known. Constructivists hypothesise that happenings on a daily basis constitute a knowledge base in the course of cycles of change that humans negotiate (Bellefeuille et al., 2005:373). Hence the negotiations that humans go through in life depend on how they have chosen to construct such experiences. At times these experiences are rationally perceived as imperfect (Zhao, 2005).

In narrative qualitative research both the storyteller and researcher are equally engaged in making meaning. Participants add to the meaning-making dynamics of the research by adding value in a flexible and equitable manner (Onwuegbuzie & Leech, 2007). In the current research, it is therefore perceived that participants (the teachers of the learners in the Foundation Phase, learners and their parents) are able to construct their personal subjective meanings. They create meaning with respect to utilising the curriculum to promote awareness about malaria through the Life Skills subject area in the Foundation Phase (Neuman, 2000).

Interpretivism

According to Erickson (1986), the substance of the interpretive approach is in its concern with the interpretations that people give to events in a definite setting. In educational research, interpretivism put the spotlight on social ecology. In other words, it is a study of the constitution and processes of the micro-culture of a milieu (e.g., a classroom). The interpretivist approach assists in understanding "the ways in which teachers and students, in their actions together, constitute environments for one another" (p. 128) to create "an enacted curriculum" (p.129). Researchers who think as interpretivists are considered naturalistic because they engage with the real world as things unfold. They do this by tending to be non-manipulative, unobtrusive, and non-influential (Tuli, 2010:100). In this study, the researcher interpreted the perceptions of the respondents as the accounts of their lives and the senses they attached to it were unveiled.

1.11 METHODOLOGICAL PARADIGM

This research uses qualitative approach since it is concerned with individual respondent's experiences, how they engage with their social world, and what meaning they ascribe to

their experiences (Merriam, 2002:4). Research methodology is "the strategy, plan of action, process, or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes" of a study (Crotty, 1998:3). The researcher explores the promotion of malaria awareness in the Life Skills curriculum in the Foundation Phase. The qualitative approach is considered suitable in this study because the researcher is interested in the encounter between teachers and learners in their natural settings (Marshall & Rossman, 1999). According to Lincoln and Guba (2000:3), qualitative investigators explore events in their natural settings, by making sense of phenomena in terms of the meanings people ascribe to them. Qualitative researchers seek to comprehend why things occur the way they do in the social world and why humans act the ways they do (Tuli, 2010).

1.11.1 Research Design

This research study used a case study and narrative inquiry approach. In Chapter Four, under sections 4.3.1 and 4.3.2, the two approaches are discussed in detail.

Case study

The case study research method is "an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (Yin, 2003:13). According to Cresswell (2002), a case study is a broad exploration of a bounded setting based on the collection of wide-ranging data that affords an understanding of events by the making of meaning of a situation of relevance. In the current study the interaction between teachers of the learners in the Foundation Phase and the learners typifies a bounded setting. This kind of interaction becomes a process, bounded by engagements and events to be explored. The case study approach is identified as a tool in a number of social science explorations, especially in the field of education (Gulsecen & Kubat, 2006). The case study approach goes beyond the limitations of quantitative research because it provides a comprehensive explanation of the problem being explored (Tellis, 1997).

Narrative inquiry

Narrative inquiry has been in use for a very long time. However, it seems to be a novel way of conducting research. The lives lived by people denote stories that are read through how they live. The stories that are lived and shared and talked about denote how we ascribe meaning as we live and how we solicit assistance from one another to build our lives in communities. The materialisation of narrative research strategies seems to be new in social science research. With materialiation has evolved intensified conversation about the stories we tell, the function of stories in our lives, and their stance in composing our communal affairs (Clandinin, 2006).

To allow better understanding, narrative research is explained:

People shape their daily lives by stories of whom they and others are. They interpret their past in terms of these stories. A story, in the current idiom, is a portal through which people's experience of the world enters the and by which their experience of the world is interpreted and made personally meaningful. Viewed this way, narrative is the phenomenon studied in inquiry. Narrative inquiry, the study of experience as story, then, is first and foremost a way of thinking about experience. Narrative inquiry as a methodology, entails a view of the phenomenon. To use narrative inquiry methodology is to adopt a particular narrative view of experience as phenomena under study (Connelly & Clandinin, 2006:477).

In the current study the narratives of teachers who teach learners in the Foundation Phase, as well as that of learners and parents are used to explore how the curriculum can be used to promote malaria awareness.

1.12 PARTICIPANTS AND SITE SELECTION

The participants included 21 learners in the Foundation Phase from two schools in the Hamakuya area of the Vhembe district. Ten parents and seven Foundation Phase teachers were interviewed at the two primary schools that were purposefully chosen. The primary schools are pseudo named Kumbulani Primary School and Takelani Primary School, and are in the Hamakuya area of Limpopo. The choice of these research sites is founded in the knowledge that the Limpopo province, being a border province between Page | 16

South Africa and Zimbabwe, had incidences of malaria infection (Brooks & Abney, 2013). The duration of each interview session was approximately twenty minutes. Research rigour was ensured in that data were obtained from more than one source in this qualitative study (Shenton, 2004).

1.13 DATA COLLECTION METHODS

Data were collected by means of semistructured interviews, observation, researcher's journal and document analysis. The Department of Basic Education's (2011) CAPS document was analysed. The participants of this research study were purposefully sampled and selected from the list of teachers and learners at the two schools where this study was conducted. Parents of the learners in the Foundation Phase also participated in the study. Merriam (2002:12) prescribes purposive sampling as a useful tool in a qualitative research because it helps to select a sample through which the most can be understood. Semistructured interviews were conducted with teachers who taught the learners in the Foundation Phase learners of the Foundation Phase and parents of the Foundation Phase learners.

According to Kvale (1996), qualitative research methods through interviews allow the researcher to reach the experiential world of the research participants to fundamentally understand the meaning they make of their lives. In this way the researcher is granted a subjective account of the world of the research participants. Semi-structured interviews were advantageous in that probing of the research participants was allowed (Hoepfl, 1997). While interviewing the research participants of this study, the interviews were recorded with an audio tape recorder. A recorded interview session has the advantage of capturing data more practically than hastily taking handwritten notes (Hoepfl, 1997).

1.14 DATA ANALYSIS

Data analysis is the process of methodical application of coherent procedure to describe, explain and appraise data (Punch, 2014). The data of this research study was analysed through content and thematic analyses.

1.14.1 Content Analysis

Content refers to what is enclosed and content analysis is the breakdown of what is contained in communication. Content analysis can be viewed as a process where the content of communication constitutes the ground for making inferences and conclusions about what is contained (Nachmias & Nachmias, 1976). Content analysis is situated between the concepts of observation and document analysis. It can be described as a technique of observation in the perspective that, as an alternative to asking humans to answer questions, it *"takes the communications that people have produced and asks questions of communications"* (Kerlinger, 1973). Stempel (1989) assisted in familiarising the researcher with the steps of data analysis for this research study. The researcher's responsibility was to ask what exactly needed to be determined from the obtained communication from the participants. This question assisted in framing the study objectives. The researcher then sought to identify the origin of the communication that was important to answer the research questions by asking another set of questions capable of being solved by an analysis of the content (Stempel, 1989).

1.14.2 Thematic Analysis

Thematic analysis is the process for discovering, breaking down, and providing feedback on patterns (themes) located inside data. It modestly categorises and expresses the obtained data set in great detail. On the other hand, its versatility usually exceeds this dimension, because it translates different features of the research study (Boyatzis, 1998). Thematic analysis was used in conjunction with content analysis in the current research study. This idea was initiated by a thorough analysis of the debate that thematic analysis should be used in conjunction with other analytical methods. Boyatzis (1998) put forward an argument that thematic analysis should not to be characterised as a specific technique but as an instrument to engage across dissimilar methods. In the same vein, Ryan and Bernard (2000) place thematic coding as a practice undertaken within "major" analytic practices (e.g. grounded theory), instead of as a definite technique in its own capacity. Conversely, Braun and Clarke (2006) contend that thematic analysis should be accepted as a method in its own capacity. However, the researcher chose to combine the two methods (content and thematic analyses) to elucidate an understanding of the different facets that were being unravelled in the study.

1.15 ETHICAL CONSIDERATIONS

Ethics refers to a system of concepts capable of critically changing prior deliberations about preferences and actions (Johnstone, 2009). It is a common discourse that ethics is the subdivision of philosophy, which borders on the dynamics of making decisions about what is correct and incorrect. Scientific inquiry, is controlled by personal and societal principles. Research ethics border on demands of daily work, the assurance of confidentiality of subjects and the publication of the reports obtained from the research (Fouka & Mantzorou, 2011).

1.15.1 Informed Consent and Voluntary Participation

Informed consent is the main ethical consideration in undertaking research. According to Armiger, it implies that an individual, consciously, willingly and cleverly, and in a lucid and obvious way, grants his or her permission (Armiger, 1997). Informed consent is one of the ways through which a respondent's right to independence is guaranteed. Independence is described as the capacity for individual fortitude in deed according to the individual's plan (Beauchamp & Childres, 2001). Informed consent attempts to incorporate the privileges of independent individuals via personal determination. It also attempts to guard against assaults on the truthfulness of the respondent. Likewise, it protects the respondent's willingness and sincerity (Clarke, 1994).

1.15.2 Beneficence- The Promise not to Hurt the Participants of the Study

The ethical consideration of beneficence refers to the deliberate attempt not to hurt the participants either verbally or emotionally (Fouka & Mantzorou, 2011). Beauchamp and Childress (2001) suggest that the thoughts of beneficence comprise the professional consent to conduct successful and important research so as to efficiently serve and uphold the wellbeing of research participants. Beneficence is at times complex to forecast when formulating a hypothesis, particularly in qualitative research. It is thus good practice to avoid the creation of discomfort when conducting qualitative research. According to Burns and Grove (2005), uneasiness and hurt can be upsetting, sensitive, social and financial in nature.

1.15.3 Respect for Anonymity and Confidentiality

The concern of confidentiality and anonymity is closely associated with the privileges of beneficence, esteem for respectability and loyalty (Clarke, 1991). ANA (2001) proposes that anonymity is ensured when the respondent's identity cannot be connected with individual replies to posed questions during the course of the research. If the researcher is unable to guarantee anonymity he or she is compelled to deal with confidentiality, which entails managing individual information so as to ensure anonymity (Nieswiadomy, 2007).

1.15.4 Vulnerable Groups of People

In this day and age, the concern about vulnerable groups and whether it is decent or not to use them as research subjects is greater than before (Fouka & Mantzorou, 2011). According to Fisher (1993), vulnerability is one distinguishing feature of peoples' inability to defend their own human rights and wellbeing. Therefore, vulnerable groups comprise imprisoned populations, mentally unfit individuals, old people, children, seriously unwell or dying, and underprivileged people. The diverse views about their involvement in research can be credited to their lack of ability to offer an informed consent and also to their requirement for extra safeguard and sensitivity from the researcher. These people are prone to the risk of being mislead, or compelled to give their consent (Watson, 1982).

1.16 QUALITY MEASURES

For a research study to be of high value the research findings should depict elements of trustworthiness as much as possible. This implies that every research study must be judged based on the procedures to generate the research outcomes (Graneheim & Lundman, 2004). In order to ascertain the trustworthiness and quality of this research study, a variety of steps were employed from the onset of the study, via data collection, data elucidation and the presentation of research results.

Guba and Lincoln (1981) declared that whereas all research must embrace "truth value", "applicability", "consistency", and "neutrality" so as to be viewed as meaningful, the attributes of knowledge contained by the rationalistic (or quantitative) model contrast the knowledge in naturalistic (qualitative) model. As a result of this notion, each model needs model-specific prescribed values for ascertaining "rigour" or "trustworthiness" (their

comparable term for qualitative "rigour"). Guba and Lincoln took cognisance of the idea that, contained by the rationalistic model, the pre-set values to attain the aim of rigour are termed internal validity, external validity, reliability, and objectivity. Conversely, they theorised the following pre-set values for determining rigour in the qualitative model, in order to guarantee "trustworthiness": credibility, appropriateness, audit trail, and confirmability (Guba & Lincoln, 1981). These pre-set values were briskly developed to credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985).

1.16.1 Credibility

Credibility (comparable to internal validity in quantitative research) speaks to the concern of "fit" between participants views and the researcher's portrayal of them (Schwandt 2001). Credibility asks questions pertaining to whether the explanation conforms with the description (Janesick 2000) and whether the account is credible. Credibility is ascertained via a number of approaches: member checks, peer debriefing, extended engagement, unrelenting observation and audit trail (Lincoln 1995). Credibility was ascertained in this study via audit trail.

1.16.2 Transferability

Transferability (comparable to external validity) entertains concerns about the generalisability of inquiry. In a naturalistic research, this borders only on case-to-case application of contexts. Qualitative inquirers are required to identify that the comparable "external validity" is significantly different in qualitative research, as there is no universal interpretation in the naturalistic model. Transferability was achieved in this study via an intense description of the context in which the research was conducted. The researcher made sure to provide sufficient information about herself and the context in which the research was undertaken, course of action, respondents, and researcher- participants interaction to afford the audience the prerogative of deciding how the study results may be transferred (Morrow, 2005).

1.16.3 Dependability

Dependability (comparable to reliability) is ensured through an auditing process. Researchers have the sole responsibility to ensure that the research process is reasonable, visible and unmistakably accounted for (Schwandt 2001). Dependability can then be showcased via an audit trail, so that others researchers can trace the researcher's records of data, techniques, resolutions and outcomes. Reflexivity is crucial to the audit trail, where researchers deliberately manage and account for the research process, comprising their internal and external moorings.

Dependability was ensured in this research via cautiously monitoring the culminating research designs and via maintaining an audit trail which had an undertone of a thorough chronology of the entire research pathways, contemplated issues that resulted in the data collection and analysis, themes that emerged, categories identified, and memos that were judiciously analysed (Morrow, 2005:252). The promoter of this research study granted an audit trail for this study.

1.16.4 Confirmability

Confirmability (comparable to neutrality) is about ascertaining that the data and interpretations of the results are not fabrications of the researcher's thoughts, but that it are unmistakably obtained from the data (Tobin & Begley, 2004). In order to accomplish confirmability, the researcher cautiously dealt with her subjectivity (Guba, 1981) by furnishing the research participants with her stance as a researcher.

1.17 RESEARCH LIMITATIONS

This study was limited by a number of recognisable dynamics. The first limitation was the small number of participants. As it is not new in qualitative explorations, the generalisation of research results may be challenging. However, the study findings cannot be declared unfit for consideration, especially when issues bordering on transferability to similar settings are contemplated. Secondly, this research study was undertaken at only two schools in South Africa. Thirdly, there was drought during the research conduction process and the researcher could not see evidence of open tanks that contained water. The only observable phenomenon close to the observation that could have constituted points of consideration had to do with the use of open pit toilets at the two schools, which could also constitute breeding spots for mosquitoes.



1.18 OUTLINE OF CHAPTERS

Chapter One: Orientation to the study

Chapter One introduces the research topic and presents a background context for the study. The significance of the study and research problem statement is discussed. The researcher presents the research questions that navigate the study, before contemplating the theoretical frameworks that serve as a platform for a discussion for the study. Finally the researcher outlines the research strategy and methodology, quality considerations of the research, ethical deliberation, key terms and study limitations.

Chapter Two: Literature review

In Chapter Two, the researcher reviewed the existing literature on cogent health considerations with particular emphasis on malaria and its health implications. The influence of the curriculum on children's health is uncovered and literature on the Life Skills curriculum and children's health are reviewed. The relevance of schools in propagating health education is unravelled. The importance of texts in fostering knowledge, attitude and practice about malaria is discussed. The role of children as change agents in health matters and the prevalence of malaria in the Limpopo province are central to this chapter.

Chapter Three: Theoretical frameworks

In Chapter Three the researcher presents the theoretical frameworks of the study. The dynamics underpinning the Social Cognitive Theory (SCT) and Social Cognition are discussed and the applicability of the two theoretical frameworks to issues bordering on health are highlighted.

Chapter Four: Research Design and Methodology

In Chapter Four, the researcher presented the strategy employed to conduct the research, which comprised the approach of inquiry, selection of cases, data collection and data analysis techniques. I also presented the quality measures and ethical dilemmas.

Chapter Five: Presentation of findings

In Chapter Five, the findings of this study are discussed. Background is provided on each of the participants of this study. The experiences of each of the participants are discussed with the focus on the challenges they face in terms of incorporating malaria in the curriculum. The study findings in terms of the theoretical frameworks of the study are presented in an attempt to explain the dynamics involved.

Chapter Six: Discussion of findings

In Chapter Six, the results of this research study are analysed and discussed. The study findings are presented in accordance to the findings presented in the extant literature. The contributions of this study to the body of knowledge are finally discussed.

Chapter Seven: Summary

Chapter Seven presents a summary of findings, new knowledge generation, recommendations and conclusions.

1.19 CHAPTER SUMMARY

This chapter introduced the research study topic and initiated relevant concepts for the study in its entirety. The chapter provided the background of the study, its basis, and a statement of the research problem and research questions to guide the study. The theoretical underpinnings, which serve as lens for the study, were discussed. This was followed by the research strategy and methodology, research quality measures and definitions of key terms. The study limitations were contemplated before the chapters were outlined. In Chapter Two of this study, the researcher reviews the extant literature both locally and internationally in an attempt to obtain a wider view and sound understanding of the phenomenon under study.

2.1 INTRODUCTION

Chapter One clearly set out the plan, intent and rationale for this study, highlighting the background for the study. The concerns of various national and international organisations on the need to promote school-based health programmes were discussed. This chapter discusses findings from the voluminous literature related to studies on the influence of curriculum on children's health. The novelty of the study provided an avenue to engage with diverse literature on educational perspectives on health issues both locally and internationally. The perusal of the extant literature presents a discussion on the connection between malaria and the health of a child. The impact of other diseases, such as HIV and AIDS, tuberculosis, and obesity, on children's health was also observed. Factors such as parental involvement in health education and the impact of malaria on child development are discussed in relation to their influence on the curriculum. This chapter further highlights the important role played by children in health-related matters in their ability to become useful change agents in the community.

Considering the need to provide classroom experiences that foster the engagement of children in activities that they live to remember, the researcher focused on exploring different strategies that might be used in the classroom, to enable children to have positive experiences of managing their health as they grow up. Unforgettable classroom experiences are predicted to culminate into practices that could enable them to act responsibly when they become adults. Both local and international articles were consulted to gain a global view of issues that relate to malaria in particular and children's health in general.

2.2 INFLUENCE OF THE CURRICULUM ON CHILDREN'S HEALTH

Oliva (1997:4) defines the term curriculum as "*content or set of programs of learning*." Oliva's definition heralds the idea of the curriculum as a collection of relevant information intentionally packaged and disseminated for knowledge and skill acquisition. In a related sense, Mortimer (2004:170) defines curriculum as everything a child is engaged in, observes, listens to, and experiences in the locale. Although these definitions describe the Page | 25 meaning of curriculum, they seem not to be capable of meeting the needs of the current study if they are not meshed with the actuality of what the curriculum should achieve in the end. The researcher sees the necessity to place the curriculum in this context on a platform where it could be perceived as having the possibility to become an agent of social change.

The abovementioned discussion paved the way for the reality that the predispositions of teachers as they go about their duties are characterized by alienation from the curriculum rather than cohesion (Flores, 2005). This could be as result feeling disconnected from a policy in which they had no input in its development and at the same time in which so much is expected from them in its implementation. Teachers usually bear the brunt of curriculum implementation as so much is expected of them by the society (Flores, 2005). From the researcher's experience of over a decade in the teaching profession, teachers feel powerless and view the curriculum is imposed on them. This probably prevents them from taking ownership of the curriculum in which their opinion was not sought at the policy level. In view of this, the voices of the teachers who participated in this study would be expected to be vital in contributing to the integration of malaria education in the Life skills curriculum. The agentic disposition of teachers therefore becomes an essential component in the implementation of the curriculum.

The aforementioned suggests that an effective way to integrate malaria education in the Foundation Phase is by taking into consideration the views of the teachers in the Vhembe District of the Limpopo Province. They are the ones who know the struggle they go through in order to get the learners have a little of what they need to know about malaria and its attendant effects on them, and on the community at large.

Stakeholders in children's education are thus confronted by what exactly should be communicated to children as relevant knowledge in their context (Kurz, et al. 2010). This presents a relevant perspective about what should be included in the Life Skills curriculum in the Foundation Phase as far as issues of malaria education are concerned. Dillon (2009:357) proposes that curriculum consists of important questions, which relate to actions we embark upon in order to denote specific responses. Drawing on Dillon, the current study thus asked questions to seek actions to embark upon, for knowledge of malaria education to be made available to learners within the Life Skills curriculum in the Foundation Phase. When these two perspectives of understanding are jointly

contemplated, the essence and versatility of the curriculum at becoming an agent of change become plausible.

An educational programme aimed at achieving set goals should be clearly stated with unambiguous objectives (Tyler, 2013) in order for such a programme to be a functioning and effective instrument of education. Tyler further explained the purpose of education, which is, to change the behavioural pattern of students to what is individually and socially acceptable (Tyler, 2013:5). Drawing on Tyler's scholarship, there arises a need for an explicit health education that succinctly defines malaria education objectives within the Life Skills curriculum in the Foundation Phase. The expression of a clear instruction on malaria education is thought to be capable of evoking a positive behavioural change in children in the Foundation Phase. This is thus a reaffirmation of the agentic predisposition of the curriculum. It thus seems as if the design of the curriculum alone is not sufficient if it is not viewed as a tool that can become effectual as an agent of change.

Porter (2004) differentiates between the intended curriculum and the enacted curriculum. He posits that the intended curriculum emphasises the curriculum content which learners are expected to learn. On the other hand, the enacted curriculum manifests in the actual learning opportunities that learners are provided for by teachers. The abovementioned reveals that there is a possible gap between what instructional knowledge children should have and what is actually available to them. When the curriculum and classroom instruction work together to guide the learner, they are said to be aligned (Kurz, Elliott, Wehby & Smithson, 2010:131).

Another aspect of a curriculum is the hidden curriculum. This aspect of the curriculum represents all undocumented and unplanned knowledge, values and beliefs, which form part of the learning process within the school environment (Horn, 2003). This also includes all non-scholastic elements that have significant impact on the child, as he or she encounters it in within school (Sari & Doğanay, 2009). All the undocumented interpersonal learning processes that the child engages in within the school environment also form part of the hidden or unofficial curriculum (Çubukçu, 2012).

In this study the curriculum is presumed to become a structure where the teacher is positioned appropriately with the learner to play an important leadership. The teacher has the role of curriculum executor and collaborates with other stakeholders designated to

ensure the enactment of the curriculum. This facilitates effective communication between the teacher and learner in the knowledge construction economy. The teacher is thus empowered to initiate discussion among learners about what they are expected to know. Learners are directed to receive adequate instruction from the teacher to stimulate understanding of the dynamics of malaria education. The intended curriculum provides instructional guidance that empower teachers to educate learners in the classroom. Because of this, education policy stakeholders significantly pay attention to integrate malaria education in the Life Skills curriculum in the Foundation Phase. This empowers teachers to freely teach children about protecting themselves against the malaria disease. Heikka and Hujala's (2013) research paved the way for this line of argument. These researchers (2013) discovered some patterns of leadership sharing between key directors in the early childhood education band in Finland and teachers, and found that a lot still needed to be accomplished in order to achieve set leadership goals. The above study emphasised that key directors indicated the significance of allocating and creating partnerships with educators. The directors highlighted their roles in creating leadership where knowledge was shared. Teachers anticipated that the key directors would initiate, enact and develop the curriculum and co-operate with stakeholders. They also anticipated key directors to devote more time to teacher development. Conversely, educators were willing to share leadership responsibilities to ensure that set goals were achieved. Heikka and Hujala (2013) provide a basis to explore the role of the teacher as a leader in facilitating learning about malaria. Their study also offers a platform for investigating the level of development of hierarchies among stakeholders of the early childhood curriculum.

An important aspect of the curriculum is the assessed curriculum (Kurz et al.,2010). Teachers are able to monitor the progress of learners through different assessment types, such as formative, diagnostic and summative assessment (Harlen & James, 1997). According to Uddin and Habib (2012), assessment is capable of monitoring how learners perform by motivating them to engage and embrace a meta-learning (deep learning) approach. Assessment also enables teachers to identify superficial learners (Uddin & Habib, 2012).

2.2.1 The Curriculum and Assessment Policy Statement (CAPS)

As the researcher reviews the literature to situate the foundation on which changes in curriculum have been premised, it was discovered that curriculum change is not a Page | 28

phenomenon that is exclusive to South Africa. It is a global issue which is a reflection of forms of transition in the society. The field of education is a dynamic one. The constant educational change often comes consequent to political undertones. Socitetal values and expectations often influence the introduction of new curricula, new technologies and new approaches. These combined factors have a direct bearing on what is taught and what is learned.

Education, and consequently the curriculum, has been seen a way of achieving political agenda of various governments. In 1997 with the demise of Apartheid, the South African government introduced Outcomes-based Education. The aim of this curriculum was to bridge the education gap created by the educational policies of the previous regime in which the majority was marginalized (DoE, 2004). However, this curriculum suffered some setbacks in its effective implementation. This prompted a review of the South African curriculum in the year 2000 which witnessed the introduction of the Revised National Curriculum Statement Grades R-9 and the National Curriculum Statement Grades 10-12 (DoE, 2004). In 2012, these two curricula were merged into a single document. The Curriculum and Applied Policy Statement (CAPS) is an offshoot of this merger.

The CAPS document is embedded in the National Curriculum Statement Grades R-12 (2012). It is a single, all-inclusive document which was advanced with the aim of providing a distinct, logical and efficient educational content and knowledge which is able to fulfill definite goal of the curriculum (DBE, 2011).

2.2.2 The Life Skills Curriculum and Child Health

In South Africa, the Curriculum and Assessment Policy Statements (CAPS) stipulates that children in the Foundation Phase should receive instructions in the following subjects: Mathematics, Home Language, First Additional Language and Life Skills (DBE, 2011). Life Skills is an area of study that exposes children in the Foundation Phase to ways of building a foundation by developing their whole being as they go through life.

The Life Skills subject area is aimed at preparing young children for life and its possibilities. Through it, children in the Foundation Phase are "*exposed to a range of knowledge, skills and values that strengthen their knowledge of personal health and safety*" (DBE, 2014:8). In view of this, teachers in the Foundation Phase are expected to Page | 29
give children pedagogical instructions capable of developing them into responsible adults who will be able to make informed decisions on issues that are significant to their survival. This corresponds with the ideas of Seal and Seal (2011:428) that children must be allowed to make "informed choices." Informed choices can only be made when a person is exposed to basic facts about the matter under consideration. When this study was conceived, an observation of CAPS policy document on the Life Skills subject revealed that specific time allocation is given to teaching physical education during Life Skills classes. Perhaps this could be one of the reasons why many children are observed to grow up with a direct consciousness of their physical looks.

The Life Skills curriculum in the Foundation Phase is therefore expected to provide children with adequate information so that they can make conscientious health decisions in areas relevant to their survival. Such information when disseminated via the curriculum might allow children to traverse a path of taking responsibility for their lives in a way that could yield positive outcomes in their adolescence and adulthood. For example, Atkinson et al. (2010:8), in a study conducted in the Tafea province, in Vanuatu, expresses the significance of teachers "in changing preventative health behaviours" in children. The researchers argue in favour of designing the curriculum in such a way that it attempts to inform the teaching of the causes, prevention and treatment of malaria. Their study reiterates the versatility of the teacher in using the curriculum as a strategy to evolve learning among children and their parents. Other studies that attempted to link the use of curriculum to children's health needs support this line of argument (Ansell, 2009; Gachuhi, 1999).

It became imperative in the current study to explore the alignment and integration of the intended and enacted health curriculum into the Life Skills instructional domain of the Foundation Phase curriculum in South Africa. The study delved into the scope of including malaria health education into the Foundation Phase Life Skill programme and how to align this with other health-related issues in a way that provides learners with the required values and skills. The current study argues that when the Life Skills curriculum corresponds with the instructional needs of learners in the Foundation Phase, teachers would be predisposed to teach them what they are expected to know with regards to causes and prevention of malaria infection. This would empower learners from their early years to be in control of their health through the influence of the curriculum. The National

Department of Health guidelines for the prevention of malaria (2009:9), suggest that the following measures are employed to minimise human contact with malaria.

- Staying indoors between sunset and sunrise.
- Wearing clothes that cover the body, hands and legs.
- Screening windows and doors with mosquito nets and ensuring that doors and windows are closed at night if mosquito nets are not available.
- Administering insect repellents on exposed parts of the body.
- Using mosquito mats infused with an insecticide, or igniting mosquito coils in living and bedrooms during the night.
- Covering beds with mosquito nets and making sure that the nets are tucked in (to prevent the net from trapping mosquitoes within the sleeping area).
- Using insecticides to spray the room after doors have been closed.
- Using ceiling fans and air conditioners to reduce the temperature of the room.
- Administering chemicals on clothes with government certified insecticide e.g., a pyrethroid.

Knowledge of these measures constitute a basic information base for teachers in the Foundation Phase and they should be able to transmit this information to learners.

International agencies such as WHO, UNICEF, UNESCO and the World Bank progressively acknowledge the significance of malaria education in the schools. One of such is the FRESH (Focusing Resources on Effective School Health) initiative in which governments of various countries work collaboratively with international organisations to provide comprehensive school-based health programmes for children (UNESCO, 2001). South Africa also belongs to this collaboration. This initiative is committed to helping national governments operationalise school-based health programmes in productive and practical ways that would yield significant results. For example, it is the expectation of UNESCO that children should begin to have an understanding of the Life Cycle of mosquitoes in the lower grades (UNESCO, 2001). This statement by the UNESCO is re-echoed by Nonaka et al. (2012) who believe that an early introduction of malaria health education is necessary in areas that are prone to malaria infection. The need to educate children at an early age about malaria, as suggested in literature provides the impetus to embark on the current study. Attention is thus given to the curriculum content of the Life Skill subject area in the Foundation Phase. In view of the abovementioned findings, this

study problematises the incorporation of malaria health education in the Foundation Phase Life Skills curriculum for investigation in the Limpopo province, one of the endemic regions of malaria infection in South Africa.

Within the early childhood education band, there exists a form of contention among various stakeholders in the social, political and professional arenas concerning decisions on the nature and content of the curriculum (Anning, 1998). There appears to be conflict between what should be the content of the curriculum with respect to teachers' and children's experiences. In the light of the current dilemma the current study is navigated in the direction of exploring whether conflict exists between the content of the early childhood curriculum, the composure of the teachers to teach what has been specified in the curriculum, and the real experiences of the children in terms of learning about malaria and associated issues (Gibbons, 2015).

The Life Skills subject area in the Foundation Phase comprises four study areas. These are Beginning of Knowledge, Personal and Social Well-being, Creative Arts and Physical Education. Analysis of the four study areas reveals the following:

Beginning of Knowledge is centred on social and natural sciences, and scientific and technological processes. The main areas of focus of Personal and Social Well-Being are social and emotional health, relationships with other people and our environment, and the acquisition of accepted societal values and attitudes.

The third study area, Creative Arts, presents to learners the opportunity to be involved in art forms such as dance, drama, music and the visual arts. The fourth study area is Physical Education which addresses the importance of non-cognitive and motor skills development, rhythm, balance and laterality.

The Life Skills subject has been systematically structured to provide basic foundational skills, values and concepts needed for the early development of young children in the Foundation Phase. It is expected that this would provide the support necessary for young children as they traverse their educational course. Life Skills as a subject is aimed at providing adequate experiences for young children in terms of reinforcing their physical, communal, individual, emotional and intellectual development.



Personal and Well-Being study area became an area of interest in this study as this is the area where issues pertinent to a child's personal health are expected to be transmitted. The researcher took time to analyse this study area to study the content provided by the curriculum for the child. A thorough investigation of the content of this study area showed what the curriculum provided to the child as healthy living in the Foundation Phase (Grade R to Grade 3).

The following Table shows the content of the Personal-Well Being study area of the Life Skills Curriculum in the Foundation Phase (DBE, 2014):

Grade	Content
Grade R	Washing regularly
	Cleaning teeth, hair, nails
	Washing fruit before eating
	Good toilet habits
	• Sleep
	Exercise
Grade 1	Sleep
	Eating healthy food
	Proper use of toilet
	Washing hands
	Keeping clean
	- Hair, teeth and nails
	- Washing regularly
	Regular exercise and play
	Limited television
Grade 2	Protecting food we eat - include protection from flies, keeping
	food cool
	 Simple ways of purifying water
	 Things that harm us - smoking, alcohol, drugs
	 Good habits - such as regular exercise, limited television

TABLE 2.1: CONTENT OF THE LIFE SKILLS SUBJECT AREA IN THE FOUNDATION PHASE.

Grade 3	Insects -
	Characteristics of an insect
	 Different insects - such as fly, mosquito, ant, beetle
	 Observing and drawing an insect
	How insects help us
	How some insects harm us
	Topic: Life cycles
	What a life cycle is
	Lifecycle of a:
	- Mammal (e.g. dog)
	- Insect (e.g. butterfly)
	- Amphibian - (e.g. frog)
	- Bird - (e.g. chicken)

Source: Department of Basic Education. (2011). Curriculum and Assessment Policy Statement (CAPS) Life Skills – Foundation Phase (Grades R-3).

Of a greater interest to the researcher is the investigation of the relationship between the weather and an important insect like mosquito when the Life Skills document was analysed. The devastating effect of breeding could be a good lesson for learners in the Foundation Phase in the topic on how the changing weather affects us. The researcher finds this as a gap necessary to be explored to fit into the Life Skills curriculum. This notion became a predicament to the researcher as a result of the rising occurrence of malaria in the areas of South Africa, close to malaria infested countries.

2.3 THE RELEVANCE OF SCHOOLS IN PROPAGATING HEALTH EDUCATION

The FRESH document on a comprehensive school health approach to achieve education for all nations stresses its unflinching support for school-based health education. This document advocates "the education sector must lead, and retain overall responsibility for, the development, implementation and enforcement of school health policies" (UNESCO, 2002:6). There is an increasing corroboration9 from other studies (such as Kater, Rohwer

& Londre, 2002; Shaw, et al., 2005) that in many developing countries, school-based health services can aid improvement in children's growth, dietetic condition, intuitive ability, school attendance and general wellbeing. However despite this growth in health knowledge and the inclusion of other aspects of health (such as physical health education in the curriculum), there still remains a scarcity of literature that addresses classroom instructions disseminated to children with regards to the malaria disease. The integration of classroom instruction on the causes of malaria, its prevention and treatment into the Life Skills curriculum could be a supplementary stratagem that could ease the burden of health workers (Atkinson, et al., 2010:12). This would make good use of the significant role played by the teachers in changing children's health behavior. When this strategy becomes fully operational, children can become agents that would make desired change happen (Bundy et al. 2000). However, children are only capable of playing the role of effective agents if the necessary supports are provided (Simovska & Carlsson, 2012).

Teachers, by reason of their profession, are disseminators of knowledge at the schools (Obidike & Enemuo, 2013). However, this role could be limited by what the curriculum allows them to teach. The importance of the provision of such empowerment is echoed by Webb (1997). Webb reiterates that there is a need for a thoroughly organised structure that permits all those who are concerned with policy implementation in a system to interpret the aims of national policy in a way that yields meaningful transformation for decision-making and practice (Webb, 1997a). In the early childhood setting, the importance of the role of the teacher is accentuated by the distributed leadership theory (Heikka, Waniganayake & Hujala, 2012). According to this theory, the teacher is an important stakeholder who plays an active role in implementing the curriculum within the classroom, thus providing a form of pedagogical leadership in the classroom. In other words the teacher may be perceived as an agent of change, capable of implementing the set curriculum. This implies that the teacher should have the necessary skills, knowledge and attitude to facilitate learning to children in ways to ensure that learning takes place. The curriculum must thus make provision for teachers to have the liberty to teach children in the Foundation Phase required knowledge about malaria. In this way both the teachers and the children will be favourably disposed to executing their roles in a beneficial way. Based on the available literature reviewed so far, a gap has been identified because no direct mention has been made to perceive the curriculum itself as an agent of change. The earlier reviewed literature either directly or indirectly located the children and teachers as agents of change. This is an important gap that needs consideration. This research study

thus seeks to identify the curriculum as a possible agent of change requiring the expertise of the teachers and the cooperation of the learners in order to succeed.

Health workers are invaluable in dissemination health education to the schools and community at large. This could be because they are more knowledgeable in health matters than the teachers in the schools (Morris, et al., 2013). Atkinson et al. (2010) point out that although health workers are very important in disseminating information about health issues, they are often more engrossed in dispensing medical care than in educating the people. This limits their ability to propagate health education in a way that may enlighten the entire community. The school is thus seen as an important agent, capable of providing the necessary intervention in educating the community. This study assumes that as children are being taught in schools, they would be able to teach their parents and other members of the family about the knowledge of malaria, its prophylaxis and how it impacts children's development in the long run. This knowledge about malaria in the Foundation Phase curriculum was conceptualized to have a multiplier effect that could permeate the entire community.

In addition, the involvement of schools as an avenue of bringing awareness about the importance of incorporating knowledge about malaria into the school curriculum cannot be over-emphasised. Ansell (2009) posits that the rate at which schools are seen as agents of intervention in reducing young people's risk of contracting diseases is increasing greatly. The school is primarily capable of influencing children and subsequently the society. When the school curriculum is open and plain, the school is able to shape and engage the children (Ansell, 2009:22). This ensues in a way that helps them to understand events within their sphere of influence. The school is seen as occupying a position of influence in developing children into adults that will be able to contribute favourably to the society. The school is regarded as a functional organisation and relevant in propagating malaria health education. This is made possible through integrating topics that provide an adequate foundation for malaria health education in the Life Skills subject in the Foundation Phase.

Geissler et al. (2001) conducted a study on a group of school children in Kenya and Uganda to assess their level of self-medication practices. Their study revealed the role of health education in the curriculum and disclosed that the curriculum content only informs school children about preventive measures and the biology of the disease. The management of the disease in terms of treatment actions are left to skilled health professionals. However, when dealing with a disease such as malaria, this course of action may not be sufficient, as children need to know how to immediately respond to malaria infection. This submission arises from the recommendation of WHO (2005) that malaria treatment should commence not later than 24 hours after perceiving the symptoms. Hence, it is expedient to design the Life skills curriculum in the Foundation Phase in a way that allows young children to access knowledge about recognising the malaria symptoms at an early stage of infection. This would enable them to make quick decisions with regards to how to handle the disease before it becomes too late.

In advocating for malaria elimination in the Tafea province in Vanuatu, Atkinson et al. (2010) proposed that schools serve as a medium in community health delivery to relay feedback to the government at provincial level. However, there is also a need to propagate homogenous verbal and written education in a way that permeates the community and this could be done through the schools.

Temperly et al. (2008) in their study of the cost-effectiveness of delivering intermittent preventive treatment of malaria concluded that school-based malaria interventions managed by teachers is an approach with prospective cost-reducing ability. Consequently the implementation of malaria education in the school curriculum among children, especially in the Foundation Phase, could be a money-saving venture for the government. Such funds saved may be useful in servicing other sectors of the economy.

2.4 THE IMPORTANCE OF TEXTS IN FOSTERING KNOWLEDGE, ATTITUDE AND PRACTICE ABOUT MALARIA

The Knowledge, Attitude and Practice (KAP) approach presupposes a direct relationship between knowledge, attitude and practice (Heins, 1976). This approach advocates the importance of a multiple dimension of analysing outcomes in a way that does not rely on knowledge alone, but also on attitude and behavioural transformation (Schrader & Lawless, 2004). The KAP approach relies on the use of cognitive, affective and behavioural domains to evaluate the impact of acquired information. In his article on the assessment of instructional intervention among high school students, Reeves (2006:294) suggested the alignment of a four-domain evaluation strategy based on cognitive, affective, psychomotor and conative skills. While the cognitive domain involves thinking,

the affective domain is connected with valuing, the psychomotor involves skillful behaviour, and the conative domain is connected with action.

The current study conceptualises that when the curriculum is well designed, it would increase the children's knowledge on matters relating to their welfare. Knowledge in turn affects attitude, which eventually translates into practice. Practice will ultimately form behaviour in the child's later developmental stages. It is envisaged in this study that the integration of malaria health education in the Life Skill subject may provide fundamental knowledge of malaria health education among children in the Foundation Phase. It is expected that this may ultimately lead to the development of attitude and practice appropriate to adolescence and adulthood. Absorbing a culture of prevention from childhood may be the key to achieving set targets for malaria elimination. The aim of this study is to integrate a health approach into the Life Skills subject in the curriculum of the Foundation Phase.

Nonaka et al. (2012) conducted a study on the content analysis of 474 science-related and language textbooks used by primary and secondary school in these nine endemic malaria regions: Laos, Cambodia, Nepal, Bangladesh, Sri Lanka, Zambia, Niger, Benin, and Ghana. They found that in all of these nine endemic regions, the inclusion of the subject of malaria was not as significant as other subjects. They reported that in cases where there malaria infection was mentioned in the Life Skills subject, the recommended textbooks in many instances were deficient of necessary information, such as the use of treated bed nets and the need to seek treatment without delay (Nonaka et al., 2012).

It was also reported that none of the 474 textbooks addressed any issue around malaria treatment. This raises a point of concern on how lightly or insignificant malaria information is being handled within the education domain. This gap substantiates the need to conduct a study that intends to make recommendations with regards to how this important information about malaria may be integrated into the Life Skills curriculum in the Foundation Phase. It is of utmost importance that recommendations made in the current study would go a long way in raising awareness about how children, particularly those living in malaria-prone regions, can be equipped with adequate knowledge and skills to help protect them and their families against malaria infection. Including the causes of malaria and how children can seek early treatment for malaria into the Life Skills subject in

the Foundation Phase curriculum is a way to improve the negative impact of malaria infection and protects children from its effects.

The significance of access to health information through texts is further highlighted in the WHO HINARI programme (Katikireddi, 2004). This initiative aims to improve the global health situation by providing easy access to journals, books, etc., especially to low-income countries. Accessibility to relevant information presents a source of wealth that is incomparable to material possession. This is because a dearth of information is an indication of lack of knowledge (Onwuliri, et al., 2005:312). Lack of access to information promotes ignorance and ignorance is one of the major factors associated with the spread of diseases in Africa (Onwuliri, 2004). The importance of young children having access to school-based information about diseases that affect their day-to-day survival is thus enunciated.

The availability of texts could have a far-reaching impact on alleviating the health situations in countries of the world. Onwuliri (2004) informs the quest to conduct this research on the consideration that if learners who attend school in malaria-prone areas have access to information (through resources, such as textbooks and storybooks which contain information about malaria), they could be equipped to fight the disease. Thus, the curriculum might become a vital route of accessing valuable information that could benefit young children in the Foundation Phase presently and in the future. The recommendations of this study could lead to policies for a comprehensive inclusion of malaria education in the Life Skills curriculum in the Foundation Phase. This could foster the right knowledge, attitude and practice in young learners about the malaria disease. The learners could be directed towards preparing for a future that could enable them to live a healthy life.

2.5 ASSOCIATION BETWEEN MALARIA AND HIV/AIDS

The incidence and impact of malaria are reported to be more pronounced among people who are HIV positive (Patnaik et al., 2005). Patnaik and his colleagues assert that in a particular region, the occurrence of malaria infection may double among people with HIV infection, resulting in higher occurrence of the malaria parasites in their blood. They also reported that people living with HIV have a high tendency of increased mortality rate due to malaria, even in areas of low malaria transmission. They suggested that this might be

as a result of the low level of immunity of this group of people due to HIV infection and their consequent vulnerability to other diseases. In the same vein, Grimwade et al. (2004) put forward an argument that low immunity may account for a high rate of illnesses and death due to malaria among those infected with HIV. They suggested that this may account for the reason why HIV-infected persons living in a malaria-prone environment are at a higher risk of malaria infection. These assertions draw our attention to the need for concerted efforts towards ensuring malaria prevention in areas such as South Africa where there are reported cases of HIV and AIDS infection (Rehle, et al., 2010). The current study aims to provide a possible way of meeting this need. It is envisaged that when children in the Foundation Phase have access to ample information about the malaria disease through the curriculum they could become valuable change agents in propagating the message of malaria prevention.

Among pregnant women who are HIV-positive, malaria infection has also been found to significantly increase the risk of mother-to-child HIV transmission. HIV positive pregnant mothers were found to have a higher tendency of giving birth to infants with low birth weights (Brahmbhatt et al., 2008). Such under-weight infants were reported to have a significantly higher risk of mother-to-child HIV transmission.

In Africa, the spread of HIV has been reported to increase alongside the malaria epidemic (UNICEF, 2003). Early research such as the study conducted by Tswana, Nystrom, Moyo, Nzara and Boone, (1999) did not report any association between malaria and HIV and AIDS. Recent studies have documented that malaria and HIV infections have health implications (Cuadros, Branscum & Crowley, 2011). Cuadros and his colleagues also reported that HIV infection increased the risk of the presence of the malaria parasite in the blood samples of people who are HIV-positive. On the other hand, severe malaria infection has been reported to account for high HIV transmission and a high speed of disease progression among HIV-positive individuals (UNICEF, 2003). The high predominance of these two transmittable diseases in Africa is predicted to have extensive unfavourable interactive effects on the population (UNICEF, 2003). From the abovementioned reasons it can be summarised that malaria education among the population may have a significant effect on the control of HIV in areas of malaria infection. This further strengthens the need for this study, which contributes to addressing ways of alleviating the incidence of HIV transmission in South Africa by advocating for the inclusion of malaria education in the Life Skills curriculum in the Foundation Phase.

Studies such as the work of Abu-Raddad et al. (2008) and White et al. (2008) reveal that HIV infections are rife among core groups such as prostitutes or people who have multiple sex partners. However, Cuadros, Branscum and Crowley (2011), in their study of the effects of malaria on the prevalence of HIV in east sub-Saharan Africa, report the possibility that ordinary people in the population may also be at risk of HIV infection if they are infected with malaria. They predicted that people living in regions of high malaria infection have a double chance of contracting HIV because of the co-existence of HIV with malaria in these high incidence areas. Although it is not within the scope of this study to explore the lifestyle of members of the community, this revelation evoked the need for ordinary members of the community at grassroots level to be enlightened about the relevance of being educated about the causes and prevention of malaria. The aim is to foster the evolution of a healthy and agile population who will make significant contributions to the society at every level. The current study conceptualises that when children have adequate knowledge of the transmission of the malaria parasite and also the prevention courses, they might enlighten older people at grassroots level. This could have the propensity to raise consciousness among the populace on how to reduce the transmission of malaria.

2.6 THE ROLE OF CHILDREN AS CHANGE AGENTS IN HEALTH MATTERS

Different schools of thought and diverse philosophies exist when it comes to the involvement of children in issues concerning the community in general. According to Hart (1992), proponents of children participation declare that children have embedded potentials that could be of immense benefit to the society. This line of reasoning points to the agentic predisposition of children when they are equipped with the necessary knowledge, skills and attitude (Nicotera, 2008). On the other hand, children's participation is considered as irrelevant because they do not have the ability to make decisions as adults. However, the involvement of children in matters that affect them in particular, and their community in general, took a new dimension since the adoption of the United Nations Convention on the Rights of the Child (UNCRC) (UNESCO, 1989). Children have since then been accorded a status that gives them the opportunity to contribute to the society in ways that they deem fit and convenient.

Underpinning the standpoint of this document is the fact that the child is regarded as someone capable of forming his or her own opinion in a chosen manner that is considered Page | 41

comfortable. Children's views are therefore respected and considered important and equally acceptable as those of adults. Of relevance in this study are Articles 13 and 17 of UNCRC.

Article 13(1) states:

The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice.

Article 17 reads as follows:

States Parties recognize that the child has access to information and material from a diversity of national and international sources, especially those aimed at the promotion of his or her social, spiritual and moral well-being and physical and mental health.(UNESCO, 1989)

It is inferred from these Articles that children have the right to receive and disseminate information that is useful to them and other members of the society. The right to freedom of expression permits them to share such information accessed in whatever form they choose, including via speech, drawings or writing. One may thus deduce that children in the Foundation Phase have the right to be exposed to important information pertinent to their health and well-being. One of the ways would be through Life Skills instructions given to these children when it is contained in the Foundation Phase curriculum. The acquisition of necessary information relating to the child's health and functioning provides the fortitude for onward transmission to other members of their community. Articles 13 and 17 of UNCRC paved the way for inquiring about the extent of information on malaria, available to the average child through the Life Skills curriculum in the Foundation Phase. Furthermore, Section 28(2) of the South African Constitution states: "A child's best interests are of paramount importance in every matter concerning the child" (Constitution of the Republic of South Africa, 1996:8).

Children are reckoned as being capable of setting targets for themselves and their views on how to achieve it are unambiguous (Mortimer, 2004). They can transmit this message either verbally or through their actions. From the researcher's interactions with children over the years, it has been observed that children could be useful change agents. They are often down to earth and sincere in their views. They are also important agents capable of influencing their parents, uncles, aunties and other people around them about the need to get protected prior to or during their visit to a malaria region. They can provide counsel on how to get prepared when going for a holiday in a malaria-prone region, provided the acumen to do so is stipulated through their engagement with the Foundation Phase Life Skills curriculum. Bresee, Caruso, Sales, Lupele and Freeman (2016) assert the agency of children in disseminating health messages. In their study, children were used as agents of hand-washing interventions in Zambia. They found that mothers reported high levels of trust in their young children. These children were able to transmit the health information they have learned at school.

Children enjoy learning when they are actively involved in the learning process (Kitsao & Waudo, 2002). Therefore teaching health education through interesting activities that involve children's participation would be a way of gaining their attention and getting them more interested and involved. This current thought echoes the ingenuity of employing curriculum enactment in ways that encourage participation (Kurz et al., 2010). In this way children learn to take action on advancing their health and that of other members of their families and community. The curriculum should be presented to children in a way that stirs up their determination to become agents of change. This is because children must be brought up to see themselves as more than "messengers". They must be active campaigners of social change and capable of positively influencing their spheres of influence. It may thus become ingrained in them to develop problem-identification and problem-solving skills (Kitsao & Waudo, 2002:27).

As social actors, children have their roots within a larger system, which is the society. As a result they are often confronted by power relation issues that may have a significant impact on their ability or inability to effectively act as change agents (Onyango-Ouma, 2003). It therefore becomes imperative for adults working with children, in whatever capacity, to give them the freedom of involvement. This would enable them to participate effectively and also become effective messengers of the course for which they are intended. These findings evoked an inquiry into whether children in the Foundation Phase are currently seen as agents of change that can bring the awareness of malaria and the intervention strategies available to their immediate community.

Ayi, Nonaka, Adjovu, Hanafusa, & Jimba (2010) conducted a study on the importance of engaging children as health messengers in a rural community. Their study was conducted among 186 school children in Grades 3-5 in the Dangme-East district of Ghana. At the conclusion of their study, they reported that significant improvement was observed among the intervention group in factors associated with the knowledge and practices connected to malaria education. For example, before the intervention programme, a number of the participants believed that eating mango and sitting under the sun for an extended period of time caused malaria. At the end of the intervention programme the level of awareness of the participants had increased because they eventually knew that some of the preconceived causes of malaria were untrue. Ayi, et. al's (2010) study became relevant in its applicability to the current study because it shows the important contributions of young children in aiding the propagation of malaria education. Ayi and her colleagues (2010) also conducted their study in a rural setting. This became relevant in the current study because the Hamakuya area in the Limpopo province is a rural setting similar to where their research was conducted.

It is important to afford every child who is a potential victim of malaria infection an opportunity to be exposed to adequate knowledge about malaria transmission and prophylaxis. Children also need to know how to protect themselves from malaria disease. In the same vein, the expected agency of children in influencing change in their communities depends on their knowledge. It becomes impossible for learners in the Foundation Phase to become effective agents of change of malaria awareness if they are devoid of relevant understanding.

2.7 PARENTAL INVOLVEMENT IN HEALTH EDUCATION

Parents are naturally the closest people to, and primary educators of their children. They are intimate with their children and understand them better than other people who are associated with their children. Parents give firsthand instructions to their children on what their expectations are. They often do this by communicating to their children the values they want them to grow up with and the dreams they would want them to fulfill (Spera, 2005). One way of communicating such expectations is through their involvement in matters affecting the education of their children (Hill & Craft, 2003; Hill & Taylor, 2004). Involving parents in health matters concerning their children may be a good place to start

addressing the issue of incorporating malaria education in the Life Skills curriculum in the Foundation Phase (Mortimer, 2004).

Parents have also been found to be significant contributors in developing health curriculum and working hand-in-hand with health practitioners for an effective dissemination of health knowledge (O'Keefe & Coat, 2009). This may arise from the reasoning that parents have expectations for their children with regards to their health status. These expectations may make significant contributions to evolving a curriculum that will work well for the child. This study is premised upon exploring the extent of parental contributions to the education of their children on malaria-related issues at the home front. Parents endeavour to get involved in the day-to-day affairs of their children. This daily involvement has been observed to contribute significantly towards socialising the children (Spera, 2005). Spera (2005) went further to identify some of these socialisation practices that include what is learnt by the children.

Furthermore, the current study looks at the level of information possessed by parents with regards to malaria issues. This gives insight into the possibility of including such information from parents in developing an integrated Life Skill curriculum in the Foundation Phase. Parents of children in the Foundation Phase would thus become an invaluable instrument in developing the content of the Life Skills curriculum in the Foundation Phase. This would give them the opportunity to become active contributors to what their children learn at school.

It is conceived that this study will provide a platform for parents of children in the Foundation Phase to express their desires concerning what they wish to know about malaria from the school front. However, some factors were observed as deterrents to the parental involvement in matters concerning their children.

2.8 IMPACT OF MALARIA ON THE CHILD'S DEVELOPMENT

Although, the impact of malaria on the cognitive and educational development in early childhood is still poorly understood (Zuilkowski & Jukes, 2014), studies (such as Bleakley, 2010; Lucas, 2010) have documented that malaria infection has an impact on the general mental and behavioural growth of children. Such impact may range from mild to intense (Holding & Snow, 2001).

Fink, Olgati, Hawela, Miller and Matafwali (2013), in their study of early childhood development in Zambia, assert that there is a connection between children's exposure of to malaria in their early stages of life and significant aspects of their development. Their study reiterates that one major aspect of children's development that is negatively impacted by the malaria parasite is the cognitive development of the child. All over the world malaria is reported to account for three to eight percent of poor academic performance and school absenteeism (Bundy, Lwin, Osika, McLaughlin, & Pannenborg, 2000). It was also documented that malaria has a high propensity to exacerbate growth retardation in children (Kreuels, et al., 2009).

Similarly, Fernando, Rodrigo and Rajapakse (2010), documented that children's continued exposure to malaria attacks could potentially lead to cognitive impairment. They recommend that countries with malaria incidence should give special attention to prevent the occurrence of malaria among children. The effects of malaria infection in young children, even after recovery, are inability to live a normal life and hindrance to school completion. Children that survive malaria attacks have been reported to suffer physical complications that could disrupt their development and ability to live healthy lives. School attendance may also be disrupted, which then leads to children's inability to progress in their educational career (Zuilkowski, & Jukes, 2014).

Previously, the incidence of malaria disease was commonly reported among children under five years. However, studies such as Kurtzhals et al. (1999) have shown a shift in the incidence and distribution of the malaria disease. Children older than five years have been reported to suffer greater consequence of malaria infection. Such findings impelled the researcher to undertake this study because in the South African system of education, the Foundation Phase covers Grades R-3. Children in this phase are typically between the ages of six and nine. This age range is very crucial for the cognitive development of young children (Fernando, Rodrigo and Rajapakse, 2010).

It thus becomes imperative for children in the Foundation Phase to be educated about malaria so that they can be fortified with the correct information about the disease from their childhood. It is important that they are informed about some facts concerning malaria. Such facts include, among others, the cause of malaria, risk groups, morbidity and mortality due to malaria, how they can protect themselves from malaria infection and the correct treatment-seeking behaviour in case of infection.

The instrumentation of an integrated health curriculum in the Foundation Phase is envisaged to possess the capability of disseminating such information to the children. Moreover it is expedient that children should learn about the significance of malaria and of the danger the disease poses to their health and welfare at an early age (WHO, 2007). This assertion paved the way to engage with the teachers and children in the Foundation Phase to know whether such information was available in the Life Skills curriculum or not. The extent of malaria health education incorporation into the Life Skills curriculum in the Foundation Phase was therefore problematised for inquiry.

2.9 PECULIAR FACTORS IMPACTING MALARIA

The occurrence of malaria comes with distinctive challenges that are peculiar to the infection. It is imperative that these peculiar challenges are highlighted in the curriculum so that learners in the Foundation Phase would be able to learn about them and know how to guard against them. Some of these challenges can be highlighted as adulterated drugs, resistance to treatment drugs, resistance to insecticides, unstable climatic conditions and human conduct. These will be further explained next.

2.9.1 Adulterated Drugs

The increasing problematic situation of malaria is made worse by the problem of people who make and sell fake anti-malaria medication (Bharati & Ganguly, 2013). The prevalence of this creates a high degree of insensitivity of humans to malaria drugs. Drug resistance could also be as a result of genetic change of the *Plasmodium* parasite due to continued or undue prolonged use by people infected with malaria (Kinuthia, Gicheru, Ngure & Kabiru, 2012). The significance of this for the current study is that the prediction of change in attitude can possibly be fostered through the curriculum during children's early years. This would have positive implications on children's attitudes with regards to malaria medication as they grow up.

2.9.2 Resistance to Treatment Drugs

The break-out of malaria parasites and vectors that are resistant to malaria drugs continues to be a major health problem all over the world (WHO, 2012). Studies by Lobel and Kozarsky (1997) and Schwartz, Parise, Kozarsky and Cetron (2003) have shown that

some *Plasmodium* species are resistant to treatment drugs such as chloroquine. This has resulted in rapid innovation in developing new anti-malaria drugs (Alba et al., 2010). Resistance to treatment drugs has been reported to be one of the major causes of malaria resurgence even in areas that once achieved significant control (Kumar, Valecha, Jain & Das, 2007). Moreover, Brooker et al. (2008) argue that the use of anti malaria drugs as treatment against malaria infection is observed to be proving ineffective in Africa due to rising incidence of drug resistance. Hence the current study foresaw the possibility of children being equipped with this knowledge from childhood so that it could entrust them with a treatment-seeking attitude and prevention methods with regards to malaria fever infection. This may be a prediction to achieving sustainable malaria control. It thus becomes an issue that warrants learners in the Foundation Phase to know more about the possibility of malaria drug abuse as a major deterrent to combating the disease.

In the South African context, Moonasar et al. (2012) report that resistance of malaria parasites to chloroquine was first reported in Kwa-Zulu Natal in 1987. This called for the need to implement a drug policy, which resulted in the decision of alternative prophylactic medication for malaria in the province. A similar condition arose in the Mpumalanga and Limpopo provinces in 1988. In the above three provinces, resistance of the malaria parasite to drugs demanded a health policy change for using one malaria drug to another. This is important because drug resistance predisposes a resurgence of malaria infection even in areas where successful control had been achieved (Kumar, Valecha, Jain & Das, 2007). These findings become important points of exploration to establish whether the Life Skills curriculum is empowered to reach learners with the knowledge, skills and attitudes regarding drug resistance. It also provides a platform of knowledge dissemination in the attempt to equip the average learner in the Foundation Phase with the propensity for survival and possible capacity to avoid drug abuse.

2.9.3 Resistance to Insecticides

Similar to the consequence of resistance to treatment drugs, resistance to insecticides has, in the same vein, contributed to malaria resuscitation. This has significantly hampered the resolve to achieve malaria elimination in the areas or regions concerned. Insecticide resistance has been identified as one of the major factors responsible for lengthening the time specified for malaria obliteration all over the world (Karunaweera, Galappaththy & Wirth, 2014). The WHO (2013) highlights the threat posed by insecticide resistance. In the Page | 48

WHO report, insecticide resistance was reported in 64 countries. This seems to be posing a global threat to malaria control and eradication. Such concerns become a point of departure in exploring whether the Life Skills curriculum in the Foundation Phase is designed in a manner that teaches learners about resistance to insecticides, and the possible means of alleviating concerns associated with it.

2.9.4 Unstable Climatic Condition

It is predicted that with global climate change, the average global temperature is expected to increase. This may consequently raise the occurrence of extreme weather events (Sheffield & Landrigan, 2011). The malaria vector, mosquito, is highly responsive to changes in temperature and rainfall. The incidence of malaria gets worse with increased temperature. Moreover, unstable weather conditions and extreme climatic episodes such as floods and drought have been observed to account for the reappearance of malaria infection. This exposes the population to more vulnerability of attack (WHO, 2010). The ability of the curriculum to raise early awareness among young children and to inculcate environmentally-friendly behaviours in them thus becomes relevant. The extent to which the Life Skills curriculum is equipped to teach learners in the Foundation Phase about the impact of climatic fluctuations on the survival of the malaria vector thus becomes a problem for investigation.

2.9.5 Human Conduct

The manners in which people go about their daily activities have a direct impact on malaria transmission. However this aspect is often ignored when addressing the spread of malaria (Bharati & Ganguly, 2013). In a study conducted by Kinuthia et al. (2012) on lifestyles and practices that enhance malaria and typhoid fever in the Njoro district of Kenya, it was concluded that some human behaviours were capable of enhancing malaria transmission. Behaviours highlighted in their study include; use of pit latrines, littering of compounds with containers that are capable of retaining water, allowing long grasses to grow, using exposed water tanks and keeping animal kraals around the house. A preliminary visit to the research site revealed that some households were still actively practising some of these behaviours. This study explores the extent to which the behavioural disposition of inhabitants at the research site contributed to or alleviated the spread of malaria.

2.10 CULTURAL BELIEFS AND PRACTICES IMPACTING ON MALARIA

Another important aspect of human conduct is culture. Culture refers to the ways of life and the beliefs and tenets of people (Beaulieu, 1987). People in rural areas are reported to still hold on to some beliefs when it comes to the prevention and treatment of malaria. Such practices include urinating on a child who has malaria infection or rubbing elephant dung on his or her skin (Hausmann-Muela & Ribera, 2003), the use of natural oils (Amer, & Mehlhorn, 2006), medicinal plants (Kariuki, Kariuki, Muchiri, & Njoka, 2016; Mukungu, Abuga, Okalebo, Ingwela & Mwangi, 2016), and cow dung (Maharaj et al., 2010). The eating of the bark of a plant *Mangifera indica* (mango) has also been documented to possess a curative effect against malaria when boiled (Asase, Otng-Yeboah, Odamtten, Simmonds, 2005). So also is the eating of the unripe fruits of the same plant. However, people are cautioned against eating too much of the unripe fruit as this could be detrimental. The seed of *Citrus limonum* (sweet oranges) has also been found to contain anti-malarial properties (Saotoing, Vroumsia, Tchobsala, Tchuenguem, Njan, & Messi, 2011). The antimalarial property of *C. limonun* is substantiated by Titanji, Zofou and Ngemeneya (2008).

Cultural night dancing rituals were reported to limit the use of bed nets among the people in the Tafea community in Vanuatu (Atkinson et al., 2010:7). Another category of people in this community did not believe in the use of insecticides due to their tenacious adherence to their culture.

Beyond the burning of cow dung as a repellent, children must be furnished with information about the ability of wet cow dung to become a breeding site because of water content (Hemingway, Shretta, Wells, Bell, Djimdé, Achee, & Qi, 2016).

2.11 POLICY RESPONSES IN SOUTH AFRICA WITH REGARDS TO MALARIA

Most policies geared towards malaria are directed towards advocacy, health promotion and collaboration (Groepe et al., 2013). Policy measures were directed towards malaria prevention and control using indoor sprays such as Dichloro-diphenyl-trichloethane (DDT) and environmental sanitation (Sharp & Le Seur, 1996). Health workers have been reported to fail in the area of early detection and diagnosis of the symptoms of malaria. The curriculum may be an effective tool in correcting this anomaly in that it provides the necessary information required by children to inculcate early treatment-seeking behaviour. This study does not make an in-depth inquiry into the national malaria policy in South Africa as other researchers who were investigating this aspect concurrently with this study delved into this matter. However, the content of the Life Skills Policy document in the Foundation Phase was scrutinised. This provided a view of the extent of policy development as far as the incorporation of malaria education into the curriculum is concerned.

A prominent statement that speaks to the stance about the curriculum in the Life Skills subject area stipulates the flexibility given to teachers in terms of curriculum implementation:

Beginning Knowledge and Personal and Social Well-being in the Life Skills curriculum are organised in topics. The use of topics is suggested as a means to integrate the content from the different study areas where possible and appropriate. Teachers are encouraged to adapt the topics so that they are suitable for their school contexts. Teachers are also encouraged to choose their own topics should they judge these to be more appropriate (DBE, 2011:14).

This document grants teachers in the Life Skills curriculum in the Foundation Phase the liberty to use their own discretion to plan, teach and assess topics that they identify as important.

The researcher draws on a similar instance where teachers in New Zealand used their discretion to adjust the health curriculum to their contexts. In a study that compared the methods embarked upon by primary school teachers to implement the teaching of health and physical education (HPE) in New Zealand and Japan, Watanabe and Dickinson (2015) made some observations. They reported that the flexibility of teachers in New Zealand gave room to creativity and innovative ways of reaching children with curriculum content. Teachers were able to meet the needs of the children within their local community.

On the other hand, there was a centralised mode of curriculum delivery in Japan. The teachers were streamlined in their approach to curriculum delivery. Hence the children

could not benefit much from the health curriculum in the short-run as a result of the rigidity in implementing the curriculum. The current study implies that if the teachers of the learners in the Foundation Phase are able to peruse and interpret the curriculum, based on the identified flexibility stated in the DBE (2011) CAPS document, it could form a platform from where desired changes (as expected by the teachers) may ensue.

2.12 THE MALARIA SITUATION IN THE LIMPOPO PROVINCE

Among the three malaria endemic regions of South Africa, the Limpopo province is reported to be the most encumbered by malaria infection. The province accounts for 43% and 44% of the total reported national cases between the 2005/2006 and 2006/2007 seasons (Department of Health, 2008). Most of the reported cases for these periods were between the months of January and April. This coincides with the peak of the rainy season in South Africa. According to the Department of Health (2008) report, Vhembe district, the area bordering South Africa and Zimbabwe, is the area most affected by malaria within these periods.

This study was conducted in the Hamakuya village, one of the prominent communities in the Vhembe district in Limpopo province where the incidence of malaria is very prominent (Brooks & Abney, 2013). Brooks and Abney observed that community members around Hamakuya village have sparse knowledge about malaria education, notably in the way malaria is transmitted and what to do to prevent its transmission. It is exciting to know that the sources from which the participants in Brooks and Abney's study obtained their information contributed immensely to the level of ignorance observed in participants. Brooks and Abney's report further highlighted the relevance to conduct a study that probed the level of malaria awareness among the people in the Hamakuya community and how to improve this in a way to easily reach community members at a low cost.

Studies such as (Asante et al., 2010; Imbahale et al., 2010) have shown a relationship between knowledge of malaria infection with settlement pattern. They have put forward that urban dwellers are probably more knowledgeable about malaria than rural dwellers. Higher levels of literacy among urban dwellers coupled with their greater exposure to information through the media are some of the reasons suggested for the existence of this disparity. It thus became necessary to determine the level of knowledge of malaria education existing among children in the Foundation Phase in the rural area of Hamakuya in the Vhembe district in Limpopo.

2.13 SUGGESTED TEACHING STRATEGIES SUITED TO MALARIA HEALTH EDUCATION

The current study conceptualises that the school is an important organ, useful in propagating malaria education. This places a demand on the need for an instructional process that is clearly laid out, distinctly expressed, with well-defined lesson plans and activity content that can be executed without difficulty (Pence, Justice, & Wiggins, 2008). It is important for a lesson to be designed in such a way that it allows children to link their home situation with what is learned at school. In this way, children's current and future needs are met (Hawes, 2003).

Mangrulkar and her colleagues (2001) suggested that teaching methods to convey Life Skills instructions must be participatory in nature. Some strategies have been identified in literature to align with the teaching of malaria education within the classroom. Hodge, Pasqua, Marquez and Geishirt-Cantrell (2002) prescribe storytelling as an effective means of health education and awareness. They found this method to be effective among American-Indian communities. This method was found to exhibit the expected behaviour standards in children in a way that was easy to understand and enjoy what was being taught. Other methods that have been found valuable and constructive in teaching malaria education among young children include role plays, games, flash cards and competitions (WHO, 1997).

Studies (e.g. Lover, Sutton, Asy & Wilder-Smith, 2011) have reported that insecticidetreated bed nets are being used for wrong purposes such as for fishing and for protecting crops. Thus instructions about malaria should include messages that dissolve fears about insecticide usage, and the proper use and maintenance of bed nets. Also it should highlight the persistent risk of spread of malaria even during off-peak mosquito periods (Atkinson et al., 2010). It is important that the teacher, who acts as a facilitator of the curriculum, does so with much enthusiasm and preparedness (Pence, Justice & Wiggins, 2008). The disposition of the teacher thus plays a major part in enabling children to learn as much as they should. Teaching and learning should occur in an atmosphere that enables them to make useful what they learn. An environment needs to be fostered wherein children are able to learn from one another. When there is a cooperative effort among children to learn and reason together, there is a propensity to align the health education acquired in school with practice at the home front. The link between the home and the school is therefore established and this diffuses into the community and eventually the society at large (Hawes, 2003). An inquiry arises as to whether these methods are being used in teaching malaria education in a way that creates awareness from the school to the home front in the Vhembe district of Limpopo province.

2.14 SUMMARY OF FINDINGS FROM LITERATURE

A number of salient points emerged from the review of the literature. These points serve as navigation for inquiry, an attempt to situate the study in the form it set out to explore. These points are outlined next:

First, the curriculum is observed as a collection of relevant information that is deliberately packaged and disseminated for knowledge and skill acquisition. This exposes children in the Foundation Phase to valuable information that will enable them to fully comprehend the need to develop a healthy choice with regards to malaria as they grow into adolescence and adulthood. Also, the school is perceived as a vital avenue to complement the efforts of government at various levels to achieve the desired goal of malaria education. Therefore, the curriculum, if effectively used, can establish a foundation of health awareness in children from their early years. As such it can initiate favourable health behaviour towards adolescence and adulthood.

Second, the significance of using relevant texts is considered. It is raised that texts which provide progressive knowledge about what malaria is, its impact on children and how children can protect themselves and other members of their families and communities are relevant in providing a good exposition for children in the Foundation Phase.

Third, of considerable relevance is the link that exists between malaria and HIV and AIDS. The inclusion of malaria education in the Life Skills curriculum, in the Foundation Phase is considered as a way forward in the growth of a population that is strong and healthy.

Fourth, it was revealed that children have the right to be granted access to useful information, and to make informed decision about how to protect themselves and others from the malaria scourge. Such information must be presented in ways that encourage the Page | 54

active participation of children in understanding and disseminating information about the malaria scourge. This allows children to become active and intentional agents of change within their families and communities.

Fifth, parents are regarded as the closest allies of their children. Likewise, they are important stakeholders in matters concerning the health of their children. They have certain expectations for their children with respect to their health status. Hence they are invaluable contributors in health issues. Their expectations for their children can provide a valuable asset to what should be included in the Life Skills curriculum in the Foundation Phase. This would further ensure that children are taught what may be relevant for their proper growth and upbringing. This will foster cooperation between the school and the home.

Sixth, malaria has been found to have adverse effects on the child. Such impacts range from poor academic performance, school absenteeism and poor cognitive development. The presence or absence of these effects on children participants at the research sites becomes significant in this study.

Seventh, malaria has peculiar inhibitory factors that hamper its local and global eradication. The issues of adulterated drugs, resistance to treatment drugs, resistance to insecticides, unstable climatic conditions and human conduct were considered to have significantly affected the possibility of finding lasting solutions to the purging of malaria both locally and globally. The possibility of exposing children to how they can tackle these factors from the onset of life will have a far-reaching impact on malaria control and elimination.

Eighth, policy responses to malaria control and elimination in South Africa have been mainly directed towards the use of indoor residual sprays (IRS) and environmental sanitation. This provides a platform to explore the existence of a policy that addresses the incorporation of malaria education in the curriculum.

Ninth, the Limpopo province was identified as one of the malaria endemic areas in South Africa. This knowledge is important in the current study because the extant literature reveals a relationship between settlement pattern and people's knowledge about malaria.

The choice of the Vhembe district in the Limpopo province as the research site would provide the opportunity to know residents' level of enlightenment about malaria.

Tenth, the review of the extant literature has revealed an important gap which paves the way for the researcher to conceptualise the curriculum as an agent of social change. Both the teachers and learners in the Foundation Phase are perceived as agents of change (Bandura, 1989; Freeman & Clasen, 2011). The agentic predisposition of the curriculum is hybridized with the ingenuity of the learners and their teachers to generate sufficient knowledge capable of addressing the malaria scourge at the research sites of the study. Bandura (1989) becomes very important at drawing this conclusion that agents of change are stakeholders; based on the work they do in terms of deliberately utilising the designed curriculum as a tool to generate sufficient knowledge about malaria.

Lastly, various teaching strategies have been found to aid the teaching of malaria within the classroom setting. A strategy such as storytelling was found to be a successful approach among American Indian communities. Other strategies recommended in the literature include role-plays, games, flash cards and competitions. This study provides an avenue of exploring present strategies that incorporate knowledge of malaria education in teaching Life Skills in the Foundation Phase. The effectiveness of these strategies in meeting the needs of the children in the Foundation Phase with regards to providing adequate knowledge about malaria is explored..

2.15. CONCLUSION

This chapter discussed the incidence of malaria both locally and internationally. Children were found to be capable of learning about health issues to become change agents. The rights of children to know about the challenges ahead of them as far as malaria is concerned became prominent. The chapter highlighted a number of erroneous beliefs about the prevention and treatment of malaria. The complications that may arise from the scourge of malaria (such as resistance to insecticides and drugs, retarded growth among children, and diminished cognitive potential) were discussed. The findings from literature confirm that the Hamakuya village is one of the endemic regions of South Africa. In Chapter Three the theoretical frameworks of the study are considered.

3.1 INTRODUCTION

A literature review was conducted in Chapter Two to understand the various dynamics associated with malaria education. In Chapter Three a theoretical framework is set out. This creates a platform from where the outcomes of the literature perused in Chapter Two can be juxtaposed. The theoretical framework also assists with interpreting the findings presented in Chapter Six.

It is important to centre the study around a theory because the use of a health theory in a health-related context contributes to developing a life skill approach (Mangrulkar, et al., 2001). Furthermore, without a proper understanding of theory, the study findings become incomprehensible and unexplainable. This line of reasoning is supported by the notion that a theory logically elucidates observations that pertain to a definite characteristic of life (Babbie, 2003:12).

However, the researcher bears in mind that a theory only offers possibilities of action to perceive and act directly upon within the environment in which the information is supplied (Sfard, 1998). The issues that are addressed in health promotion and disease prevention are multidimensional. They involve diverse interactions between distinctive individual and ecological factors that influence the manner in which people respond to their health (Bandura, 1998).

The teaching of Life Skills and health are often linked. There is a view that the field of the Life Skills subject should include health topics (Department of Education, 1995). Similarly, it is believed that the acquisition of Life Skills would educate people in ways to help them stay healthy (Department of Health, 2014). Both ways, the link between Life Skills and health is apparent. This gives rise a study approach that incorporates both personal and sociocultural health factors. The need for a personal development of health knowledge, attitude and practice cannot be overemphasised. The value of understanding personal healthy habits that positively impact on the environment is irreplaceable. Having control over negative health habits is deemed the best medicine (Lindsay, 1980). In an attempt to understand this study, the agentic predisposition of the child, as explained by Bandura

(1986), is pivotal. This underscores the relevance of the importance of children as change agents in the community where they live.

3.2 THEORIES OF ACTION

The theories of learning that were apply to the study are Social Cognitive Theory (SCT) (Bandura, 1986) and Situated Cognition (SC) (Brown, Collins & Duguid, 1989). These theories are preferred because they both agree that learning occurs in a social environment and within particular contexts. These theories apply to this study because the dissemination of knowledge with regard to health issues, such as malaria, involves intervention strategies that necessitate the involvement of various stakeholders in a particular context. Within the school context, learners in the Foundation Phase, as well as teachers and parents were identified as stakeholders capable of narrating their experiences of the prevalence of malaria within their environments. Their ability or inability to handle the situation became an inquiry in this study.

3.2.1 Social Cognitive Theory (SCT)

Bandura (1977) proposed SCT as a culmination of social learning theory while Luszczynska and Schwarzer (2005) reiterated the applicability of SCT as a theoretical framework to issues pertaining to health education. They argued that SCT evolved in the 1970s as a result of a paradigm shift from the behavioural mode of reasoning to an emphasis on cognition. In 1959 Bandura and Walters wrote books on adolescence and aggression, premising their work on behavioural analysis and role models. At this time Bandura knew that people learned by observation. He expanded this notion "to abstract modelling of rule-governed behaviour and disinhibition through vicarious experience" (Luszczynska & Schwarzer, 2005:127). He extended the frontiers of his scholarship by publishing his Social Learning Theory in 1977. This changed the route navigated by psychology in the following decades (Luszczynska & Schwarzer, 2005).

Bandura's article on self-efficacy was a milestone achievement (Bandura, 1977). The scholarship of self-efficacy began to take note of the major role of social modelling in human motivation, reasoning and deeds (Bandura, 1994). Bandura argued that the challenging and risky route of experimenting with diverse methods until a successful

method is determined could be shortened via social modelling of understanding and skillfulness (Bandura, 1994). In her review of current health education theories, DeBarr (2004) expressed a fit in the use of Social Cognitive Theory in influencing interpersonal health behaviours. These lines of thought influenced the application of SCT as an applicable theory of action in the current study.

This study applied the idea of Luszczynska and Schwarzer (2005:127) about social modelling (that people would rather have to evolve novel ways of behaving by extending the frontiers of what they have observed and perceived). To apply the idea of Luszczynska and Schwarzer to the current study knowledge of malaria education has to be introduced into the Life Skills curriculum in the Foundation Phase. Teachers would have to play the role of initiating and facilitating knowledge construction among learners. This has to be done in ways that learners would become agents of change beyond the information they acquire in the classroom. This dimension of knowledge would equip the learners as such that they would become the custodians of the knowledge economy encountered via engagement with teachers. They would then be able to divulge information about the malaria disease and how to prevent it to their parents and others around them. The learners in the Foundation Phase would thus be seen as generating novel patterns of lifestyle because they would have been empowered to teach others about what they have learnt from the Life Skills curriculum.

All of these dimensions of learning a novel route to combat the disease can thus be perceived as a culmination of children's engagement with more knowledgeable others via the use of their cognitive potential (Reyes, 2007). In this particular argument teachers in the Foundation Phase are regarded as more knowledgeable others because they have been commissioned to teach learners in the Foundation Phase. Their duty is to engage learners in the Foundation Phase with what has been stipulated in the curriculum. Reyes (2007) addressed the value of learners (in a community of practice), associating with more knowledgeable experts in order to elicit acquired characteristics in the community. In this scenario the association between teachers in the Foundation Phase and learners depicts a learning curriculum that requires cognitive engagement for effective learning to take place.

SCT becomes a theory that looks at teachers and learners as they operate as active change agents within their terrains of activity (the classroom) (Bandura, 1989). This is

because the theory emphasises that pedagogy is entrenched in social activities (teaching and learning experiences) (Kim & Baylor, 2006). This scholarship emanates from Kim and Baylor (2006) who refer to teaching and learning as encompassing social activities, because it is based on the principle of scholastic engagement between actors (teachers and learners in the Foundation Phase). In other words, teaching and learning activities are synonymous to social activities because it involves interaction between teachers and learners in a classroom setting. Therefore, the interaction between teachers, learners and learning resources has an impact on the cognitive and affective (moods, feelings and attitudes) development of learners (Bandura, 1994; Kim & Baylor, 2006).

Drawing on the questions of curriculum raised by Dillon (2009) the engagement between learners and teachers becomes important. According to Dillon (2009) the guestions that a teacher has to ask entail knowing "what" to teach, "how" to teach, "why" the teaching exercise is important and what the outcome of the engagement is. These questions promote teachers' capacity as facilitators of change in the learning exercise with the notion of enabling learners to employ their cognitive domains to learn the stipulated curriculum. According to Bandura (2001) and Kim and Baylor (2006), SCT makes use of the principles of human agency to offer an explanation of the role of humans in constructing knowledge. In this case agency refers to how humans deliberately facilitate change by what they do. In this case teachers are change facilitators who by reason of their professional training have been commissioned to assist learners in constructing meaning by what they do in the classroom. This implies that as learning activities ensue in an academic environment, stakeholders (teachers and learners) engage with one another, learning aids and their environment. This is done with the notion of creating enhanced performance as well as developing the cognitive capacity of participants (teachers and learners) (Kim & Baylor, 2006). With mastery of the knowledge of malaria, learners eventually become agents of change in their vicinity. This conceptualisation is made clear in Figure 3.1.

FIGURE 3.1: CONCEPTUALISING LEARNING DYNAMICS ON THE BASIS OF SCT



SCT advocates a kind of behavior that is consciously produced by the performer and evolves from intrinsic reward through self-reflexivity. This view is adopted in the current study. The curriculum was expected to produce inherent malaria health behaviour in children in their formative years, which they would continue until adulthood. This behaviour becomes fundamental and in-built in them. It creates a natural response to take responsibility for their health and learn to protect themselves from malaria infection as they traverse their journey through life. The curriculum therefore induces in learners the capacity to centrally process information from a recognised and authentic source (Bandura, 1977:192).

Social Cognitive Theory is based on the conception of a "health model" directed at both health promotion and disease prevention. The aim of the health model is to assist people achieve a lifestyle that is focused on staying healthy. The achievement of such lifestyle would be made possible through taking up a personal mode of lifestyle capable of promoting a healthy living (Bandura, 1998). The role of medical care cannot be shoved away. However, it is also important to emphasise the need for individuals to develop a habit of healthy living. This is a sort of principal asset that cannot be taken away from an individual.

The relevance of giving children a good foundation in malaria education is to make them grow up to become responsible and well informed adults who can take care of their own households when they grow up. In a study conducted by Brooks and Abney (2013), parents attested to the fact that the knowledge they acquired about malaria disease when they were children still remained with them and they had been able to build on that knowledge as they grew into adulthood. This has enabled them to take care of their own offspring and guard them against the malaria scourge. It clearly becomes important that what a child learns can be a useful tool for making important decisions in adulthood.

The components of SCT include activities such as achievement of tasks, experiences that are deeply rooted and convincing, speaking convincingly and exciting stimulation (Bandura, 1977). Practical applications of Bandura's suggestion to inculcate the components of the SCT in this discourse could entail the following: First, using set tasks that teach learners about the importance of malaria. Such tasks could be designed by teachers to encourage learner participation until learning evolves. Second, video clips that educate learners about the prevalence of malaria and its detrimental effects could be shown to them. This kind of approach would remain fixed in the minds of the learners.

Third, the ingenuity of pedagogy to make the learners come to terms with the scourge of the disease could help.

Fourth, teachers could stimulate learners by engaging them in role-plays that speak directly to the malaria scourge.

When such activities are incorporated into the school curriculum to integrate specific health issues such as malaria, children would be empowered towards self-efficacy and self-stimulation as suggested by Bandura (1977). These could foster the propensity to build health-enhancing behaviours in children from an early age. SCT postulates that there is reciprocity among individual, behavioural and environmental factors in a way that produces interactive benefits (Bandura, 2001).

In the context of this study, the curriculum is predicted to have the ability to produce learning that will generate expected benefits from a conducive academic milieu, reinforced by educators' skills and facilitation experience. A well-enacted curriculum is expected to enhance purposeful and preventive behaviour in children. This will enable them to influence their environment in a positive way. This also conforms to one of the tenets of SCT, namely that humans are capable of acting as agents who are proficient in influencing their mannerism in a deliberate way in order to achieve a determined goal within their environment (Bandura, 2001).

Bandura (2001) asserts that intentionality must be the driving force behind agency. For a person to be considered as an agent, he or she must deliberately deliver the action. This presupposes a natural way of behaving in situations without being forced or coerced. This was the reasoning behind the expectations of the curriculum anticipated in this study. It is conceptualised in this study that children in the Foundation Phase will grow up to be proactive in their reaction towards malaria prevention rather than waiting to become victims. The power to "originate action" is the main characteristic of personal agency (Bandura, 2001:6). In the same vein, drawing on Bandura (2001), this study hinges on a fulcrum that advocates the use of the curriculum to initiate action for meaningful learning about the disease to take place. The curriculum as a collection of programmes designed to direct learning (Oliva, 1997), thus becomes a change agent in its own rights. It has the capacity to communicate content by relying on the engagement of minds to effect necessary change. An important incentive that allows people to act in an agentic capacity is the confidence of self-efficacy (Bandura, 2001). This means that people act in their best capacity as agents of change when they see and believe in themselves as being capable of effecting the desired change through their actions (Bandura, 2000:74).

Perceived self efficacy assumes a critical role in the agentic responsibility that can be undertaken by actors. This is because a person is influenced to reason optimistically or pessimistically about himself or herself in a way that boosts or hampers the person. Agentic action is also capable of producing adaptability in humans. The acquisition of selfefficacy by teachers becomes important. They are also agents of change because they are expected to effectively engage learners with the curriculum content until learners' cognitive capacities are aroused for learning to take place. Bandura (2000) takes the issue of intentionality a step further. He asserts that a more purposeful intention embraces the inclusion of other people who become functional partners in heralding the cause. In this respect, parents and other members within the community become relevant partners. They assisting both the school and children in the Foundation Phase to achieve their aims of becoming transformation agents in the cause of militating against the malaria scourge. In this study curriculum was conceived to be a tool to facilitate self-confidence in learners in the Foundation Phase with regards to knowledge and understanding of malaria infection. Teachers on the other hand are seen as implementation agents of set out curricular activities, geared towards shaping the cognitive predisposition of children in the Foundation Phase. This self-confidence is expected to produce self-efficacy that will stimulate their ability to act in the desired agentic capacity within their community both at present and in the future.

3.2.2 Situated Cognition

Situated Cognition (SC) is a theory of learning that draws on the principles related to the fields of philosophy, psychology, anthropology and sociology. The core line of reasoning of SC is that knowledge is situated in activities that are socially, physically or culturally located (Brown, Collins & Duguid, 1989). Drawing on the scholarship of Brown, Collins and Duguid (1989), the researcher sees a convoluted link between Social Cognition and the curriculum. Since the core line of reasoning of SC stipulates that knowledge is embedded in activities that are socially, physically or culturally located, the curriculum is seen as a domain of Social Cognition. This line of thought arises from a critical engagement with the principles of curriculum development which entail knowing what needs to be taught, to whom it should be taught and under which context it should be taught (Dillon, 2009). Therefore, teachers' display of self-efficacy is critical in the cognitive development of learners as it exhibits what has been set out in the curriculum.

Situated Cognition proposes that knowledge is a result of the activity, context and culture in which it is developed. Knowledge acquisition therefore cannot be separated from the context from which it is received (Brown, et al., 1989). Brown et al. (1989) seem to be describing the ingenuity of the curriculum because it is capable of shaping the understanding of specified content and how the content should be disseminated. Brown et al (1989) argue that knowledge acquisition surpasses theoretical transfer from teacher to the learner. For knowledge to be used effectively, the social and environmental factors Page | 64 must be considered. Lave (1991) argues that a situated activity such as teaching or learning does not occur in isolation. They are intricately interrelated with other aspects of the social environment in which learning or teaching occurs.

In their explanation of their perspective of Situated Cognition, Brown, et al. (1989) argue that it is impossible to detach what is learned from the manner in which it is learned. This discourse is confirmed by what Dillon (2009) specifies about the curriculum. Dillon (2009) explains the importance of how the curriculum is presented. This presentation has to bear in mind that the association of stakeholders with the curriculum content cannot be underestimated. The activities and the environment in which that knowledge is constructed are not secondary to learning and cognition. Rather than give attention to individual behaviour and way of knowing, Situated Cognition takes the larger system into account (Greeno, 1998). The larger system, as conceptualised in this study comprises the school and the communities within which they are located. In this perspective, learners in the Foundation Phase and their teachers fall directly under the description of interrelated cognitive individuals because they are involved in meaning making exercises of the curriculum.

Foremost in the argument of Brown et al. (1989) is the conceptualisation of knowledge as a "tool" (Brown, et al., 1989:33). Just as the effectiveness of any tool is proven in its ability to solve a problem in a particular situation, the effectiveness of knowledge gained is demonstrated in a relevant situation that necessitates the display of what is acquired. In this notion, the clear demonstration of the efficacy of acquired knowledge is a measure of how valuable it is. The tool, the person handling the tool, the environment in which the tool is used, the specific context in which the tool is used, and the culture of the people all mutually depend on one another (Durning & Artino, 2011). The interrelationship that exists between these entities makes them to be intricately connected in such a way that it becomes almost impossible to understand one without relating to the other.

The relevance of the expertise of the user of a tool was highlighted by Lave (1988). She argued that the conventional route of acquiring knowledge presents an insignificant proof of the ability of learners to transfer the acquired knowledge from one situation to another. This problem of transmission arguably might be attributed to the incapacity of the custodian of the tool to know the right timing and the right way to use the tool (Durning & Artino, 2011). It thus becomes important for the teacher as the executor of the curriculum
to administer the Life Skills curriculum content in a way that enables learners in the Foundation Phase to understand the relevance of what they are being taught in the classroom to their daily lives. The relevance of the knowledge they have acquired will propel them to becoming useful agents of change within their community.

Durning and Artino (2011:189), in an attempt to highlight the interactive nature between knowledge, learning and the environment used a relevant example of scrabble players. The tile chosen by a participant and the words arranged determine the next move of the other participants. This suggests that it is not just sufficient for interacting members to learn from one another. Their actions and moves are also being watched. The action of one member of the community will determine what the other person will do subsequently. The implication of this with regards to health issues relating to malaria is that the curriculum will inform teachers' actions in terms of the knowledge they need to be engaged with the learners. This will in turn influence how teachers will propagate this knowledge to the learners and how learners will engage with parents in the community at large.

3.3 THE THEORIES OF ACTION IN CONTEXT

Figure 3.2 explains the curriculum as a tool that links Foundation Phase learners to the curriculum. The emphasis of Social Cognitive Theory and Situated Cognition is on the context in which learning is taking place. The curriculum must be designed to give learners ample experience in their specific context. In the context of the current study, learners living in malaria-prone regions should experience the Life skills curriculum in a way that relates to their specific context in everyday life. A well-enacted curriculum that provides learning experiences that enhance knowledge acquisition of children in the Foundation Phase on malaria education will bring about the right attitude towards the disease as they grow up into adulthood.

Bandura (1994:71) defines self-efficacy as people's confidence in their abilities to generate a certain amount of accomplishment so that they are able to exercise control over the affairs of their lives. This belief influences the extent to which people are motivated, their moods, feelings and behavioural disposition. When children are empowered, they have the propensity to act as change agents in the community. Children, parents and teachers are viewed as valuable contributors to the curriculum in terms of their experience and knowledge of malaria education. The presence of the plasmodium parasite in certain Page | 66

regions of South Africa calls for the attention of various stakeholders to intimately align with the situation on the ground in those provinces. This is necessary before submitting remedial strategies to alleviate concerns in regions where malaria is a threat.

The environmental factor also becomes significant. This is because learners in the Foundation Phase do not live in isolation. They are a significant part of the system in which they are expected to become agents of influence. If they would become effective in their agency, they would have to learn to interact in a way that would generate positive responses from community members. Activities that incorporate the development of necessary relational skills in learners are therefore important for their agentic function.

Humans do not approach every situation as completely new. They usually bring into a new situation a catalogue of experiences, acquired from previous knowledge, encounters and confrontations. Prior knowledge and experience become useful tools which enable them to critically analyse their present situation (Labonte, Feather & Hills, 1999). It is conceptualised in this study that an invigorating health curriculum in the Foundation Phase has the ability to build a repertoire of experiences in children at a young age. These experiences are considered to become a useful device as they grow into adulthood.



FIGURE 3.2 CURRICULUM AS TOOL

In an attempt to link Figure 3.2 to the theories of action, the curriculum becomes a tool for teachers to use to respond to malaria threats. Acquired self-efficacy on the part of teachers is considered capable of fostering the transition from a novice status to that of an expert. Interaction of parents, learners and teachers produces the expected change. From

the standpoint of the two theories, the curriculum and instructional materials design must consider the environment in which learning takes place, as well as stimulating factors in learners, their perspectives and teaching methods. The way these elements intricately interact with one another produces effective learning.

3.4 CONCLUSION

Knowledge acquisition provides a foundation for change (Bandura, 1998:3). There is a need for a certain degree of awareness in people so that they would realise the dangers inherent in certain unhealthy behaviours. It is perceived in the current study that the integration of malaria education into the Life Skills curriculum in the Foundation Phase will provide a solid foundation for learners in the Foundation Phase to grow up with malaria awareness. This will help them to protect themselves from the malaria scourge. The teaching of malaria should go beyond only mentioning that the mosquito is one of the dangerous insects around us. Teaching should include why the mosquito is dangerous and what can be done to prevent its attendant dangers. The belief in one's capability provides a foundation for human activity. The extent to which people believe in their ability to make a change is the driving force behind regulating their thoughts and actions. This may eventually affect conduct and influence within their domain and propel them towards becoming effective agents of change.

Chapter Four discusses the research design and methodology of this study.

4.1 INTRODUCTION

In Chapter Three, literature was reviewed to ascertain theoretical frameworks for foregrounding the study findings. The current chapter discusses the research design and methods to explore how the Life Skills curriculum in the Foundation Phase can promote malaria education. This chapter highlights the qualitative research design of the study and the use of semistructured interviews, observations, researcher's journal and document analysis as data collection methods. The qualitative research design led to the collection of rich data, which was thematically analysed based on content analysis to pave the way for the meaning making exercise required for the study. This chapter also presents the research questions that were used to navigate the study to ensure a good grasp of the topic. The researcher also states the value of each of the research questions (see Table 4.1) and their relevance to the present study.

TABLE 4.1: SUMMARY OF RESEARCH STRATEGY AND METHODOLOGY

RESEARCH METHODOLOGY							
Paradigmatic consideration		Interpretivism and constructivism					
Research methodology		Qualitative res	earch approad	ch			
RESEARCH DESIGN							
Narrative inquiry and case study							
SELECTION OF PARTICIPANTS							
Purposeful sampling	Selection of two government primary schools in the Ha Makuya area of the Vhembe district in the Limpopo province. Participants were South African born children in the Foundation Phase, their teachers and parents.						
DATA COLLECTION							
Data collection methods	Semistructure	d interviews,	observation	of the	school		

vicinity, document analysis and researcher's journal.

RESEARCH QUESTION METHODOLOGY VALUE То explore participants' Main research knowledge in and Semistructured interviews question: What is understanding of the with learners and the role of causes, effects and teachers in the curriculum in control of malaria. To Foundation Phase, improving malaria have a view of the and parents. awareness among Foundation Phase Life Document analysis. children in the Skills' curriculum Foundation Phase? content with regards to its malaria education content. Research Semistructured interviews To acquire an understanding subquestions with teachers in the of the integration of How is malaria health Foundation Phase, malaria health education document analysis education in the addressed in the curriculum of policy statement in the Life Skills subject and Life Skills Foundation Phase. area in the textbooks. **Foundation Phase** curriculum? Semistructured To furnish the researcher How do teachers in the interviews. with an understanding Foundation Phase of whether teachers in sensitise children in the Foundation Phase grasping an provide learners in the understanding of Foundation Phase with the relevance of the knowledge they malaria to their need to understand the health issues? relevance of malaria to healthy day-to-day

transactions.

	Semistructured	To obtain parents' views on
To what extent do	interviews.	how much information
learners in the		they receive from their
Foundation Phase		children about malaria.
educate their		
parents to achieve		
maximum health		
condition with		
regards to malaria?		
What are the cultural practices impacting the knowledge, attitude and practice of learners in the Foundation Phase with regards to malaria?	Semistructured interviews and observation.	To understand beliefs and practices that impact on malaria education and on the health-seeking attitude of children in the Foundation Phase.
What is the level of knowledge of malaria health issues among children in the Foundation Phase?	Semistructured interviews.	To decipher the extent of awareness about the cause, prevention and treatment of malaria among children in the Foundation Phase.

DATA ANALYSIS AND INTERPRETATION

Content analysis: coding, formation of themes and documents analysis

QUALITY CRITERIA OF THE RESEARCH

Credibility, transferability, dependability and confirmability

ETHICAL CONSIDERATIONS OF THE RESEARCH

Informed consent, anonymity, safety considerations, confidentiality and reliance

(Adapted from Adebanji, 2010)

4.2 PARADIGMATIC ASSUMPTIONS

Before the time stipulated to conduct the research, it is the researcher's responsibility of conceptualise a definite philosophical stance. In other words, a philosophical stance demonstrates how the researcher sees the world. This is an operating position from a definite paradigm. According to Guba and Lincoln (1994), a paradigm is a fundamental belief system or world outlook that navigates the researcher. Such navigation is not only premised on the choice of a research strategy but on "ontologically and epistemologically fundamental ways" (Guba & Lincoln, 1994:105). What then is a paradigm? According to Goduka (2012) a paradigm symbolises an entire arrangement of beliefs, principles and methods embarked upon by the associates of a research domain.

Paradigmatic assumptions vary from one researcher to another because humans look at the world differently, necessitating the acumen of identifying and choosing dissimilar approaches to understudy and evaluate the current study. The researcher learned from Ponterotto (2005) that researchers should endeavor to expound paradigmatic assumptions behind their research. A declaration of the researcher's paradigmatic assumption is vital because it reveals how the researcher looks at the world, strengthened by the practitioners surrounding the researcher (Goduka, 2012). Characteristically, a paradigm comprises clearly defined methodological strategies which recognise a link between the researcher's worldview linked to similar studies and other researchers' methods (Bickman & Rog, 2008). In the following subsections, the researcher reveals in detail, her meta-theoretical paradigm (philosophical supposition), which influences the current study's methodological strategies the current study's methodological strategies at the strategies at the strategies at

4.2.1 Meta-theoretical paradigm

This research study is situated within two meta-theoretical paradigms, namely constructivism (Williamson, 2006) and interpretivism (Cohen, Manion & Morrison, 2000). Drawing on Bogdan and Biklen (1982) a theoretical paradigm is the recognition of the underlying essence used to build a scientific inquiry. It is a moveable assemblage of assumptions and principles that are logically fastened together and capable of informing how to reason and conduct research. Under the following subheadings the researcher will

V-V-List of research project topics and materials

discuss the basic principles of the two meta-theoretical assumptions and the justification for choosing them as a lens in this research study.

Constructivism

Constructivism is an area of interpretivist representation. As such it centers on how people construct their world (Williamson, 2006:85). Constructivism acknowledges the relevance of the subjective nature of human construction of meaning based on feelings and experiences, but does not eliminate completely a measure of objectivity (Baxter & Jack, 2008). In order to be able to construct knowledge on the experiences of the participants of this study, the researcher employed constructivism because it is a supposition of knowledge that employs principles of interpretation as a study aspect in the social sciences (Adler, 2005:12).

A thorough consideration of Adler (2005) led to a vivid understanding of the unbroken link between constructivism and interpretivism. This link is capable of fostering an understanding of principles that are of particular interest. The researcher engaged with the work of Hacking (1982), which offers a valuable understanding of constructivism as a method of interpreting collected data. The researcher took the stance of a constructivist by investigating constructions and connotations of narrated data, pertaining to the education of malaria among learners in the Foundation Phase in the Life Skills curriculum. This study focused on personal constructions of research participants in an attempt to unravel issues pertaining to malaria education (Williamson, 2006). The use of the constructivist approach for this study helped to foster a close collaboration between the researcher and the research participants while the participants were encouraged to tell their stories (Baxter & Jack, 2008).

The researcher benefited from the invaluable work of Appleton and King (2002: 644), that provided an important constructivist consideration. This facilitated the researcher's access to the research field about a year before the data collection process started:

A constructivist methodology encourages the inquirer to discuss topics or issues prior to their investigation with fellow practitioners as this helps to refine the inquirer's thinking before contemplating access to the field. In the initial stages of a constructivist inquiry the researcher is more likely to gain access to the study sites and achieve a purposive sample by sustaining a process of interaction and discussion with potential participants.

This initial visit to the Hamakuya village about a year before the actual field trip for the study gave the researcher an opportunity to familiarise herself with the two research sites. The researcher was granted permission to comprehend the dynamics of these sites in order to tackle the study.

Interpretivism

Interpretivism is a multifaceted reasoning approach that concentrates on assigning connotations to many experiences that humans negotiate (Bryman, 2008; Pouliot, 2007). The concept of interpretivism is based on the stance that humans usually negotiate and ascribe meaning to things happening in their environment. The researcher employed interpretivism because she perceived that the world is built by people (Williamson, 2002a). The intricate issue of subjectivity was taken care of by guarding against the observation of Pouliot because via the course of interpretation, meanings carrying the undertone of bias are expressed in tangible forms as components of an intersubjective setting (Pouliot, 2007:366).

The researcher employed the interpretive approach because it permits research in natural settings by allowing an inductive reasoning style, which gives prominence to data obtained qualitatively (Williamson, 2006: 84). The two schools chosen are examples of natural scenarios with the learners in the Foundation Phase, teachers who taught them, and their parents. Based on the fact that qualitative research leads to the interpretation of obtained data, as highlighted by Denzin and Lincoln (2003:3), the researcher employed the principles of interpretivism as her paradigmatic consideration. Furthermore, the use of interpretivism presents an opportunity to explore multidisciplinary studies, as in the case of the current study, (Denzin & Lincoln, 2003:3).

4.3 METHODOLOGICAL PARADIGM

Methodology can be defined as an avenue of reasoning and exploring realities within the social strata of life (Strauss & Corbin, 1998:3). In the following subsections the methodological paradigm and the rationale for considering it suitable for this study is properly articulated.

4.3.1 Qualitative Research Methodology

A research design, according to (Rowley, 2002), links the collected data and the drawn conclusions to the initial questions in a study (Rowley, 2002). A good research design promotes consistency in the research study. It is also regarded as performance that is required to transit from set questions to drawn conclusions. The researcher for this study chose a qualitative research methodology. The researcher noted the suggestion of Lincoln and Guba (1985:221), that research design is "the plan, structure, and strategy of investigation conceived so as to obtain answers to research questions and to control variance". This suggestion facilitated the research planning in such a way that the researcher identified the research instruments, the research sites and participants.

A prior visit to the research site was conducted on June 2014. This was instrumental to the planning, which structured the research and led to emergent strategies that ensured a smooth data collection exercise for the study. Therefore the researcher came to terms with the write up of Creswell (2014:11) that research design is a "procedure for collecting, analyzing, and reporting research."

This chapter has been structured to follow the pattern of exploration which, according to the consulted literature can generate responses to the research questions raised in the study. This decision informed the use of collected data to expound issues that related to malaria education in the Foundation Phase.

The study employs a narrative research strategy, which is embedded in the qualitative research approach (Casey, 1996; Clandinin & Connelly, 1994; Manning & Cullum-Swan, 1994). The research is structured according to case study design (Cohen, Manion & Morrison, 2007).

Creswell (2014:30) asserts that qualitative research is best suited to address a research problem where there is a need to explore the phenomenon due to lack of knowledge on a chosen phenomenon. The use of qualitative research methodology thus presented the researcher with an opportunity to learn about the phenomenon directly from the research participants. This study was principally conducted to explore the knowledge, attitude and practice imparted on children in the Foundation Phase with regards to malaria education. It focuses on how classroom health instructional lessons in the Life Skills programme provide avenues of equipping the children in the Foundation Phase with the necessary knowledge required to overcome malaria infestation. McMillan and Schumacher (2006) suggested the use of qualitative research methodology in issues involving different stakeholders. As this study explores the opinions of different stakeholders in a health education issue, the qualitative research approach was considered applicable. This is because a qualitative research approach provides the avenue for the "collection and analysis of extensive narrative data" (Ngobeli, 2001:50) that was obtained from the learners in the Foundation Phase, their teachers and parents.

This study highlights the classroom and home front experiences of learners and teachers in malaria health instructions. The advancement of health matters was perceived as being related to a set of beliefs and characteristics of social groups (Labonte, Feather & Hills, 1999). It thus became expedient to understand the cultural perspectives of the parents of learners in the Foundation Phase. A study of this nature requires a design that is set in a naturalistic strategy as entrenched in qualitative research design. This is due to the fact that a phenomenon such as this exists in social reality, and social reality only exists in conjunction with people who interact with their environment and the reality they confront (Pring, 2000).

The core of the qualitative methodology is set in its capacity to ascribe meanings or interpretations that people give to what experience in a specific situation. Social research in education focuses on communal relationships within the environment. This involves an exploration of the composition and series of changes within the "micro culture" of the community, such as the classroom, so as to understand the mode of interaction between students and teachers, and how this interaction produces "an enacted curriculum" (Erickson, 1986;129; Kurz, et al., 2010). Based on the undertone of the "micro culture", as put forth by Erickson (1986), the intermingling of the learners in the Foundation Phase with their teachers during the dissemination of the curriculum was conceptualised to have a Page | 76

resultant effect on the environment of the learners, which constituted a micro culture. At this point the rapport between the teachers and the learners in the Foundation Phase could become vital in establishing the extent of scholastic socialisation between them, capable of featuring their agentic predisposition to effect change. If the learners in the Foundation Phase are identified to have acquired the skills to become change agents at the school front, it can be inferred that they have acquired the required dimension of cognition that is capable of effecting change at the home front (Dunning & Artino, 2011). This line of argument is also echoed by one of the tenets of Bandura (1986) about the characteristics that should be identified in potential change agents. This study set out to explore the effect of such intermingling from the stance of Foundation Phase learners towards becoming change agents.

4.3.2 Strength and Weakness of Qualitative Research Design

This study employs a qualitative approach to explore the promotion of malaria education through the Life Skills curriculum in the Foundation Phase. The researcher considers it vital to discuss the strength and weakness of the qualitative research design. Qualitative methodology has the strong purpose of assisting the researcher to identify background and situational factors as these factors communicate to the circumstance of concern (Choy, 2014). The qualitative research methodology is also useful in exploring processes such as curriculum issues because of the undertone it carries by generating inductive reasoning that can evolve policy change in the field of education (Creswell, 2014). In contrast, its weakness relates to the difficulty it presents because of its near impossibility to generalise produced knowledge to other situations. Furthermore, the output from qualitative research is more prone to the researcher's personal biases and eccentricities.

4.4 THE RESEARCHER'S STRATEGY OF INQUIRY

This research study employs the two qualitative customs of inquiry stated by Creswell (1998), namely narrative inquiry and case study. In the following subsections, the researcher describes and discusses the two research methods that were utilised in this study.

4.4.1 Narrative Inquiry

The researcher made use of narrative inquiry with its strength of involving the researcher and the participants closely in the research process to assist with the data collection process. As stipulated by Phillion (2008), this kind of association encourages a high degree of transparency between the researcher and participants. The inquirer thus became privy to the lived experiences of the participants. He or she became fervent about the events that were explored, giving rise to the researcher's immersion in understanding the phenomenon under study.

The researcher adapted the scholarship of Xu, Connelly, He, Fang and Joann (2007:415), in terms of narrative inquiry framework. They suggest that the researcher has a narrative perception of learners in relation to their "teachers, other students, parents, administrators and communities" in order to grasp what they navigated and how they experienced their school. As far as an understanding of this scholarship is concerned, it was the perception of the researcher that the learners in the Foundation Phase who attended public schools in the Hamakuya village would be capable of narrating the extent to which they were knowledgeable about the incursion of malaria within their vicinity. It was expected that their teachers would provide such dynamics of information. In the same vein parents were also expected to be equipped with the knowledge of malaria to demonstrate to the parents that their children were change agents. This expectation became the basis of exploration embarked upon in this study as the researcher sought to understand the perceptions of learners in the Foundation Phase with regards to malaria education in relation to their teachers, parents and communities.

To develop a general theory, Slim and Thompson (1995) contend that we need to consider people's experiences. The relevance of using narratives in the development and planning of programmes (health or social) is highlighted in the work of Slim and Thompson. The researcher paid particular attention to respecting the cultures of the participants, in an attempt to yield to the suggestion of Slim and Thompson (1995). This determination emanates from their study that emphasises the need to respect the oral cultures of poor and disadvantaged communities. This is important because indigenous people are aware of the problems they encounter within their community, and telling the stories of their lives and how they survive in their environment becomes vital for researchers. It becomes

important in the exploration of the current study to gain insight into the problems encountered by the learners in the Foundation Phase, the teachers who taught them and their parents in the Hamakuya area, considering that there is inadequacy of malaria education. Similarly Wallerstein and Bernstein (1998) recognise that the stories and experiences of people are powerful tools that strengthen strategies employed in addressing issues related to health education. The stories relayed by the participants of this study thus became valuable in understanding the context and dynamics around the issue of malaria awareness in the Hamakuya area of the Vhembe district of Limpopo province.

According to the suggestion of Guba and Lincoln (1989), the researcher involved the people in analysing their sphere of influence because it further encouraged the participants to have a better grasp of how meaningful and important their experiences were. This served as a vivid perception of the scholarship of Guba and Lincoln (1989) because the participants saw that they were recognised by the larger society in which they lived. The participants thus saw the researcher's presence at the research site as a mark that their experiences had the potential to herald their importance in the community in which they lived. Involving the participants of this study in a matter that resonated in their hearts and which was very pertinent to their health, gave them confidence that they were not sidelined. They were hopeful that their experiences were not slighted and treated as irrelevant.

In line with Freire and Macedo (1987) suggestion, the researcher experienced the relevance of individuals being empowered to disseminate their experiences from their personal perspectives. This was evidenced when the participants were seen to take control of what they were experiencing as far as malaria infestation in the Hamakuya area of the Vhembe district was concerned. They became passionate about their lived experiences to the extent that they relayed how they felt, and what they experienced about the infestation of malaria in their communities. This gave credibility to the reality of their views, and gave the participants a sense of ownership of the research process. Ascribing such importance to their situation gave the people the tenacity to be a part of this study. The participants' stories were not just viewed as ordinary. Their stories were considered important for providing a foundation for understanding the reasons and motives behind their actions (Labonte, et al., 1999). This consideration provided better enlightenment from the perspectives of the residents of the Hamakuya area of the Vhembe district in the Page I 79

Limpopo province. Data gathering methods amenable to narrative inquiry and which were used in this study included participants' life experiences about the knowledge of malaria, document analysis and observation (Nyawaranda, 2003; McMillan & Schumacher, 2006).

4.4.2 Case Study

According to Zucker (2001), a case study has many angles of comprehension and descriptions. It is the perception of Bromley (1990:302) that a case study is a procedural inquiry into an experience or an array of similar situations that attempt to express the phenomenon being explored. As far as Gerring (2004) is concerned, a case study is a thorough study of a single unit in order to understand a broader dimension of (related) units. The researcher perceived a unit in this study as a spatially bordered occurrence that is explored at an instance or in a limited space of time. The unit of analysis according to Zucker may range from humans to establishments. The unit of analysis in this study comprised learners in the Foundation Phase, teachers who taught them and their parents. Drawing on Basit (2003) a case study explores a particular factor, which could represent a learner, a class, a group, school, or a community to elucidate an understanding of a broader population that it fits into. Similarly, the researcher pondered on Yin (2003), who defines a case study as an experiential investigation that contemplates a present-day occurrence as it occurs particularly when the borders of occurrence and perspective were not clearly defined.

There are different types of case study. First, there is the instrumental case study. Second, there is the intrinsic case study. Third, there is the collective case study (Stake, 1994). Of importance to this study was the intrinsic case study approach because the researcher was interested in acquiring in-depth understanding of how to promote malaria awareness through the Life Skills curriculum in the Foundation Phase. In understandable terms the aim of a case study approach, regardless of classification, is to ascribe as accurately as possible the most exact account of the case (Zucker, 2001). Yin (2003) enlightened the researcher about the importance of a case study especially when it comes to interrogating participants. There are two instances of questioning that border on Yin's (2003) scholarship. According to Yin (2003), the first instance is when the emphasis of the study entails answering questions such as "how" and "why." The second instance is important when the researcher attempts to explore contextual situations as a result of the

researcher's perception that they are important to the situation under exploration (Yin, 2003). Case studies have been described as a inquiry method that understudies series of occurrences where the investigator is limited in terms of control (Baxter & Jack, 2008; Rowley, 2002; Yin, 1994). In this research study, the main research question was to explore the role of the curriculum in improving malaria awareness among children in the Foundation Phase. A closer look at the main research question reveals that it guided and described the phenomenon under investigation (Zucker, 2001). The use of a case study assisted the researcher in developing a full understanding of the role of the curriculum in improving malaria awareness among learners in the Foundation Phase. The main research question of the study was therefore context bound because all the thirty-eight participants were located within the two schools where the study was undertaken.

In this study, case study design was used because "the case method is an extremely useful technique for researching relationships, behaviours, attitudes, motivations, and stressors in organizational settings" (Berg, 2001:333). The Hamakuya community is conceptualised in this study as an organisation of people who exist together for a common purpose. The choice of the research site for this study denotes the peculiarity in the experience of the people living within the community.

The Limpopo province where the Hamakuya area is situated, is one of the endemic malaria regions of South Africa. The people living there saw malaria infection as a stressor within their community. The case study design therefore provided an opportunity to learn more about their behaviour and attitudes towards malaria disease. In addition, the case study design was used because of its relevance in providing an avenue to learn more about organisations and communities within their normal and natural environment. The learners in the Foundation Phase, their teachers and parents were naturally located within their usual environments and within their communities. This facilitated the researcher's ability to learn more about them with regards to how knowledgeable they were in matters relating to malaria education.

The qualitative case study, used as a research methodology, presented a means through which the researcher explores complicated phenomena within their boundaries. Also it is suggested to be a very useful method in research involving health issues when the

approach is applied in the right manner (Baxter & Jack, 2008). This is because it may become useful in developing theories, evaluating programmes and developing interventions due to its adaptability in different circumstances. The novelty of the current research in bringing an educational perspective into issues bordering on malaria in South Africa supports the use of a case study approach. However the scope of the case study design must be driven by the nature of the study and the research questions to be explored (Berg, 2001; Hancock & Algozzine, 2006). The integration of malaria health education in the Life Skills curriculum of the Foundation Phase is a complex phenomenon that would involve different stakeholders in the political and health arena. This study was conducted with the intention to provide a window into how people living in malaria endemic regions could be assisted through the medium of education. This understanding is conceptualised to foster a reaction that could eventually lead to the formulation of policies that could culminate in the intentional inclusion of malaria education in the Life Skills curriculum in the Foundation Phase. It was expected that this would lead to a means of alleviating the negative experiences encountered by people who live in malaria endemic regions.

Similarly, a case study is a type of qualitative research suited to making policy decisions based on verifications. It is deemed to suit health-related research due to its ability to provide a technique that is capable of generating theory, appraise health curriculum and advance health-improvement actions (Baxter & Jack, 2008). This current study looks into the integration of malaria education, which is a health situation in the Limpopo province. Hence the case study design is considered to be applicable in exploring the issue. Thorough use of a case study design has the prospect of allowing the researcher to portray an occurrence in perspective by making use of diverse data sources which give the researcher the flexibility of observing complex phenomena and making meaning of such through various interventions (Yin, 2003).

The case study design can be adapted to studying an organised group of people with the intent of acquiring knowledge of their existence within their natural community. Learners in the Foundation Phase are an organised group of inhabitants of their community. They relate with the people and the environment within the schools and homes. Therefore the current research study used the case study design to explore the interaction that exists between children in the Foundation Phase and their immediate environment. The expectation and resultant effects of this interrelationship on their health was also explored. Page | 82

The case study approach was posited to be flexible and helpful in health-oriented studies to construct intervention programmes. These assertions become the backbone for the use of case study design in this study, aimed at exploring the role of the curriculum in promoting malaria health education among children in the Foundation Phase. This would result in designing strategies and programmes that would be useful in disseminating knowledge of malaria infection to children in the Foundation Phase.

4.5 RESEARCH QUESTIONS

To assist in creating a better understanding of the strategies required to implement malaria education into the Life Skills curriculum in the Foundation Phase, the study was guided by research questions. These questions provided guidance in directing the course of the study. In consultation with literature, they charted the course of the questions formulated in the interview protocol. Thus the participants in the study were able to make contributions to learn best from their experiences (Creswell, 2014:31).

4.5.1 Primary Research Question

What is the role of the curriculum in improving malaria awareness among children in the Foundation Phase?

The main research question was asked to provide a general basis for insight into how the Life Skills curriculum functions in its bid to help learners in the Foundation Phase have a classroom experience with regards to the knowledge of malaria infestation. An attempt to answer this question provided an understanding of the extent to which the Life Skills curriculum in the Foundation Phase is able to equip the learners in the Foundation Phase with the required knowledge to protect themselves against the malaria scourge as they developed in life. It provides the opportunity to know the provision made for learners in the Foundation in the Life Skills curriculum.

To attend to the broad research question asked above, the following research subquestions were asked. The research subquestions provided an avenue to break down

the main research question into smaller units so as to delve into organs capable of providing answers for a better insight into the study.

4.5.2 Research Subquestions

• How is malaria health education addressed in the Life Skills subject area in the Foundation Phase curriculum?

The above research subquestion was developed to understand the level of inclusion of malaria health education in the Life Skills curriculum in the Foundation Phase.

• How do teachers in the Foundation Phase sensitise children in grasping an understanding of the relevance of malaria to their health issues?

The above research subquestion determined the role of teachers in the Foundation Phase as knowledge providers in malaria education to help learners in the Foundation Phase understand the relevance of such education in their day-to-day healthy living.

• What is the level of knowledge of malaria health issues among children in the Foundation Phase?

The above research subquestion was asked to gain understanding of Foundation Phase learners' existing knowledge about malaria, in particular of what causes malaria; what symptoms are associated with a malaria attack; how malaria could be prevented; and how to treat someone who has an attack.

• To what extent do learners in the Foundation Phase educate their parents to achieve maximum health condition with regards to malaria?

The above research subquestion investigated the various avenues that children in the Foundation Phase could used to provide their parents with knowledge. The aim of this question was to find out whether the children fulfilled agentic roles.

• What cultural practices impact on the knowledge, attitude and practice of children in the Foundation Phase with regards to malaria?

The above research subquestion was asked to gain insight into the traditional ways of life and activities relevant to learners in the Foundation Phase as they grew up in their different households.

4.6 ACCOUNT OF RESEARCH SAMPLE AND SAMPLING PLAN

4.6.1 Research Participants and Sites

This study made use of purposive sampling as suggested by Creswell (2007). The Limpopo province was purposefully chosen because this province is one of the areas with incidences of malaria infection in South Africa (Department of Health, 2008). The participants consisted of 21 children in the Foundation Phase from two schools within the Hamakuya area of the Vhembe district. Three schools had been cited as research sites one year before the data collection commenced. Two out of the three schools had been merged into one. The researcher was told that the two schools were merged for better management purposes as a result of the low population of learners in one of the two schools. Ten parents and seven Foundation Phase teachers were interviewed at the two purposefully chosen primary schools. The primary schools are pseudonamed Kumbulani Primary School and Takelani Primary School, all within the Hamakuya area in the Vhembe district of Limpopo.

The researcher selected the research sites because it is known that the Limpopo province is a border province between South Africa and Zimbabwe. According to Brooks and Abney (2013), the Limpopo province border serves as a point of entry to undocumented immigrants who are not likely to have been adequately treated against the malaria parasites from their country of origin. Theoretically, this increases the tendency of these immigrants becoming human carriers of the malaria-causing plasmodium parasite. It is also documented that a high incidence of malaria infection is rife in these areas. The proximity of the villages around the Hamakuya area to the Mutale River predisposed the inhabitants of these villages to a high incidence of malaria infection because the river becomes a breeding spot for mosquitoes, especially when there are pockets of stagnant water around the river (Brooks & Abney, 2013).

4.6.2 Description of the Research Sites

Two primary schools were identified as study sites for the research. The services of liaison officers were employed in the identification of the schools. A series of communication events took place between the liaison officers, a team of postgraduate students from the University of Pretoria and the Senior Project Coordinator for the University of Pretoria Institute for Sustainable Malaria and Control (UPISMC) for close to one year before the commencement of data collection. The two schools identified for this study were Kumbulani Primary School and Takelani Primary School. Both schools are located in the rural areas of Hamakuya of the Vhembe district in the Limpopo province. At the time of the research, each school had enrolled over 200 learners. Both schools had one class consisting of learners in Grades R, 1,2, and 3. Most learners came from distant places in buses provided by the Department of Education. Kumbulani Primary School is about 55 kilometers from Thohoyandou while Takelani Primary School is about 75 kilometers from Thohoyandou. The roads to the two schools were not tarred at the time of the research. Teachers who did not have vehicles had to depend on public transport, which was available twice in a day. If a teacher missed the morning bus it meant that he or she would have to forfeit the day since there was no alternative means of transport.

4.6.3 Profile of the Limpopo Province

The Limpopo province has an area 125,754 km². It is bordered by Zimbabwe on the north, Mozambique on the east, and Botswana on the west. It shares it borders with the South African provinces of Gauteng in the south, Mpumalanga in the South–East and North West in the South-West. Limpopo is ranked the fifth largest province in South Africa (see Figure 4.1). It is the fifth largest province in South Africa, the fourth largest in population, with about 5.3 million people. Around 2.4 million are male, and 2.9 million female. More than 97% are black Africans. The Limpopo province is one of the most ethnically diverse provinces in South Africa, with different groupings such as the VhaVenda, BaSotho, Shangaan, AmaNdebele, BaTswanas and Swazis. It comprises five districts: Mopani, Vhembe, Capricorn, Waterberg and Sekhukhune.

FIGURE 4.1 THE LIMPOPO PROVINCE



(Source: Brand South Africa, 2017)

Statistical facts about the Limpopo province motivated the choice of this province for the current study. According to Statistics South Africa, evacuation of refuse by the municipality had not commenced in some areas of Limpopo due to its classification as a rural province. Similarly, it is alarming that the number of household units without refuse dumps increased from 164 657 in 1996 to 176 273 in 2011 (Socio-economic Review, 2012). Of all the districts in the Limpopo province, the Vhembe district was identified to have the highest number of households that had found ways to individually dispose of their wastes (Socio-economic Review, 2012). Because residents had to dump refuse at their discretion these refuse dumps constituted breeding sites for mosquitoes, and malaria infestation became ubiquitous.

FIGURE 4.2: VHEMBE DISTRICT MUNICIPALITY MAP



(Source: Brand South Africa, 2017)

4.6.4 Criteria for Participation

The schools used as research sites for this study were located within the malaria-prone areas of the Limpopo province. The school children and their parents resided within the area. Teachers who were chosen as study participants had taught in the area for not less than two years. Table 4.2 highlights the profile of the participants of the research study. A total of 21 learners in the Foundation Phase participated in the research study. Out of the 21 learners, nine of them were males, while twelve of them were females. Seven female teachers who taught learners in the Foundation Phase participated in the study. Out of the ten parents of learners in the Foundation Phase who participated in the study, only one was male.

Descripti	Gender		Characteristics	Numbe
on				r
Learners	Male = 9	Female	Foundation Phase	21
		=	learners	
		12		
Teachers	Male =	Female	Foundation Phase	7
	nil	= 7	teachers	
Parents	Male = 1	Female	Have children in	10
		= 9	the	
			Foundation	
			Phase	

TABLE 4.2 PROFILE OF PARTICIPANTS

4.7 DATA COLLECTION PROCEDURE

The outcome of a qualitative study is not predictable (Richards, 2005). This is one of the major differences between a qualitative and quantitative study. The understanding of the phenomenon is created from data gathered; the scope of which cannot be predicted. The interview questions were open-ended and referential in nature. This allowed participants the opportunity to share their thoughts and perspectives of what they considered important about their knowledge of malaria.

Data were collected using semistructured interviews, observation, researcher's reflection journal and policy document analysis. The documents that were analysed included the Foundation Phase curriculum and textbooks used for Life Skills in the Foundation Phase. This provided the researcher with an opportunity to see the extent of the integration of health-related issues in the curriculum. Data were analysed by means of content and thematic analyses (Mayring, 2000; Braun & Clarke, 2006).

A familiarisation visit was made to the research sites in conjunction with the senior project coordinator of the UPISMC who made a follow-up visit to the area about one year prior to the data collection for this study. The visit provided vital background information about conducting research in the area. During the visit, the researcher, together with other postgraduate students were showed the sites where the UPISMC was conducting ongoing

research on malaria. The researcher met with the liaison officers who explained that a bottom-up approach was considered important in the villages when it came to issues affecting the community.

Researchers who proposed a study had to liaise with a prominent member of the community. This member was to notify the chief of the concerned community and also help in securing required permission from the chief of the community before any research could be undertaken. Equipped with this information the researchers visited the community resource centre at Hamakuya where they met one of the community liaison officers. The centre supplied the statistics of the number of schools that were available in the area. The researcher gathered that the language of learning and teaching (LOLT) at the schools was English. However the teachers code switched to Tshivenda for learners to better understand. On arrival at the two schools it was found that teachers predominantly taught in Tshivenda. The resource centre became the hub of connection to the schools when it was time for data collection.

4.7.1 Semistructured Interview

The researcher based her discretion on the notion that interviews constitute one of the major sources of data collection from research participants (Fossey, Harvey, McDermott, & Davidson, 2002). A semistructured qualitative interview is "the most prominent data collection tool in qualitative research" (Punch, 2014). According to a semistructured interview, the researcher prepares the interview schedule before going to the field (De Vos, Strydom, Fouche & Delport, 2005). However, the questions contained in the interview schedules were used as a guide as participants shared their individual experiences and flexibilities and responsiveness. This helped the researcher to be focused. This method of data collection was chosen because it permitted a sort of social interaction between the researcher and the participants. It also allowed the participants to explicitly state their perspectives in detail, by digressing a bit in order to pursue a subject that pertained to the study (Mills, 2001:285). This method was found suitable for the study for the following reasons as highlighted by Mills (2001:286):

Adaptability: Semistructured interviews are amendable to time and location. Responsiveness: The researcher is responsive to the participants' feelings. The acknowledgement of such feelings forms a significant aspect of the data collected. Intricacy: The use of semistructured interviews permits the researcher to become part of the participants' world. It gives the researcher insight into the complex experiences of the participants and the meaning they ascribe to their world.

These qualities informed the disposition of the researcher to select a semistructured interview as the data collection method.

Semistructured interview questions were prepared methodically from intensive engagement with the literature (Jacob & Furgerson, 2012; Turner, 2010) and interactions with the liaison officers during the preliminary visit in 2014. The researcher did not follow the list of questions on the interview schedule strictly with each participant. The data collection process was influenced by Mills (2001) in the following ways:

An attempt was made to allow adaptability so that individual interviews followed distinct courses in order to give room for each participant to speak from his or her perspective.

The researcher fostered a milieu that allowed the participants to be open-minded. This gave the participants the fortitude to express their perceptions of how they experienced malaria. They were eager to divulge their experiences because they wanted to be free from the scourge. They perceived the discussion about the subject matter as a way out of the health challenge they were confronting, and as an avenue for their voices to be heard.

Based on the realisation that the topic of this study embraced some levels of sophistication, the researcher was afforded the opportunity to temporarily belong to the world of the participants. This yielded the researcher the privilege of knowing how they experienced the malaria. The posture of belonging to their world was able to melt down the wall of sophistication that existed prior to the commencement of the interview process.

A prominent feature that was found to have likely blurred the wall of sophistication had to do with the use of semistructured interviews because of the combination of adaptability and the researcher's posture of responsiveness.

The interview questions that were prepared for the teachers bordered on their biographical information, classroom experiences with regards to the teaching Life Skills in the Page | 91

Foundation Phase, and their responses to learners' absenteeism. These questions were asked because Brooker (2009) and Bundy, et al. (2000) found that learners were absent from school as a result of malaria infestation.

The questions prepared for the parents were divided into three major parts: biographical information; knowledge about the malaria disease; and treatment-seeking attitude. These questions were asked to gain insights into the level of awareness of the parents about malaria. The questions posed to the children were divided into two major parts, viz; biographical information and knowledge of malaria. The children's knowledge about malaria was inductive in nature. After responding to the biographical information, a picture of a mosquito was shown to the children. This evoked a prompt, which eventually led to having a conversation on their level of knowledge and understanding of malaria. In other instances, learners were asked about their classroom experiences of malaria education in the Life Skills lessons in terms of what they had learned in Life Skills subjects. This gave the researcher an opportunity to become familiar with the content of the Life Skills curriculum as the learners were taught in the classroom.

Interviews with parents and teachers lasted for about 20 minutes per session. The interviews with the children lasted between 10 to 15 minutes per session because children sometimes do not possess enough vocabulary to express their views (Scott, 2002). Prompt questions were used to keep the conversations flowing to elicit the generation of rich data, which provided sufficient insight into the issue of malaria health education (Jacob & Furgerson, 2012). The researcher embraced the suggestions of Mayall (1996) to ascertain that the voices of the children who participated in this research study were heard in manners devoid of likely power relations between the researcher and the research participants:

- 1. The researcher regarded the children in the Foundation Phase as capable and reflexive in narrating their own experiences.
- 2. They were given the liberty to narrate their experiences and their stories were taken seriously and treated with utmost respect.

List of research project topics and materials

3. The researcher did not compel them to talk in ways that could tamper with their privacy.

The interviews were conducted using a small, portable audio recorder. From the study conducted during the researcher's master's research, the participants (especially children) found the use of this device unobstructive and comfortable. Prior to the commencement of the interview, participants were informed that a recorder would be used. To facilitate smooth interview processes, participants were first met in groups to formally introduce them to the research. For example, the participating learners were met in groups of five.

During the group meetings the interpreter read the informed consent or assent letters again and reminded the participants that their participation was voluntary. Informal chats ensued between the researcher and the participants before the interviews. The aim with this was to establish rapport and make participants feel relaxed during the interview.

The researcher conducted the interview in English. The service of an interpreter was employed. He translated to the participants in Tshivenda. Most of the participants spoke Tshivenda, which is the dominant language in the Hamakuya area of the Vhembe district in the Limpopo province. Given that the interpreter spoke English fluently, the interview was conducted with ease. The researcher rigorously reflected on the issues noted about interpretation from one language to another (e.g. Adamson & Donovan, 2002; Edwards, 1998) that the experience and credentials of the interpreter are crucial in ascertaining the authenticity of interpreted conversations. These issues are capable of adversely affecting the validity of qualitative research. The researcher ensured that the interpreter of the interview sessions had been involved in a broader malaria study with the University of Pretoria Institute for Sustainable Malaria Control (UPISMC) and had been conversant with the vocabulary relevant to the study. This became a useful instrument which assisted the researcher to rely on the interpretations conveyed during the interview sessions. The researcher reechoed the responses relayed during the research to ensure that the interpreter accurately relayed the posed questions to the participants. As the interpreter translated from Tshivenda to English, the researcher checked the interpretations for consistency in order to avoid miscommunication.

All the interviews were conducted within the school premises. The interviews with the parents were also conducted within the school premises. This was because logistics did not permit individual home visits to parents' homes. Most parents who participated in the study preferred to come to the schools very early before they went to their places of work. Data collection took place during the examination week. Because the teachers were not

teaching during this time, there was no intrusion into the lesson time. The times of the interview for the children were scheduled for when they were comfortable to answer questions and were not too tired. The children were interviewed in the presence of their teachers as it was noted during the data collection process for the researcher's master's study that children felt more relaxed and comfortable when they were with people they trusted. However in one of the schools, a group of Grade 3 learners asked for their teacher to be excused at the time of the interview.

4.7.2 Observation

Observation as a data collection method gave the researcher the benefit of collecting numerous data in a more naturalistic situation (Mulhall, 2003). In this study, the researcher made use of "naturalistic observational technique" (Li, 2008). This allowed the researcher to study the participants in their natural setting and to document observable phenomena such as their physical surroundings and their communal interactions. The researcher could not go into the homes of the learners who participated in the study. Hence it was not possible to observe the neatness of the surroundings of the homes of these learners or to scrutinise the use of malaria-prevention practices such as keeping the vegetation around the houses low and getting rid of containers that could hold water.

However, the researcher had the privilege of observing some homes around the schools where the research was conducted. It was observed that there were open water storage tanks at some of the houses around the schools where the study was conducted. These uncovered water storage tanks could potentially become breeding spots for mosquitoes and thereby they predisposed the learners at the schools to contract the malaria parasite via mosquito bites. However, during the year that the current study was conducted there was drought in South Africa. This suggests that the water pots and open tanks could constitute breeding spots for mosquitoes during the regular conventional rainy season. Puddles were not sighted on the gravel roads leading to the schools probably because there was no rain due to drought at the time that this study was conducted. (Data collection occurred during what should be the malaria season). It was observed that the schools had open-pit latrines that could serve as breeding places for mosquitoes.

4.7.3 Document Analysis

Documents refer to the material that accompanies interviews. They assist researchers to have a clearer judgment concerning their line of thought from data collected (Merriam, 2001). Moreover documents are means of corroborating other sources of data in case studies (Ary, Jacobs & Sorensen, 2006). The documents that were available for scrutiny were the Department of Education policy documents for Life Skills at the Foundation Phase.

4.8 ETHICAL CONSIDERATIONS

Ethics refers to the discipline relating to principles, rules and values that govern demeanor and actions of people (Medical Research Council, 1993). The following measures were put in place to ensure that the required ethical considerations were observed in this study.

4.8.1 Informed Consent and Children's Voluntary participation

The study was based on voluntary participation of the participants. Ethical approval was obtained from the University of Pretoria's Ethics Committee, the Department of Health in Limpopo and the Department of Education in Limpopo, where the study was conducted. Informed consent was obtained from the school principals, learners' parents and teachers. Learner consent was also obtained before the study commenced. Since the researcher had a foreknowledge of the use of bottom-up approach in the villages, the chiefs' consent was sought to employ the assistance of the liaison officers at the community centres. The participants were given letters of consent ahead of the interviews to allow them make personal decisions on whether they wanted to participants partake in the study.

The children who participated in this study were young children, therefore permission was first sought from their parents or guardians and the school authority. The interpreter read the letters of consent to the learners in Tshivenda to ensure their voluntary participation.

4.8.2 Anonymity and Confidentiality

Issues relating to the confidentiality and safety of the research participants were made clear from the inception of the study. The researcher engaged with the principles relating to issues that bordered on anonymity and confidentiality before embarking on the research study. The work of Polit and Back (2006) became useful in handling these matters. Prior to conducting the study, the research participants were made aware of the extent of their involvement in the study. They were assured that there would be no risks involved. They were also granted the liberty to withdraw their participation at any stage of the study, if they were uncomfortable or if they felt that their rights, safety and freedom of expression were being encroached. The research participants were also assured that all the information disclosed by them would not be revealed to any third party who would use the information wrongly. However, they were notified that the work would be published without the use of their real names. This was done to enable the participants' voluntary participation and for the researcher to be able to collect reliable data that depicts the full picture of the children's lived experiences around issues bordering on their experiences with malaria infestation.

The researcher embraced the concerns of Morse (2007) that in the course of analysing gualitative research, it is challenging to promise participants absolute confidentiality. Morse stipulated that participants needed to know that their narratives might be published for others to see. In the light of these concerns, the research participants were assured that their real names would not be revealed when reporting the research. This accounted for the use of pseudonyms instead of the real names of participants and research sites (Polit & Beck, 2006). Erickson (1990:14) asserts that the association that exists between the researcher and the participants goes beyond mere congeniality (friendliness). It is expected that there would be a reciprocal rapport and relationship to indicates the investment of trust that encourages participants' active participation. Before the study began, the researcher endeavoured to earn the trust of the research participants for the course of the study. Furnished with tips from Jacob and Furgerson (2012) about steps required to take when trying to establish a conducive atmosphere during data collection, the researcher had the privilege of starting with biographical information guestions and questions that prepared the minds of the research participants to be capable of divulging their experiences without fear. This fostered the devoted involvement of the participants.

4.8.3 Protecting Participants from Harm

The purpose, scope, as well as the duration of the study was explained to the participants in a clear, unambiguous way. The service of an interpreter was employed to translate from English to Tshivenda, which was the dominant language spoken. The interpreter relayed the responses of the research participants to the researcher in English. The learners who participated in this research study were given the liberty to discontinue from the research whenever they felt uncomfortable to speak about their experiences. This assurance was ascertained in the presence of the interpreter. The researcher explained the purpose of the research study to the children through the interpreter. The interview sessions did not commence until both the researcher and interpreter were assured of the fact that the learners who participated in the study were absolutely willing to be interviewed despite obtaining the consents of their parents. The researcher intermittently reminded the learners who participated in the research study about their freedom to desist from the study whenever uncomfortable questions were posed to them. With due conside ration to the scrutiny conducted by the ethical committee of the University of Pretoria, the questions that were posed to the children were rigorously screened and approved before the researcher went to collect data. The researcher also made it clear that non-participation would be without any consequence. Transparency was upheld throughout the research process.

4.9 DATA ANALYSIS

The researcher initiated the data analysis process by taking a careful look at the Mcmillan and Schumacher's (2006) suggestion that, in order to undertake data analysis, a methodical pathway of coding and sorting data should be followed to offer elucidation of a phenomenon of interest. The obtained data from the participants was transcribed and the transcriptions were thoroughly read through. Similar responses were grouped together into unique groups. Groups were merged into themes. Categories were developed from each theme that emerged (see Tables 5.4, 5.5 and 5.6).

The data were analysed through thematic analysis (Braun & Clarke, 2006). Thematic analysis allowed the researcher to recognise, investigate and report the identified themes found in the collected data. Some of the themes obtained from certain participants were

amalgamated because of how the questions that were put to them were answered. Prior to the commencement of data analysis, the researcher was completely immersed in the transcribed data by rigorously reading the transcripts, observations recorded in the researcher's journal in consonance with the transcripts. These were read over and over in an attempt to study the orientation of the obtained themes from the transcripts obtained from the 38 participants of the study. At such times that the themes were unclear, the audio-recorded interviews were played back to ascertain the researcher's orientation as far as the study was concerned. Throughout the course of data analysis, the research questions and subquestions were borne in mind in an attempt not to lose vital data that answered the stipulated research questions and research subquestions that were set out at the onset of the study. The researcher bore in mind the philosophy and principle inherent in the transcription process as suggested by Sandelowski (1994). The following factors affect the precision and value of transcripts: the magnitude to which the researcher understands the constructed reality, careful selection regarding what portion of the interview should be preserved, future uses for the transcript, which have bearing on the selection process and the need for a reliable representation.

As the interview transcripts, observation and researcher's journals were perused, a margin was deliberately created to enable the researcher pay attention to emerging themes from the research participants' transcripts. Themes began to emerge from the transcripts as the researcher paid attention to narratives that spoke to important questions that were asked from the research respondents, informed by the research questions set out at the commencement of the study. After rigorous analysis of the transcripts, it was obvious that the major emerging themes related to the possibility of incorporating knowledge about malaria in the Foundation Phase Life Skills curriculum. These were matched with the analysed policy documents, Life Skills textbooks, observation sessions recorded during the research and the researcher's journal. The researcher looked out for similarities between the themes that emerged as the transcripts were read over and over. These transcripts were constantly matched with the recorded observation sessions and the researcher's journal. Different colours were assigned to the different codes in order to easily detect emerging themes from the transcripts. The analysis of the researcher's observation journal also assisted in making informed decisions to consolidate the authenticity of the coded transcripts obtained from the audio-recorded interviews (Schurink, 2004b). In the course of analysing the data, new insights and a strong

impression about the emergence of novel knowledge that could contribute to the body of existing knowledge became paramount (Merriam, 1998).

The researcher took the initiative to further improve the emerging themes from the transcribed data to single out the emergence of new knowledge that could add sufficient value to the study (Braun & Clarke, 2006). Data analysis was conducted over and over in sporadic ways as the emerging themes were spotted. All of these important themes were judiciously arranged and documented for ease of comprehension. Three stages of documentation were traversed namely, the stage of recording of data; the transcription of the data; and the construction of the new knowledge obtained from the transcribed and coded texts. This procedure of thematic analysis augments the phases of analysis (Merriam, 1998). At first, a descriptive account route was undertaken in order to compress and link data sources that resulted in the meaning making exercise. The next phase was the categorisation phase. This phase pointed the researcher's attention to regular prompts obtained from the consulted literature during the course of learning about the study.

The categories were made through frequent methods of data analysis.. These were entrenched in the arranging of units of data according to the groups with consistent meanings (Anfara, Brown and Mangione, 2002). A comparative analysis was carried out of the obtained data from the two schools where this study was undertaken. The obtained data from the two schools were placed side by side so as to triangulate existing data prior to constructively making sense of the study data. The data obtained from the transcripts were triangulated with the recorded observation sessions and researcher's observation journal to ascertain validity. The transcripts obtained from the teachers were analysed for consistency with those obtained from the learners and the parents. The researcher further examined the reflection journal and observations recorded in order to compare these with the transcripts.

4.10 QUALITY CRITERIA

Golafshani (2003) clearly defines qualitative study as a type of study in which the findings are not generated from numerical data but from lived experiences of people where the details of events of concern are naturally revealed. The essence of quality assurance in a qualitative study centres on producing comprehension (Stenbacka, 2001).

In quantitative studies, reliability and validity are viewed as separate criteria for quality determination. Credibility, transferability and trustworthiness are quality criteria, used for evaluating qualitative studies (Golafshani, 2003:4). Similarly, Guba and Lincoln (1989) map out four criteria for assessing the trustworthiness of a research study. These are credibility, transferability, dependability and confirmability.

4.10.1 Credibility

The credibility of a qualitative research depends on the researcher who is considered as the instrument (Patton, 2002). Armed with this important notion the researcher was careful not to be biased about the interview processes by allowing the conducted interviews to take their natural courses. When the researcher contemplated issues bordering on credibility, it was important to note that it entailed improving the level of assurance of the emerging findings from a qualitative research study. Consideration of credibility offers an understanding of the scope of interpretation of the interview transcripts obtained from the study. The extent of the researcher's immersion in the text obtained through the interviews of the study is thus made lucid (Saukko, 2005). The credibility of the study was embedded in the knowledge that a detailed account revealing the full relationship among variables and associations corresponded to the obtained data.

The researcher considered the fact that the research participants spoke from their subjective perceptions. The research questions were therefore crafted in such a way that they produced objective responses devoid of personal biases (De Vos, Strydom, Fouche & Delport, 2005). The researcher considered the route of data collection as a measure of improving credibility because the participants were monitored as they revealed their experiences while the audio recorder was used to record the proceedings of the interviews. The transcription of data corroborated the credibility of the study (Savin-Baden & van Niekerk, 2007). The initiative that the researcher took to personally transcribe the interviews was to ensure the credibility of the study (Fade, 2003). The transparency of involving the researcher's supervisors in the data collection processes (whereby the interview transcripts were at their disposal for analysis and consideration) further strengthened the credibility of this study.

4.10.2 Transferability

As far as the issue of transferability is concerned, the scholarly output of Fade (2003) was useful. The researcher reflected on the importance of comprehending qualitative research as not capable of offering generalisability. This consideration is by virtue of the view that qualitative research seems not to be based on statistical connotation. The researcher pondered on the practice of the other researchers because they have been noted for not generalising their research studies outside of the situation under consideration. The researcher reiterates the fact that qualitative research findings may be applied to a number of similar contexts as long as the researcher who wants to employ the tool of generalisability takes the context of his or her research study, there were no conventional rains. As a result of this situation, the prevalence of infestation of malaria may not have been be ubiquitous. It is possible for other researchers report, they should take the current weather into consideration so as not to generalise the findings of this study.

4.10.3 Dependability

According to Bellefeuille, Martin and Buck (2005), the issue of dependability is debatable, provided that the sample size is small. This implies that qualitative research should not be overburdened by measuring its extent of dependability. However, the researcher takes solace in the suggestion of Koch (2006) that as long as a research study is traceable it can be regarded as dependable. The researcher took sufficient effort to ensure the safekeeping of the audio-recorded interviews, researcher's observation journal and interview transcripts of the study. This action ensured an audit trail of the study so that it becomes verifiable. At the University of Pretoria, it is compulsory for researchers to provide evidence of the research study so that the transcripts, researcher's observation journal and audio-recorded interviews, letters of consent and assent letters sent out to the participants of the study are available on request. All these data collection tools can be audited if another researcher chooses to conduct a similar study (Sandelowski, 1986).
4.10.4 Confirmability

As long as the findings of this study portray the outcome of the reasons for conducting the study, it is said to be confirmable. Furthermore, the neutrality of the researcher ensured the study's confirmability because of the absence of personal bias towards the research under consideration (Mouton, 2001). In the course of analysing the data that was obtained, the path taken to arrive at the interpretations was lucid enough to ensure confirmability (Koch, 2006). Reflecting on the scholarship of Guba and Lincoln (1989), this study is confirmable because issues of credibility, transferability and dependability have been contemplated. Deliberations on how decisions have been made are available in order to meet the requirements of the concept of confirmability in the data analysis process.

4.11 TRIANGULATION OF DATA

This research topic's data collection was achieved via a number of data collection strategies in an attempt to ensure data triangulation. The use of semistructured interviews with parents, teachers and learners in the Foundation Phase assisted in achieving triangulation of the obtained data. In addition, the researcher's observation journal also served this purpose (Lincoln & Guba, 1985). The aim of triangulating data was to ensure proper understanding of the phenomenon under study in order to verify the authenticity of narrated information from the different study participants (the learners in the Foundation Phase, their parents and teachers). These respondents ensured the generation of rich and valid data for the study (Barusch, Gringeri & George, 2011; McMillan & Schumacher, 2006).

4.12 SUMMARY

This chapter highlighted the relevance of using a qualitative design methodology for this study. A comprehensive alignment between the research study and the data collection methods was also emphasised. The need for the advancement of a health education curriculum in the Life Skills subject in the Foundation Phase provided the justification for embarking on this study. The rigorous research process was found to be rewarding in that it provided very rich data that afforded meaningful knowledge construction from the participants' stories. The researcher's personal involvement in the data collection afforded List of research project topics and materials

an opportunity to encounter the desire of the research participants for a health curriculum that could supplement other efforts directed toward malaria elimination in the Hamakuya village in the Vthembe district Limpopo province. Chapter Five presents the data collected during the inquiry.

5.1 INTRODUCTION

In Chapter Four, a detailed report of the methodology was presented. The current chapter presents the data collected from various participants in this study. It also elaborates on how the collected data were analysed.

Thirty-eight participants participated in this research study. The participants were categorised into three groups namely; learners in the Foundation Phase, teachers who taught these learners in the Foundation Phase, and the parents of these learners. The participants profiles are detailed in Tables 5.1, 5.2 and 5.3 respectively.

All interviews were done on one-on-one basis. This method was preferred to allow each participant have the liberty to voice his or her opinion. The rationale underpinning this strategy is that this study is novel and that it is important to have sincere opinions of participants to form a foundation for further studies. Data were collected by means of audiotapes, as permitted by the participants. The collected data were then transcribed according to the participants' responses within the study context. Pseudonyms were used instead of the participants' real names. This ensured the confidentiality and anonymity of the participants. An attempt was made to make use of all the data collected. This was because the researcher judged all the data collected as relevant to the study.

The themes and categories that emerged from the narratives of the participants are also highlighted in Tables 5.4, 5.5 and 5.6, in an attempt to foreground them against the research questions of the study. The themes and categories were identified when the researcher read through all the transcribed data. As the data were perused, the researcher carefully selected responses that were similar, especially those that seemed to have pointed to cogent trends that fitted into collective responses. These responses could be grouped together for proper analysis. These responses led the researcher into taking informed decisions that enabled the judicious categorisation of valuable data that could be used to corroborate the claims that would be made in the study.

TABLE 5.1: PROFILE OF LEARNERS WHO PARTICIPATED IN THE RESEARCHSTUDY

Pseudonym	Age	Gender	Grade	Pseudonym of school attended
1. Mukzani	7	Female	2	Takelani Primary School
2. Fheli	7	Female	2	Takelani Primary School
3. Dammie	6	Female	R	Kumbulani Primary School
4. Dan	8	Male	3	Takelani Primary School
5. Emmanuel	7	Male	2	Kumbulani Primary School
6. Phillip	7	Male	2	Kumbulani Primary School
7. Isaac	8	Male	3	Kumbulani Primary School
8. Michael	7	Male	2	Takelani Primary School
9. Albert	9	Male	3	Kumbulani Primary School
10. Leo	7	Male	2	Takelani Primary School
11. Loreta	8	Female	3	Kumbulani Primary School
12. Philo	7	Female	2	Takelani Primary School
13. Phindile	7	Female	2	Kumbulani Primary School
14. Riaan	7	Male	2	Kumbulani Primary School
15. Sarah	9	Female	3	Takelani Primary School
16. Sindi	9	Female	3	Takelani Primary School
17. Timothy	7	Male	2	Kumbulani Primary School
18. Tessy	9	Female	3	Takelani Primary School
19. Victoria	9	Female	3	Kumbulani Primary School
20. Yvonne	9	Female	3	Kumbulani Primary School
21. Wanda	7	Female	2	Kumbulani Primary School

This study used the purposive sampling method. The selected schools are located in the Hamakuya village where the incidence of malaria is prominent.

Teachers of the learners helped to identify learners who would be able to respond to the interview questions. Participation of learners was voluntary despite being selected by their teachers. Grades 2 and 3 learners were most preferred because they represented the

learners who had spent at least two years in the Foundation Phase and who were able to engage in dialogue.

TABLE 5.2: PROFILE OF TEACHERS WHO PARTICIPATED IN THE RESEARCHSTUDY

Name	Gender	Grade	Name of school	Total years of	Years of
(Pseudonym)		taught	(Pseudonym)	teaching	experience
				experience	in present school
	F	3	Kumbulani	21 years	1 ¹ ⁄ ₂ years
1. Maria					
2. Rachael	F	R & 1	Kumbulani	13 years	10 years
3. Nkhensani	F	G 2	Kumbulani	30 years	26 years
4. Tessy	F	G 1	Kumbulani	25 years	25 years
5. Zinhle	F	G3	Takelani	23 years	23 years
6. Joni	F	G2	Takelani	22 years	22 years
7. Enny	F	GR	Takelani	6 Years	6 years

The teachers who participated in the study taught the Grades 2 and 3 learners who also participated in the study.

TABLE 5.3: PROFILE OF PARENTS WHO PARTICIPATED IN THE RESEARCHSTUDY

Name	Age	Gender	Numbe	Level of	Occupation	Length of
(Pseudonames			r of	educatio		residence in
)			childre	n		Hamakuya
			n in the			
			FP			
	33	F	1 in G2	G 10	CWP (street	From 2001
1. Pinky					cleaner)	
2. Flora	40	F	1in G3	ABET	Unemployed	From 1996
3. Linda	25	F	1 in G1	G 9	Unemployed	Since birth

4. Tania	26	F	1 in G2	G 12	Unemployed	Since birth
5. Phadala	32	F	1 in G3	G 11	CWP	From 1988
6. Rihanna	48	F	1 in G2	G 12	Unemployed	
7. Hannah	24	F	1 in G2	G 7	Unemployed	Since birth
8. Jane	29	F	2 in G3	G 9	Petty trade	Since birth
9. Cynthia	43	F	1 in G2	Diploma	Admin clerk	From 1995
10. Muvhango	28	Μ	1 in G3	G 11	CWP	From 1996

The parents who participated in this study were those who were contacted and who chose to voluntarily participate in the study. All of them had children in the Foundation Phase.

5.2 QUALITATIVE DATA ANALYSIS

The outcome of the analysis of responses provided by the various participants in the course of exploring this study led to the emergence of distinct themes.

The subsequent subsections highlight the themes and categories that emerged from the collected data:

Theme 1 and the ensuing categories emerged from the data collected from the learners. Theme 2 and the resulting categories emerged from the data collected from the teachers. Theme 3 and the subsequent categories emerged from the data collected from the parents.

Theme 1: Learners had limited knowledge of malaria disease because they received				
limited tutela	limited tutelage on malaria education through the Life Skills curriculum			
Category 1	Total ignorance about malaria disease			
Category 2	Limited knowledge about malaria disease			
Category 3	A desire for a curriculum that enlightens learners more about malaria			

TABLE 5.4: THEME 1: DATA COLLECTED FROM LEARNERS

TABLE 5.5: THEME 2: DATA COLLECTED FROM TEACHERS

Theme 2: Teachers' level of information and resources to implement the teaching of			
malaria education to learners in the classroom			
Category 1	Teachers had basic knowledge about the symptoms, causes and		
	treatment of malaria.		
Category	Teachers did not see the teaching of malaria education as compulsory		
2:	because of lack of support through the Life Skills curriculum.		
Category 3	Teachers were willing to do more with regards to giving learners		
	adequate tutelage on malaria education if they were empowered by the		
	curriculum.		

TABLE 5.6: THEME 2: DATA COLLECTED FROM PARENTS

Theme 3: Parents' level of knowledge about malaria			
Category 1	Parents had little or improper knowledge about malaria infection.		
Category 2	Parents engaged in cultural practices in malaria prevention		
Category 3	Parents wanted more action from the school with regards to malaria education. They looked forward to a curriculum that would influence their actions through what they would learn from their children.		

5.3 DISCUSSION OF THEMES

5.3.1 Theme 1: Limited Knowledge

Learners had limited knowledge of malaria disease because they received limited tutelage on malaria education through the Life Skills curriculum.

Theme 1 presents the analysis of data collected from the learners with regards to their level of understanding of the malaria disease. The three categories that came up are hereby discussed. The real names of the participants were replaced by pseudonyms.

Category 1: Total Ignorance about Malaria

The majority of the learners that were interviewed showed no knowledge of malaria (see Figure 5.1). They were completely ignorant about malaria is. They were also able to recognise the mosquito on the picture.

Although teachers claimed to have taught learners about malaria at their discretion, most of these learners showed limited knowledge about the cause, symptoms and prevention of the malaria disease. Many of them did not know what the word "malaria" meant. They also did understand the word when it was translated to Tshivenda (their indigenous language).

One of the learners, Mukdzani, expressed her ignorance of malaria disease in her response to the researcher's question by saying, *"I don't know anything about malaria."* After a continued session of probing with help from the interpreter and going through diverse dimensions of putting forth the question to this learner, she was able to bring forth a prominent response. The researcher asked her to narrate what she was taught about teaching at the school, in an attempt to decipher if she was taught anything that pertained to malaria. She responded by saying: *"My teacher only teaches me mathematics and reading."*

Other learners in various ways confirmed this response. The researcher asked another learner, Dan, what he knew about malaria. He responded by saying *"I have not heard about malaria disease."* The researcher proceeded to ask Dan what he knew about taking care of his body in order not to get sick. He revealed that the only thing he knew about taking care of his body was to take his bath regularly. He knew this because it was the focus of health education in the Life Skills curriculum in the Foundation Phase. Since Dan knew how to take care of his body it can be inferred that if he was properly taught about malaria he would have been efficacious about it. Having one's bath is truly a way to keep healthy but carries no relevance to malaria prevention. Dan did not understand the devastating effect that malaria could have on his health and well-being. He had no idea of the meaning of malaria. Neither did he know the symptoms of the disease.

Dan's confession to the fact that he had never heard anything about malaria was an indication of his non-awareness about the topic on malaria disease. He declined having more knowledge about malaria, a possibility that he was very ignorant about the severity of the disease. To further validate findings through his narrative, he said, *"I don't want to know more about malaria."* This was his response to the question the researcher put to him in eliciting whether he would like to know more about malaria. His response to the researcher's question confirmed that he did not know the severity of malaria despite the fact that he lived in a malaria endemic environment.

The incorporation of malaria education into the Life Skills curriculum in the Foundation Phase could assist in disseminating the knowledge about the disease. This would help other children like Dan become aware of ways to protect themselves from malaria infection.

Most of the children knew what they were taught at school. They were not completely ignorant of the content of the Life Skills curriculum as disseminated by the teachers. This assertion was made clear in their responses to questions on what they learnt in the Life Skills curriculum. One such learner was Phillip. He knew that he had to do some things such as washing his body in order not to fall ill, but had no information about the malaria disease. When asked to reveal the subjects he was taught, he responded, *"My teacher only teaches me mathematics, drawing and reading."* This was the prominent narrative that characterised his interview with the researcher. The level of contact periods that Phillip had in mathematics, drawing and reading probably accounted for his quick ability to recollect those subjects as part of what he learned at school. It became obvious that, if Phillip had the same level of contact with malaria information, he would have responded in the same manner.

Some responses by the learners had an undertone of cultural beliefs and practices. Such beliefs formed the stance of children about the malaria disease. A child like Philo believed that unhealthy foods like snacks could cause malaria disease. When the researcher asked Philo if she was taught any health-related subjects, she said, *"My teacher teaches us not to eat unhealthy foods like snacks because it can cause malaria."* Her response indicated that she did not understand the cause of malaria. Eating unhealthy foods as far as we know cannot be the cause of malaria. Philo was asked if she knew about malaria and she said, *"No I don't know about malaria."* She was then asked to identify a photograph

showing a mosquito. She identified the image on the photograph as a "fly." From this revelation of understanding it is clear that using the Life Skills curriculum to disseminate knowledge about malaria to learners in the Foundation Phase could become important to enhance their understanding about malaria.

Timothy was another learner with a similar view. The prominent narrative that characterised Timothy's interview demonstrated his capacity to embrace what he was taught at the school. During the interview, he told the researcher who asked him what he was taught at the school, *"They teach us different things like mathematics, and singing."* Furthermore Timothy said, *"We must eat healthy foods and keep our body clean."* Timothy had no clue about malaria. Had he been taught, from what he revealed, he would have responded to the researcher's questions based on what he knew. He said, *"I do not know about malaria as a disease."* A critical analysis of Timothy's cognitive capacity revealed that he would have been able to tell the researcher what he knew about malaria if he was taught. Timothy is an example of a learner who could demonstrate acquired knowledge of what he was taught at the school. Based on this finding, the informal teaching of malaria was probably not adopted by all teachers at the two schools.

The response of some of the other learners revealed their understanding of the content of the Life Skill curriculum. A typical example is Albert. At the time of the research **h**e was a nine-year-old male learner in Grade 3 at Kumbulani Primary School. Albert knew all of the four subjects he encountered in Grade 3, namely English, Tshivenda, Life Skills and Mathematics. He knew that he was taught about human beings and the human body in the Life Skills subject area. In the course of probing him further to know whether he had any knowledge about malaria, he said, *"We learn about human beings in Life Skills."* When he was asked what he knew about taking care of his body he said, *"I take care of my body by washing, eating healthy foods and cleaning the table."* Albert had no idea of malaria, the causes of the disease or its prevention. He however expressed his desire to learn by saying, *"I want to know about malaria disease, causes and how to prevent it."* This reveals the possibility that learners in the Foundation Phase have the capacity to understand what they are taught in the classroom.

Loreta corroborated this view. When Loreta was asked what she was taught at school she mentioned "*Mathematics, Life Skills and Tshivenda*" as subjects taught in the Foundation Phase. When the researcher asked her whether she knew about malaria, she responded,

"No I have never heard about malaria." She said, "I would be interested to know more about malaria." In order to be healthy, she said, "We must eat healthy foods, wash ourselves and protect our body." That was as far as her teacher taught her on health issues. Her narratives did not reveal any knowledge of malaria, which indicates that incorporating knowledge about malaria could advance her knowledge of the disease.

In the same vein, Victoria displayed her ignorance about malaria as revealed by her lack of understanding of the disease. Victoria is a female who was eight years old at the time of the research. She was a learner in Grade 3 at Kumbulani Primary School. Although she was an extremely shy girl, she could decipher what her teacher taught her. She said *"I learn Tshivenda, Mathematics and Life Skills."* When asked to reveal what she was taught in Life Skills she said, *"How to take care of our body."*

Victoria was asked if she knew about malaria. She responded, *"I don't know what malaria means."* She did understand that malaria was capable of killing someone if the disease was left untreated. She was unaware of the vector of the disease (mosquitoes) and that it was important to screen the house with mosquito nets to prevent mosquitoes from entering the house. She did not know about keeping the yard clean as some of the other children knew. Victoria did not know anything about the resistance of plasmodium to malaria drugs. Plasmodium is the parasite that mosquitoes transmit from one human being to the other. She was totally clueless about the scope of the disease. Victoria's story is an example to show that children would only be able to tell stories that they have been taught. It is likely that her teacher did not mention the disease to her or other learners in the Life Skills subject area.

Some of the learners who participated in this study did not even mention Life Skills as a subject. This raises a thought about how important the Life Skills subject is to learners in the Foundation Phase.

The narrative of Isaac displayed ignorance about malaria disease. At the time of the research Isaac was a Grade Three learner at Kumbulani Primary School. When Isaac was asked to reveal the subjects he was taught, the only thing he said was, *"My teacher teaches me how to write."* No mention was made of any health-related subject taught to him at the school. When asked whether he knew about malaria, he said, *"No I don't know about malaria."* From Isaac's oblivion on the subject of malaria it was evident that his

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teacher did not teach him about the disease since it was not part of the Life Skills curriculum in the Foundation Phase. The researcher noticed that further probe was becoming too overwhelming for Isaac. He felt uncomfortable about having to answer questions about a topic he knew nothing about.

Michael's response corroborates a similar view. Michael did not know about Life Skills as a subject, let alone knowing about malaria as a disease. The only thing he knew was that he was taught "interesting things." When probed further he mentioned, *"My teacher teaches me mathematics, reading and writing."* He had never heard about malaria as a disease. Michael's level of ignorance suggests that he was never taught anything about malaria at school.

The focus of some of the other groups of learners with regards to Life Skills was on safety. They demonstrated better orientation of the safety aspect of the Life Skills subject. One such learner was Yvonne. Yvonne was a female eight-year-old learner at the time of the research. She was in Grade 3 at Kumbulani Primary School. She told the researcher about the subjects she was taught in the Foundation Phase namely, "Mathematics, English and Life Skills." When Yvonne was asked to specifically reveal what she was taught in Life Skills, she said, "They teach us that we must not follow strangers." There was no indication that her teacher mentioned anything about malaria to her in the course of her encounter with the Life Skills curriculum. Yvonne responded to the researcher's question about whether she knew about malaria and she responded, "I have never heard about malaria." She had no awareness of the presence of malaria despite the fact that she lived in a malaria endemic region. Her experience points to the need to consciously include malaria as a topic in the Life Skills curriculum in the Foundation Phase. Yvonne's story shows that the exposure given to learners in the Foundation Phase may go a long way in elucidating their understanding of concepts because they are cognitively inclined to grasp whatever has been presented to them. Her narrative, "They teach us that we must not follow strangers", provides evidence to deduce that children are able to recite information that they have been taught. Yvonne had self-efficacy on the information that was taught to her but lacked information about the prevalence of malaria because no one taught her.

Similarly, Emmanuel knew that he had to take his medication after meals. However, he did not divulge the reason behind taking the medication. Emmanuel probably acquired this understanding about taking medication after meals from what he was taught in the Life Skills subject area. This demonstrates that children are able to understand content when it is included in the curriculum. The only thing he remembered was the regimen of taking his pills whenever he was ill. This indicates a dearth in knowledge about specific diseases, such as malaria. We can see that his level of awareness about disease in general was limited, without delving into the specifics like malaria fever and its prophylaxis. In an attempt to comprehend Emmanuel's state of knowledge about malaria, the researcher probed, "*Have you ever heard about malaria*?" Emmanuel responded in the affirmative. However, when the researcher probed him further to ascertain whether he knew what the disease was all about, Emmanuel responded, *"I forgot what malaria is."* His response confirmed that he had no knowledge of malaria, because if he did have, he would have remembered.

Category 2: Limited Knowledge about Malaria

This category discusses the responses of learners who had a certain level of malaria awareness. Such knowledge was acquired through various means as highlighted in the discussion.

Fheli was one of the learners who had an idea of the symptoms of malaria. She had acquired this knowledge from health workers who came to teach them at the school about various diseases and possible prevention methods. The researcher confirmed this information from the observation made while at the research site. The researcher gathered that health workers came to schools around the vicinity to alert them about impending diseases such as malaria, which they could ignorantly contract. When the researcher asked Fheli what she knew about malaria, she responded through an interpreter, *"Headache and pain in the stomach are the symptoms of malaria."* Fheli had some idea of some of the symptoms of malaria, although these were not all the symptoms. She did not know which insect was responsible for transmitting the disease. This indicates shallow knowledge about the disease. It can be inferred that this learner had limited knowledge about malaria. Having knowledge of the symptoms is not enough. Young children should also have knowledge of the insect that causes malaria and know about the prevention of the disease.

Similarly, Phindile had also fallen ill at some time. She knew she had malaria because the doctor revealed the cause of her illness to her mother who in turn told her. This formed the source of her information. She recalled her experience about a particular time she was ill but could not understand the cause of her illness. She said, *"I was vomiting and my ear was painful."* She did not know what was wrong with her. At the clinic the source of her illness was divulged to her mother but she was not made aware of what was wrong with her. She responded to the researcher when she was asked about the source of her illness, *"The doctor told my mother I had malaria and I was given medication."* During the course of the interview it was revealed that while Phindile knew about the word "malaria", she did not understand the cause and prevention of the disease. However she said, *"I would like my teacher to teach me about malaria."* The researcher deduced that Phindile would love to have first-hand information about malaria. It is clear that she probably could have given her mother direction about the source of her illness when she was ill.

The response of the next participant has an undertone of the cultural beliefs and practices among the people of Hamakuya village. Such beliefs constitute a wrong avenue of information to learners. At the time of the research, Riaan was a seven year old Grade 2 learner at Kumbulani Primary School. He knew a little about malaria because he was ill and diagnosed with malaria in 2015 (one year before this research study). When the researcher asked him, "What is malaria?" Riaan responded, "It's a disease that causes discomfort in the stomach." He had experiential knowledge of the malaria scourge and the experience had taught him a little about the disease. His mother told him that he had malaria. According to Riaan, "I was unable to come to school for five days when I had malaria." Riaan's narrative furnishes us with the aftermath of malaria that is absenteeism. When the researcher asked him whether he wanted to know more about malaria, he said, "I want to know how not to eat green fruits because green fruits cause malaria." Riaan was not furnished with accurate information about the cause or treatment of malaria. When he was asked if the doctor or his mother told him about the cause of malaria, Riaan responded, "No I was not told." Riaan's narrative indicates that he was not knowledgeable about the possible cause of malaria. Green fruits do not cause malaria. The carrier of the disease is the mosquito and the parasite which it carries (plasmodium species). Nevertheless, he was totally ignorant. The Life Skills curriculum could become advantageous in furnishing learners in the Foundation Phase with accurate knowledge of malaria.

Sarah was a nine-year-old female in Grade Three at Takelani Primary School at the time of the research. She attended a school that was envisaged to use by the researcher as a third research site. However, the school was merged with Takelani Primary School in January 2016. The reason for the merger was not disclosed to the researcher. Sarah gave a good insight into all of the subjects she was taught at school. She told the researcher, *"I learn Tshivenda, English, Mathematics and Life Skills at this school."* When asked what she was taught at the school, she responded as follows:

Don't allow yourself to be called by someone you don't know. If someone who you don't know calls you, you must run away and call an elderly person to assist you.

Sarah was one of a very few learners who were taught outside of the dictates of the Life Skills curriculum. The teacher deemed it fit to teach these learners about malaria. The researcher asked her to reveal some of the diseases that she was taught about. She said, *"Malaria."* The researcher asked where Sarah obtained her information and Sarah responded, *"I was taught by my teacher that malaria is a disease."* Sarah revealed to the researcher that she was down with malaria in 2014. This is probably why she knew that *"Mosquitoes are the cause of malaria."* Sarah's experience became a channel of knowledge to her. She was lucky to have survived to tell the story.

She continued, "When I had malaria I did not come to school for two days." She further expounded her understanding of the disease by telling the researcher, "When a person is having a headache, pain in the stomach, sweating a lot, it is malaria." Sarah had both experiential knowledge of the disease and tutelage at the school, despite the fact that malaria was not specified as a topic in the Life Skills curriculum. With the knowledge Sarah had, she wanted to know more about the disease. In her words, "I want to know more about malaria." This is the prominent narrative that characterised her interview session because she had more knowledge about the disease than other learners. We can see that the teaching she received from her teacher likely became a tool at her disposal to identify the disease. It thus helps us understand that the cognitive domain of children in the Foundation Phase could be sensitised by the dissemination of appropriate knowledge from the teacher. This could be made a reality if the topic on malaria was universally taught to children through the Life Skills curriculum in the Foundation Phase. The initiatives of Foundation Phase teachers to informally teach learners about malaria seem to be fruitful. This has helped some learners to be informed about the disease. A learner like Sindi could recall that she was taught Life Skills and Tshivenda at the school. When the researcher asked her to reveal what she was taught in Life Skills she mentioned, *"My teacher taught us about reading and malaria."* This was another insight into the informal tutelage received by learners in the Foundation Phase about malaria. This was possible because of those teachers who used the initiative to mention issues around malaria to the learners. Although malaria was not stipulated in the Life Skills curriculum at the time, some of the Foundation Phase teachers used initiative to teach learners about malaria.

Sindi was further asked to reveal the reason that humans have malaria. She said, *"I have no idea."* In the case of Sindi, although her teacher mentioned malaria, there was no indepth dissemination of knowledge to elucidate her understanding of the causes and effects of malaria. Issues pertaining to drug abuse, how to screen the house to prevent mosquitoes from entering the house, resistance to drugs and insecticides were not taught to Sindi. Learning about the preventive measures about malaria became a springboard for some of the learners to acquire knowledge about malaria.

Tessy was a nine year old Grade 3 female learner at Takelani Primary School, at the time of the research. Tessy knew the subjects that she was taught in Grade 3. She mentioned the subjects, "*Tshivenda, Mathematics, English and Life Skills*." When Tessy was asked to tell what she was taught in Life Skills, she said, *"My teacher taught us about bullying, respecting other people and taking care of our body*." She gave examples of how to take care of her body, "*We must wash our body, brush our teeth and eat healthy foods*." This experience reveals that children are able to retain whatever they have been taught. This demonstrates their capacity to engage their cognitive domains of reasoning to learn.

Tessy had a faint idea about malaria prevention. She told the researcher, "The house and the whole yard must be clean." She did not have an understanding of the reason behind keeping the whole house and yard clean. The researcher asked Tessy to explain the reason behind keeping the whole yard clean. Tessy responded, "Because it is not supposed to be dirty." She needed to know that keeping the house clean would prevent mosquitoes from having breeding spots around the house. Her response depicted limited understanding of the disease.

The nodes and internodes of growing plants can become breeding spots for mosquitoes. All of these should have been relayed to Tessy through her teacher if malaria was included as a topic in the Life Skills curriculum. She was curious to know more about malaria and said, *"I would love to learn more about malaria."* Explicit knowledge about malaria can be disseminated through the teacher in the Foundation Phase. Tessy's story informs us that when children are consciously taught a subject matter they are capable of demonstrating knowledge about what they are taught. Tessy's limited knowledge was focused on keeping the yard clean. She had limited knowledge of malaria and was oblivious of the other important aspects of malaria (such as resistance to malaria drugs and insecticides, screening the house with mosquito nets, etc). She did not know about the vector of malaria or about the fact that malaria can kill if not treated urgently.

Category 3: A Desire for a Curriculum that Enlightens Learners more about Malaria Education

This category was common to all the learners who participated in the study. They expressed their unequivocal desire to have more knowledge about malaria. They expressed a strong desire for their teachers to teach them more about malaria. This could be translated to their voicing out a desire to have malaria education included in the Life Skills subject in the Foundation Phase. This confirms that the teaching of health-related topics such as malaria education can be achieved through the Life Skills subject area. For example, a prominent narrative that characterised one of the learners' (Fheli) discussions showed her desire to know more about malaria. This indicates the need to incorporate knowledge about malaria into the Life Skills curriculum in the Foundation Phase.

Fheli responded to the researcher's question on whether she would prefer to be taught about malaria at the school. She responded, *"I would be happy if my teacher teaches me more about the insect that causes malaria."* From Fheli's prominent narrative it is obvious that she had a keen desire to know more about malaria, the scourge that ravaged her environment by virtue of its proximity to neighbouring countries where the disease is endemic. In this regard, Fheli claimed to have little knowledge about malaria and that she was willing to know more. She did not demonstrate an understanding of the other dimensions of malaria such as resistance to malaria drugs and insecticides, drug abuse and the conventional methods that screen houses from the incursion of mosquitoes. In like manner, Loreta was explicit in expressing her desire to learn more about malaria disease through its inclusion in the Life Skills curriculum in the Foundation Phase. When asked if she would love to learn more about malaria, she said, *"I would be interested to know more about malaria."*

Similar responses were received from other learners who participated in the study. The two examples above were documented in the write-up in order to avoid repetition. Learners in the Foundation Phase in the Hamakuya village unanimously subscribed to having malaria education included in the Life Skills curriculum.

Summary of Findings obtained from the Interviewed Learners in the Foundation Phase

Out of the 21 learners that were interviewed in the Foundation Phase at the two research sites of this study, 29% of them had an awareness of malaria. Seventy one percent (71%) admitted to not having any knowledge about the cause and prevention of malaria (see Figure 5.1).

FIGURE 5.1: PERCENTAGE LEVEL OF MALARIA AWARENESS AMONG LEARNERS AT THE RESEARCH SITES



Those who knew about the disease were informed by their teachers. The teachers mentioned the disease because it was endemic in the Hamakuya village. Some of the learners contracted the disease and the doctors who made the diagnosis told their parents.

The learners who knew about malaria had very limited knowledge of the disease. There are many important facts to be learnt about malaria, such as methods of preventing the disease, issues around the correct medication, drug abuse, the need to screen the house with mosquito nets, and drug resistance, to mention but a few.

Many of the learners who were interviewed had the cognitive capacity to learn because they relayed what was taught in the Life Skills curriculum. Because of cultural beliefs at the village, some learners were likely informed with misleading information about the cause of the disease. For example, one of the learners believed that eating certain green fruits could cause one to contract malaria. One of them believed that eating unhealthy food such as snacks could cause one to contract the disease. Others believed that their compounds needed to be clean to prevent malaria. They did not understand the dynamics surrounding the maintenance of clean compounds.

At this juncture it is important to analyse the findings obtained from the teachers who taught these children, to understand whether they actually taught them about malaria or not. If their teachers taught the children about malaria, it is important to explore the extent to which they were taught. The teachers would in this instance be able to broaden our understanding of their perspectives on the matter.

Also, if the learners were taught because of the stipulation of the Life Skills curriculum, how effectively were they taught? A number of these issues are presented in section 5.3.2 through the narratives of the teachers who taught the children at Kumbulani and Takelani Primary Schools.

5.3.2 Theme 2: Teachers' Information Level and Resources to Implement Teaching Malaria Education to Learners

Theme 2 discusses the findings obtained from teachers in the Foundation Phase. Three categories were obtained from this theme as highlighted in Table 5.5.

In Table 5.2 the profile of teachers who taught the learners in the Foundation Phase is shown to vividly reflect their background information. This table indicates the teachers' gender, grade taught, total years of teaching experience, years of experience at the present school and names of schools. The real names of the teachers and the schools at

the two research sites have been replaced with pseudonyms. None of the teachers disclosed their ages. This was not a problem because the focus of the study was not on knowing the impact of the age of the teacher on learners' academic performance.

Category 1: Teachers had Rudimentary Knowledge about Malaria Symptoms, Causes and Treatment

The responses of the teachers with respect to their level of understanding of malaria are discussed in this category. Teachers who taught the children in the Foundation Phase displayed a level of understanding of malaria that was considered to be rudimentary. None of the teachers mentioned basic prevention practices such as the use of insecticide-treated nets. This also served as a pointer to the level of knowledge of malaria among teachers themselves. The narratives of the teachers are hereby discussed. The discussion was initiated with a brief introduction and a background of the teachers. There were seven female teachers who participated in the study. The researcher chose to present all of their responses because each case was unique.

Ms. Maria was a Foundation Phase teacher at Kumbulani Primary School. She had an overall experience of 21 years of teaching. At Kumbulani Primary School she had one and a half years teaching experience. Out of a total of 21 years of teaching, she had taught learners in the Foundation Phase for 19 years. She confirmed the subjects taught to learners in the Foundation Phase as *"Tshivenda, Mathematics, English and Life Skills."* She (Ms. Maria) was interviewed without an interpreter because she was able to express herself fluently in English.

Ms. Maria seemed to have little knowledge about malaria. She said:

I know that mosquitoes cause malaria. Hamakuya is a malaria zone because it is close to the Kruger National Park.

She told the researcher that "The malaria season spans from September to December." Ms. Maria reported that learners were absent from December to February during the hot season because mosquitoes thrived and bred during the hot and rainy weather conditions. Knowledge of the season during which the disease was prevalent was another dimension of knowledge that Ms. Maria demonstrated. It is likely that she had gained an understanding of this knowledge through following up on learners who were ill and Page | 121 hospitalised. When the researcher probed more to gain further understanding of how she knew that learners were absent due to malaria attacks, she responded, *"Parents only complain about the symptoms their children are manifesting."*

When Ms. Maria was asked whether she ever fell ill as a result of malaria, she said: *I hear it from other people. They say that they have a headache; some say they feel dizzy. Others say they are vomiting.*"

From this narrative Ms. Maria depended on reported information to know the symptoms of malaria. If malaria was stipulated to be taught in the Life Skills curriculum, the Department of Education would probably organise intermittent workshops to train teachers about the dynamics of malaria. Teachers in the Foundation Phase know about the symptoms of malaria through other people. This confirms the need for proper teaching about the disease for learners in the Foundation Phase. One ascertains that Ms. Maria has self-efficacy on the subject of malaria.

Ms. Rachel had taught at Kumbulani Primary School for ten years. Her overall teaching experience was 13 years. She taught at the Adult Basic Education and Training for three years. She responded to the researcher's questions through an interpreter. At the time of this research study, she was teaching Grade R learners. She confirmed that she taught *"English, Tshivenda, Life Skills and Mathematics."*

When Ms. Rachel was asked to reveal what she taught to the learners in the Foundation Phase in Life Skills, she mentioned that the learners were taught, *"Parts of the body, the family, hygiene, physical training and arts."* The researcher asked Ms. Rachel whether she knew about malaria and her response was in the affirmative:

I just know that malaria is caused by mosquitoes and that the symptoms are headache, shivering and abdominal pain.

Her understanding of malaria was rudimentary and non-scholastic because there are other aspects of malaria that a teacher should understand before he or she can teach malaria issues to learners. She did not know about screening the house to prevent mosquitoes from invading the house. She also did not know about resistance to insecticides and drugs. Ms. Rachel did not consult any material to learn about malaria. All she had was experiential knowledge, as revealed in the following narrative:

I have experienced malaria because one of my children had malaria. When my child was complaining of headache and stomach ache and was shivering and becoming talkative, I took her to the clinic immediately so that she can get help.

According to Ms. Rachel, her child had malaria four years ago. A very dangerous symptom of cerebral malaria, as revealed by Ms. Rachel was that her daughter was "becoming talkative." The malaria parasite was filtering into her brain cells, evident of cerebral malaria. Ms. Rachel was asked whether she taught the learners in the Foundation Phase about malaria. She responded, "*I teach them once a month*." She taught the learners, not because it was a component of the curriculum. In her words she said, "*I just mention the topic on malaria because I realise that malaria is dangerous. It is not in the curriculum.*

Ms. Rachel mentioned the time of the year that learners in the Foundation Phase were regularly absent from the school. She said, "*During summer, the children are sick because of malaria. I make a follow-up to know why they are absent from the school.*" Out of all the parents of the learners that have had malaria, Ms. Rachel said, "*Only one parent told me that the child was absent because the child was attacked by malaria and this was two years ago.*"

Ms. Nkhensani was one of the Foundation Phase teachers at Kumbulani Primary School. At the time of this research she had a total of 30 years' teaching experience in the Foundation Phase. Since she started teaching learners in the Foundation Phase, she had been teaching learners in Grade Two. She has taught four learning areas, namely Mathematics, Life Skills, English and Tshivenda.

The researcher asked Ms. Nkhensani a specific question to know the information that was communicated to the learners that she taught in the Foundation Phase:

I teach them that if they feel that they have continuous heat, running stomach, dizziness, they must tell us. We have the clinic book here. We write their names and send them to the clinic and the nurses check them. A serious disease here in this place is malaria and it can kill. Malaria is a dangerous disease.

Ms. Nkhensani displayed incompetence as far as the knowledge of malaria was concerned in the following narrative when she was asked whether she had been ill as a result of malaria:

I have never had malaria. I do avoid drinking water from the river because drinking water from the river also causes malaria. I also make sure that around my house I don't keep things that can keep water. If you have a container around your house and water collects in it when it rains, if you leave the water standing for three to four days especially in December, mosquitoes will come and have some 'babies' there. We also teach our learners that they must not just allow their parents to keep water next to the house because that will be the house of mosquitoes. At night we tell them to go inside the house because mosquitoes will bite them and inject them with malaria.

From the response of Ms. Nkhensani, it is lucid that she did not have the required scholastic understanding to teach learners in the Foundation Phase about malaria. Her understanding that drinking water from the river could cause malaria was incorrect. Drinking water from the river does not cause malaria. She was correct about the other causes especially the aspect of not leaving water in open cans so as not to constitute breeding spots for malaria. It shows that teachers should also be taught about malaria so that they would not communicate inaccurate information about the disease to learners in the Foundation Phase.

Ms. Tessy was Grade 1 teacher who had been teaching for 25 years and in the same school. When the researcher posed a question to Ms. Tessy on what she taught the children in her class with regards to their health, she responded: *"I teach learners to wash their hands before eating, not to go to the river often to fetch dirty water so that they would be free from malaria."*

From the abovementioned statement we can deduce that Ms. Tessy did not have proper understanding of malaria because fetching dirty water does not cause malaria. A teacher of her status with many years of teaching young children in a malaria-prone zone like the Hamakuya village should know more about malaria prevention that to teach the children to wash their hands before eating and not going to the river. While having an idea of a link between malaria, mosquitoes and water, she did not have the right connection that existed between them. The major vector of the disease is mosquitoes. Likewise, it is stagnant water, contained within certain spaces, that allow mosquitoes to breed. However, Ms. Tessy expressed that Grade 1 learners should be taught about malaria because they could not write. She suggested the use of classroom activities to teach Grade 1 learners: We can use pictures with mosquitoes and medicines. Pictures are very good in the Foundation Phase, especially in Grade 1 because they don't know how to write. They learn a lot from pictures.

Ms. Tessy was an experienced teacher who knew how to best reach children in the Foundation Phase with the correct content, however, her level of comprehension about malaria was limited. She knew the vector of the disease (mosquitoes) and she understood that clinical attention was necessary to combat the disease. She did not know about resistance to malaria drugs by plasmodium (the parasite), resistance of plasmodium to insecticides or the importance of screening the house to prevent mosquitoes from entering the house. Ms. Tessy needed to learn more about malaria in order for effective teaching and learning to take place among the learners in the Foundation Phase.

Mrs. Zinhle was a Foundation Phase teacher at Takelani Primary School. She taught Grade 3 learners and had 23 years' teaching experience at the time of this research study. She began to teach at Takelani Primary School in the month of January 2016. She was deployed to Takelani Primary School from an adjacent primary school that was recently closed down. She taught Tshivenda, English, Mathematics and Life Skills to Foundation Phase learners.

Ms. Zinhle was asked what she taught the learners in the Life Skills subject area. She said, *"I teach them HIV/AIDS, malaria, TB, Typhoid and also flu."* A very close analysis of the content of malaria mentioned to the learners in the Foundation Phase by Ms. Zinhle revealed the following when she was further probed:

I teach them that mosquitoes cause malaria. To prevent malaria from attacking them I tell them that they must always clean their compounds at home. They must always collect papers and dispose of used tins because the used tins can hold rain water and mosquitoes will lay eggs inside the used tins. After the eggs are hatched the mosquitoes will come to attack them and spread the disease.

Ms. Zinhle seemed to have a better understanding of malaria than some of her colleagues. From her response she highlighted measures to prevent malaria. She even went further to touch on an aspect of the life cycle of a mosquito. This was an indication that she was not ignorant of issues pertaining to malaria. However, she showed that her knowledge level of knowledge about malaria education was inadequate. The prominent narrative, which characterised her story borders on her passion to teach learners in the Foundation Phase more about malaria. She said, "Our *learners must have more teachings about malaria.*"

The researcher was curious to know the season when learners in the Foundation Phase were attacked by malaria. Ms. Zinhle responded in the following way:

In the first and third terms, children usually play around places where there are stagnant water spots. That's the time the mosquitoes bite them and they become sick. When they are sick, they don't come to school. Most of them are admitted in the hospital or go to the clinic.

Her knowledge of the time of the year that malaria was prevalent, was a vital tool to furnish learners with an understanding of the season that they needed to prepare to combat the disease. Ms. Zinhle showed an understanding of the consequence of malaria on children. Absenteeism characterised the lives of learners who were ill as a result of malaria. It was likely that absenteeism prevented ill learners from excelling at school because of loss of contact with tuition.

Ms. Joni was a Foundation Phase teacher at Takelani Primary School with 22 years' teaching experience. Based on the reality that this research study focused on the possibility of incorporating malaria in the Life Skills curriculum in the Foundation Phase, the researcher asked Ms. Joni which topics she taught learners in the Life Skills subject. Her response was very elaborate because it paved the way for further questions about the teachings she gave on health issues.

We start by teaching them about taking care of their bodies. What to eat and what not to eat. Before they eat, they must first wash their hands. After eating they have to wash their hands. When they come back from the toilet they have to wash their hands. Later on we talk about different diseases. I teach them more about HIV/AIDS.

Ms. Joni did not sound like someone with in-depth knowledge about malaria because she saw health workers as more competent when she was asked about malaria:

I think that I teach them the basic things I know about malaria but the health workers are more suitable to talk to the learners about malaria.

The abovementioned narrative shows that Ms. Joni needs to be furnished with an understanding of the dynamics surrounding malaria. Its incorporation into the curriculum entails that teachers are furnished with all that is important about the disease before learners are taught. According to the information gathered from Ms. Joni, she basically knew that unused tins should be buried to avoid creating breeding environments for mosquitoes. She also knew that it was wrong for children to bath in stagnant water spots that could be breeding spots for the vector (mosquitoes) of the disease. She did not mention other salient points such as resistance to malaria drugs and insecticides in her narrative:

I teach the learners to dispose of used tins to prevent mosquitoes from breeding inside the tins after rainfall. They are told not to wear short clothes and to stay indoors at night. They are taught not to stay around stagnant waters because they are the breeding spots of mosquitoes.

She did not mention the use of mosquito nets to screen mosquitoes from the house as a route to combating the spread of the disease. Her narratives revealed that she did not know much about malaria. How then would she be efficient at teaching learners about malaria?

However, Ms. Joni knew the period when the inhabitants of the village, including students, were vulnerable to malaria attacks. She explained:

Malaria attacks people in the summer period when the rain is falling. When the yard is dirty and littered with used cans and the grass is tall, mosquitoes are able to lay eggs and hatch.

Category 2: Teachers did not see Malaria Education Teaching as Compulsory because of Lack of Support from the Life Skills Curriculum.

In order to present this category, the researcher investigated Ms. Enny's narrative. According to Ms. Enny, the decision to teach malaria came up as a result of the prevalence of the disease in the Hamakuya village. The teaching of malaria without its incorporation in the curriculum was a spontaneous decision taken by Ms. Enny to address the prevalence of the disease in the Hamakuya village where the school is situated.

She reiterated, "When we experience heavy rains, children are absent from the school because of malaria." Absenteeism is a common experience during the raining season at the school because mosquitoes are capable of breeding in unused containers, cow dung etc. Ms. Enny was asked to express her opinion on what needed to be done to alleviate learners' concerns in the Foundation Phase:

Since the other subjects have been set in the curriculum to be taught, I think malaria should be included in the curriculum for all the teachers to teach it.

Most of the learners who participated in the study lacked adequate knowledge about malaria. In an attempt to confirm the findings obtained from the learners in the Foundation Phase, Ms. Maria was asked whether she taught the learners in the Foundation Phase about malaria. She responded:

Not in-depth, we teach the learners to report to us if they are dizzy, experiencing headache or vomiting. They should let us know so that we can take them to the clinic for treatment.

It becomes obvious that Ms. Maria disseminated knowledge based on the acquired knowledge she had on the symptoms of malaria. She did not teach about malaria because it was set out in the Life Skills curriculum in the Foundation Phase. Rather, she taught malaria because of the experiences she had about the disease.

Personal experiences of teachers thus become a source of information to informally teach learners in the Foundation Phase about malaria. This effectively helps them escape being victims of the disease. One such teacher who decided to use her discretion in this manner was Ms. Rachael. When she was asked whether she taught learners in the Foundation about malaria, she responded, "*I teach them once a month*." She taught the learners about malaria, not because it was a component of the curriculum. In her words, "*I just mention the topic on malaria because I realise that malaria is dangerous. It is not in the curriculum*." Ms. Rachael probably deems it fit to teach the learners in her class about malaria because of the unpleasant experience that her own child had. She used her intuition to educate the learners so as to save them from malaria attacks. This action by Ms. Rachael indicates that she would do much more if malaria education was introduced in the Life Skills curriculum.

The reality of the environmental situation that exists in the Hamakuya village made it imperative for some teachers to mention the issue of malaria health in the classroom. Their years of experience are important in helping to decipher what could be informally included in the Life Skills subject curriculum so as to help young learners in the Foundation Phase. This was the case with Ms. Nkhensani. When she was probed to establish whether she taught learners anything pertaining to health in the Life Skills curriculum, she responded:

Some years ago we used to teach a subject called Health Education but we no longer teach it. It has been replaced with Life Skills. When we were teaching Health Education we taught learners the different diseases and what they needed to eat in order to remain healthy. Nowadays, we are just given what to teach by the Department of Education in Life Skills. Since we know this region is affected by malaria we just mention the disease to guide the learners. We don't have content that deals with malaria but we usually tell the learners about malaria.

Ms. Nkhensani mentioned another informal way that the learners were taught about malaria. She said, "*The local nurses sometimes come here and teach learners about malaria.*" As the researcher probed further, she was asked if the knowledge of malaria was specified in the Life Skills curriculum in the Foundation Phase. She affirmed:

There is no topic that deals with malaria in the Life Skills curriculum in the Foundation Phase. I just teach the learners so that they can know about malaria because this place is always affected by malaria. Towards the end of the year we receive reports about learners who were admitted to hospitals because they became ill as a result of malaria. I take it upon myself to teach the learners about malaria despite the fact that it is not specified that we must teach them in the Life Skills curriculum in the Foundation Phase.

The researcher deduced that the reason why Ms. Nkhensani taught malaria to her learners was because she was aware of the impact of the disease on school attendance. She noted that:

Malaria affects the learners because they are hospitalised and then they are not able to write exams. We are compelled to make provision for them to write after others have already written their exams.

When learners are ill and hospitalised because of a malaria attack, they are deprived from participating in teaching and learning exercises at the school. This puts pressure on the teacher because she has to make time to take the learner through what he or she has missed while being absent from school.

The researcher asked Ms. Tessy whether she taught the learners anything that pertained to malaria. Ms. Tessy responded:

There is no content for malaria according to the curriculum in the Foundation Phase. We teach what we are told to teach them according to the curriculum.

She was probed further so as to explore her practice on the matter. She opened up:

When learners are free, because malaria is here in Hamakuya, I teach them in their free periods so that they can know what malaria is and how to prevent the disease. I just decide to teach them because this is a malaria zone and learners should know what to do in case they are attacked by malaria.

A comparison of her style of teaching to the other teachers who taught the learners during the Life Skills contact sessions reveals the possibility that the knowledge of malaria was not ubiquitously disseminated within the school, despite the presence of the disease in the Hamakuya village.

Ms. Zinhle seemed to be ahead of some of the other teachers in her knowledge of the cause and prevention of malaria. It became a point of interest to know if she has shared this knowledge with the learners.

The researcher was curious because Ms. Zinhle taught malaria to Grade 3 learners when it was not specified as a topic to be taught in the Life Skills curriculum in the Foundation Phase. The perception of Ms. Zinhle was different to that of the other teachers at the two schools where the study was undertaken. She responded to the researcher's question on why she took the initiative to teach malaria to learners in the Life Skills curriculum in the Foundation Phase:

Malaria is indirectly part of the curriculum because malaria falls under those diseases which can be transmitted by infected people.

She decided to teach malaria to the learners in the Foundation Phase because she identified the disease as a threat in the Hamakuya village. She taught learners without fear, probably because she could defend her action based on the fact that teachers were to teach the learners about common diseases. She seemed to find a loophole to convince herself to do what she thought was best for the learners. Malaria is not one of the diseases transmitted by infected people. A vector called the mosquito transmits malaria. However, she used her discretion to teach malaria to help the young children in her class gain foundational knowledge on the subject.

The researcher's curiosity was aroused to know why she was teaching HIV and AIDS to a greater extent than malaria. According to the findings gathered from the Life Skills curriculum at the two schools where this research study was conducted, malaria was not specified as a topic to be taught to learners in the Foundation Phase. Ms. Joni taught malaria briefly to learners due to the prevalence of the disease in the Hamakuya village because malaria was a disease that ravaged their community during the raining seasons. Ms. Joni elaborated more on the extent to which she taught the learners about malaria:

We talk about malaria, not because it is specified in the curriculum but the healthcare workers come here to talk to the children about malaria at least once a year.

The abovementioned narrative from Ms. Joni points to the reality on the ground: she did not teach about malaria as a matter of command by the stipulated curriculum. She taught malaria because of the prevalence of the disease in the environment. The teachers did not assess the learners to know whether they had learned anything about the disease. If they were assessed, one would have been able to measure the extent to which they understood the subject matter. The incorporation of malaria into the curriculum would require teachers to assess the learners' levels of understanding when they write examinations. The intervention of health workers who came to teach malaria once a year was not sufficient to make learners retain adequate knowledge about malaria. It was surprising to the researcher that almost all of the children that were interviewed in this study did not know about malaria. Many of them could not identify the image (pictorial representation) of the anopheles mosquito. All of these findings point to the need to deliberately include malaria as a topic in the Life Skills subject area in the Foundation Phase. The prominent narrative that characterises Ms. Joni's story makes it clear that malaria is not stipulated to be taught in the Foundation Phase. She said, "*Malaria is not in the Grade R curriculum. It's what I have decided to teach*."

Category 3: Teachers were willing to do more with regards to giving learners adequate tutelage on malaria education if the curriculum empowered them.

The curriculum provides a channel of influence on teacher practice (Weiss, Knapp, Hollweg, & Burrill, 2001). This forms the basis of discussion and the creation of this category. Teachers in the Foundation Phase expressed their desire to have a Life Skills curriculum that empowers them to teach malaria education freely in their classroom. They acknowledged their incapability to disseminate the correct educational content to the learners because of the limited stipulation by the curriculum. Hence they did not demonstrate comprehensive knowledge about malaria.

Category 3 is initiated by citing Ms. Maria as the first example. Ms. Maria shared her thought on the necessity to include malaria as a topic in the Life Skills curriculum because she had limited knowledge. She was particular about the after effects of malaria, which bordered on absenteeism. When the children are taught the way they should be taught, they would become self-efficacious to evaluate their states of health by seeking necessary help to combat the disease.

The inclusion of malaria education in the Life Skills curriculum could assist enhance the knowledge of parents about malaria. Ms. Rachael corroborated this possibility. She reiterated that:

It will help parents to know the symptoms of malaria in case of an attack on any member of the family. The person will be quickly taken to the clinic for urgent attention by the doctor. Teaching about malaria in the school will give parents better knowledge of the disease.

From Ms. Rachel's narrative we see the possibility of agency in knowledge communication from the school front to the home front. This implies that learners in the Foundation Phase could rehearse knowledge about malaria at home so that their parents can learn from list of research project topics and materials them. However this was not the case because many of the learners interviewed in this study did not know about malaria. Towards the end of the interview, Ms. Rachel told the researcher, "*I also want to know more about malaria*." Ms. Rachel was not equipped with information about malaria to the extent of being capable of communicating it to the learners for effective learning to take place. In other words, she lacked the self-efficacy to become an effective change agent in the classroom. When teachers are well-equipped to teach a subject matter, they take ownership of the knowledge and ensure its replication in their learners until such learners are able to cultivate the habit of self-efficacy.

The inclusion of malaria education in the Life Skills curriculum is paramount in the minds and hearts of teachers who teach the children in the Foundation Phase. Ms. Nkhensani echoed the importance of this. The researcher asked Ms. Nkhensani if it was important to include malaria as a topic in the Life Skills curriculum in the Foundation Phase. She responded as follows:

This is a very serious issue. The teaching of malaria must be in-depth because people are dying. Learners are so simple in such a way that if you teach them, they are very clever and they listen. If you teach learners, you will protect their parents because learners will say "No! Mother, father, aunty, don't do that. Our teachers have taught us that mosquitoes will bite us.

Ms. Nkhensani elaborated on the importance of including the knowledge of malaria into the Life Skills curriculum in the Foundation Phase:

In my opinion, if I am Mrs. Angie (Minister for Basic Education) I would have included the topic on malaria. And as you know maybe in Pretoria and Johannesburg you don't have problems like this and the ones who are preparing our curriculum know nothing about what is taking place in places like this.

It therefore implies that knowledge of malaria is important because learners from other provinces of South Africa may become students in malaria endemic regions of South Africa at any time. The knowledge of malaria according to Ms. Nkhensani should not be limited to malaria endemic regions of South Africa. She is passionate about including it in the Life Skills curriculum.

The ability of the curriculum to empower the teachers in the classroom cannot be overemphasised. Teachers in the Foundation Phase recognise the fact that they have to disseminate knowledge with respect to what the curriculum stipulates. Ms. Tessy confirmed this:

If malaria is included in the Life Skills curriculum I will be compelled to teach what the curriculum has asked me to do. I don't allow them to write what I teach them about malaria in their books because it's not in the curriculum because when the curriculum advisers come here they may ask questions about where the topic on malaria comes from. If it's in the curriculum I can tell the learners to write it in their books.

Ms. Tessy mentioned that learners were not allowed to write anything about malaria in their books. This kind of informal teaching may not be taken as important by learners because of their lack of documentation of the topic on malaria. This action may constitute a lack of reference to consolidate informally transmitted knowledge from the teacher to the learners. Learners may not perceive the knowledge shared with them by their teachers as necessary to be borne in mind. This suggests that developing self-efficacy to learn a subject matter has to do with the importance of that subject matter to the learner. This may be the reason for the responses of most of the learners who were asked whether they knew about malaria. It is likely that they did not consider the information taught to them by Ms. Tessy as important because they did not take notes to follow up on the shared knowledge. A critical analysis of Ms. Tessy's narrative unveils her concerns about asking the learners not to write about malaria in their books. She was particular about not being questioned by the authorities in the Department of Education for departing from the dictates of the planned curriculum. The learners did not consider her enactment of the informal curriculum (the teaching of malaria) as important. Therefore, many of the interviewed learners did not display an understanding of malaria as an endemic disease.

Ms. Tessy became passionate about the importance of the inclusion of malaria in the Life Skills curriculum because of her experience as a teacher. She shed light on the occurrence of malaria when the researcher asked her to share her experience at the school. Ms. Tessy said: When the learners are ill they are absent from the school. When learners are absent from school, we do a follow-up and the parents of the learners who are attacked by malaria ask us what they must do.

Parents of learners in the Foundation Phase were not skilled in tackling malaria because there was a dearth of knowledge about malaria in the Hamakuya village. If the children of these parents were well informed at school, they would have become agents of change at the home front. The level of ignorance at the Hamakuya village was expressed when Ms. Tessy told the researcher "*parents do not know where to get help to combat malaria*." When the researcher interviewed the parents, it was found that the majority of the parents knew that they had to take their children to the clinic when they saw symptoms that related to malaria. It thus occurred to the researcher that Ms. Tessy only responded to the researcher's question based on the experience that she had. Ms. Tessy further communicated the consequence of malaria in terms of the learners, "*Malaria affects the schoolwork of learners because they miss school, which eventually affects their academic performance*." Absenteeism and low academic performance were the threats associated with malaria in the Hamakuya village.

These threats to learners' academic performance of learners in the Hamakuya village can be alleviated if learners are knowledgeable about the relevance of malaria to their day-today functioning.

Ms. Zinhle shares the view that teaching the learners in the Foundation Phase about malaria would eventually have a great influence in educating the entire Hamakuya community about malaria. Ms. Zinhle responded to the researcher's question to know what she thought could be done to assist the learners in the Foundation Phase to know more about malaria. She responded as follows:

What can be done is that the learners in the Foundation Phase must be taught about malaria at school. Their parents must be taught about malaria in their community. Even the clinics, which are under those villages, must also spread the gospel about malaria.

The dilemma at this juncture is the reason why the majority of the learners at the two schools did not demonstrate an understanding of malaria. It can be deduced that the inclusion of malaria as a topic in the Life Skills curriculum should be made a priority so that

learners' understanding can be assessed whether they know about the disease or not. Assessment, according to Kurz et al. (2010) is an important aspect of the curriculum. Without an assessment of learning it cannot be ascertained that learning has taken place. Since malaria is not an integral part of the Life Skills curriculum in the Foundation Phase, the teachers do not deem it fit to assess the understanding acquired by the learners. Ms. Zinhle stressed the importance of teaching parents and empowering the community to know the importance of the disease.

A review of the curriculum to reflect the paramount needs of the people in the Hamakuya village is viewed to have a far-reaching effect on the health of the people. The curriculum should be structured to meet the needs of the community. One of the teachers who participated in the study, Ms. Joni, believed that malaria should be introduced in the curriculum of the Life Skills subject area because of the importance of creating an awareness of the challenges of the disease. She was of the opinion that the introduction of malaria as a topic in the Life Skills curriculum would afford better understanding of the disease. She opened her mind on this issue:

I think the curriculum has to be reviewed especially because of the affected areas like ours so that the learners and their parents can be better informed about the disease. It would also afford teachers the opportunity of learning more before teaching the children.

According to Ms. Joni, malaria challenged learners who were ill to the extent that they were absent from school:

The challenge that we are facing is that malaria causes absenteeism at the school. When these learners are affected they are hospitalized and at times miss the examination. At times parents are unaware of the symptoms of malaria. Instead of rushing their children to the clinic they are clueless.

Malaria promotes absenteeism as a major challenge. When learners are absent from school they were unable to participate in the teaching and learning dynamics at the school. This challenge can invariably impact on their academic performance.

The inclusion of malaria education in the Life Skills curriculum in the Foundation Phase could influence the need to get the malaria knowledge of teachers in the Foundation

Phase updated. If teachers are to be instructors they must first be well-informed. Ms. Enny corroborated this issue. She was determined to learn more about malaria because she felt that she had a limited dimension of knowledge about the disease. She wanted to read books that address the challenges of malaria to enhance her understanding about the disease. She probably knew that her effectiveness at teaching about the disease hinged on her depth of knowledge. She needed to acquire knowledge through access to malaria information. She said;

I want to have more information about how to teach malaria and if there are books I can be assisted with them in order to know how to teach the children about malaria.

It is obvious from the narrative obtained from Ms. Enny that the incorporation of malaria into the Life Skills curriculum could orient teachers properly about the disease. Relevant books pertaining to malaria should be spelt out by the curriculum, and incorporated into the curriculum. In this way teachers could be well prepared to teach learners in the Foundation Phase about the disease. Furthermore, the learning acquired by the learners would be assessed, because assessment drives learning (Kurz et al., 2010).

Ms. Enny believed that it was necessary to include malaria as a topic in the Life Skills curriculum in the Foundation Phase:

I think the department needs to see what we are going through in this village as a need by including malaria in the Life Skills curriculum because of the danger that malaria poses to learners, parents and teachers. Adequate knowledge about malaria would assist all of us to know how to prevent the disease.

Ms. Enny did not have a different experience from that of the other teachers about the consequences of malaria on the affected learners:

Our greatest threat at the school is that learners are absent from the school when they are attacked by malaria. This affects their attendance at the school and of course, how they perform in their studies.
Summary of Findings from Teachers

The findings obtained from the teachers who taught the learners in the Foundation Phase revealed a number of experiences that are worth reflecting on:

First, all the teachers interviewed agreed that the Hamakuya village was endemic with malaria. Most of the teachers interviewed claimed that they taught malaria to learners in the Foundation Phase. However, many of the learners interviewed did not demonstrate adequate knowledge about malaria. This became a predicament in this study because if learners were taught according to the dictates of the curriculum they could have been assessed and certified capable of demonstrating an understanding of the dynamics of malaria. The situation was exacerbated when it was found that the learners who were ill as a result of malaria did not realise they had the disease.

Second, the tutelage that the teachers claimed to have done with respect to malaria education did not seem to have any impact on the learners' cognitive capacity. Such tutelage, which seemed to match what curriculum experts such as Kurz et al. (2010) refer to as the enacted curriculum, did not align with any assessment strategy, which would have driven learning.

Third, a number of the teachers in the Foundation Phase did not have proper understanding of the dynamics of malaria. Some of them did not know that bathing in the river does not spread the disease. One of the teachers taught her learners that drinking water from the river caused malaria but this knowledge was faulty because drinking water from the river has not been reported anywhere to cause malaria. The majority of the teachers admitted that they did not have comprehensive knowledge of malaria. They yearned to be taught about the disease so as not to communicate inaccurate information to learners. The teachers unanimously agreed that malaria should be included in the Life Skills curriculum to afford them the privilege to also learn more about the disease.

Fourth, absenteeism characterised the lives of learners who were ill as a result of malaria. The learners were thus unable to attend school at such times. This situation was reported to affect their academic performance.

Fifth, some of the teachers who taught on malaria outside of their class schedule did so because they were afraid that they could be challenged for teaching malaria outside of the jurisdiction of the planned curriculum of the Life Skills subject area.

Sixth, one of the teachers, Ms. Zinhle, had another perspective. She argued that the Life Skills curriculum specified that certain known diseases should be taught to learners in the Foundation Phase. Consequently, she decided to teach about malaria because she believed that it was a disease in the Hamakuya community. She believed that it was necessary to teach about malaria because it was an endemic disease in the Hamakuya village. Despite her effort none of the learners interviewed in the Foundation Phase could identify the picture of a mosquito or anything about malaria.

5.3.3 Theme 3: Parents' level of knowledge about malaria

All the parents who participated in this study acknowledged that they had limited knowledge about malaria. They indicated the need to be well informed about malaria. They also saw the school as an avenue through which they could be more informed about malaria. They recognised the importance of their children being useful agents in disseminating knowledge about malaria at the home front.

Theme 3 was discussed under three categories.

Category 1: Parents Possessed Basic Knowledge of Malaria Infection

Most parents who participated in this study had contact with health workers who presented health talks on malaria prevention practices. This formed the source of knowledge for most parents in the Hamakuya village. Although this discussion reveals a general consensus, the uniqueness in each parent's response is worthy of note.

Ms. Pinky possessed rudimentary information about malaria. She knew the malaria season in the Hamakuya village was during the raining season. That was the time that mosquitoes multiplied but she did not know how they multiplied. The prominent narrative characterising her story centred on what she knew about preventing the spread of malaria. She had received this knowledge from health workers who enlightened parents on how to prevent the disease. In this regard, she said, "*I clean my yard and make sure I don't have*

stagnant water around the house." She did not elaborate on the motive behind keeping her yard clean and making sure there was no stagnant water and knew that stagnant water assisted mosquitoes to breed. Hence she knew that getting rid of stagnant water could decrease the population of mosquitoes.

The researcher wanted to know whether she knew the symptoms of malaria upon which Ms. Pinky said, "*If someone has malaria, headache, high body temperature, and shivering are the signs.*" At this stage of the study, Ms Pinky's information source was of the utmost importance to the researcher. The researcher asked her to reveal where she obtained that level of knowledge about malaria symptoms. She said, "*Some people go from house to house teaching us about malaria and the symptoms.*" After careful interrogation, the researcher discovered that health workers were responsible for teaching parents about malaria from house to house.

When Ms. Pinky was asked whether she had been infected by malaria before this research study, she said, "I have not yet had malaria because I keep my compound clean and get rid of stagnant water." Her response shows that the little knowledge she had was working for her. We could take this as knowledge induced efficacy, culminating in a healthy status. The researcher traced Ms. Pinky's son and discovered that her son did not know about malaria at all. The possibility in this discourse may be that none of the occupants in Ms Pinky's household had ever suffered malaria because of the knowledge that she practised. In light of the current discourse her child could be correct that he did not know about malaria since he never had the disease. It is clear that a measure of knowledge had prevented him from contracting the disease at home. A predicament was that some teachers claimed that they had taught malaria to the learners. However, the majority of learners did not demonstrate adequate knowledge or awareness of the disease when they were interviewed. At this point the researcher concluded that it could be because it was not stipulated that malaria had to be taught in the curriculum. The learners did not likely pay attention to the subject while it was informally taught by some of the teachers.

Having basic understanding of the relevance of climatic conditions and environmental awareness serves as a necessary tool to prepare the parents to help them guard against malaria infection. The importance of such preparation was highlighted by Ms. Flora. She was not oblivious of the season that malaria was prevalent. This knowledge was important because it afforded her to prepare to take certain precautions in an attempt to combat the disease. She said:

Our children in this village are attacked by malaria when the rain starts to fall. I hear about the children that are affected by malaria because they are unable to go to school. This is usually when rain starts to fall and when the temperature is high.

The researcher asked her whether she had knowledge about malaria. She replied, *"Malaria comes with headache, vomiting and loss of weight.*" The researcher wanted to know her source of knowledge. She responded:

I learnt about malaria in the ABET class. They teach us Life Skills in ABET. When you put a cup and leave it outside for a long time, or when you use a pot and leave it outside, mosquitoes lay eggs inside them and these hatch into more mosquitoes.

At this point the researcher reflected on the value of education among the parents of learners in the Foundation Phase as a source of good information. It occurred to the researcher that the more educated parents were, the more knowledgeable they became at combating diseases such as malaria. The Life Skills curriculum in the ABET course was useful in teaching Ms. Flora about malaria and she demonstrated an understanding at home of the knowledge that she gained at the ABET classes. She disposed of used containers and did not allow mosquitoes to have breeding spots around her house. The researcher probed her further to know whether she knew how malaria was propagated. She said, *"I know that malaria is caused by mosquitoes but I don't know the particular ones responsible for malaria.*" This was the prominent narrative that characterised her story. Not knowing the specific mosquito that caused malaria was less important than knowing how to prevent the disease. She demonstrated that she knew how to prevent the disease.

The researcher progressed by asking if the disease ever infected her, she said:

I have never had the disease because I clean my entire yard. I also receive pamphlets from health workers that educate me on the causes of malaria, its symptoms and how to prevent malaria. Ms. Flora was never attacked by malaria probably because she knew what to do to prevent the disease, based on the education she had from reading pamphlets and the tutelage she received from health workers who taught her. This suggests that knowing what to do to prevent malaria could prevent an attack by the disease. Furthermore, Ms Flora said, "*None of us has ever had malaria in the family because we know a little about the disease*." The researcher traced the name of her child to ascertain the integrity of her story and found that her child indeed did not know anything about malaria and had never been found with any of the symptoms of malaria. Phillip, her child, truly did not know anything about malaria probably because no one in the household have fallen ill with the disease. From Phillip's narrative there was no trace that his teacher ever taught him anything about malaria. The only challenge with Ms. Flora was that she did not become a change agent to the child by educating him about malaria.

In the same vein, Ms. Tania was aware of the time of the year that people were ill as a result of malaria. She mentioned, "*The disease is always around when it is raining and hot because mosquitoes reproduce and multiply*." Knowing the particular time of the year that the disease is prominent is a measure of understanding about the disease. Although she had never been admitted to the hospital as a result of malaria, the prominent narrative, which characterised her narrative, pointed to what she knew about the disease, "*I know that malaria kills*." She prevented malaria as the other parents did. She said, "*I clean my yard so that mosquitoes would not multiply*." She told the researcher that she had never had malaria. This suggests that the knowledge that she had about the detrimental effects of malaria furnished her with the action to prevent the disease by keeping her yard clean. She mentioned that the healthcare workers taught her what she knew about malaria:

The healthcare workers give us lessons on how to prevent malaria but they only come during summertime.

As in the case of the other parents who were interviewed in this study, Ms. Tania did not furnish her child with an understanding of what she had learnt from the health workers. If she did, her child would have known something about the disease. She would have become a change agent by elucidating the disease to her child.

Similarly, Ms. Rihanna knew that malaria was prevalent during the raining season:

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Whenever it is raining the disease is always around here. We have children who cannot go to school because of the illness.

The prominent narrative which characterised her story emerged from the question that was posed to her by the researcher. The researcher wanted to know if she has ever heard about malaria. She responded, "Yes I have heard about malaria but I have never been sick because of malaria." Her response interested the researcher to know the reason behind her healthy status. She said "I keep my whole yard clean so that mosquitoes wouldn't breed there. None of us has ever been treated for malaria." The researcher wanted to know how Ms. Rihanna knew what to do to prevent malaria. She said:

There is a group of healthcare workers who go from house to house, teaching people about malaria and the precautions. They taught us the causes of malaria and how to prevent it and I am doing what they taught me.

From Ms. Rihanna's story it is clear that an understanding of the causes and prevention of malaria can assist parents to know how to keep their households free from malaria. If this knowledge was deliberately included in the curriculum, the learners in the Foundation Phase could have become change agents at the home front. The learners could have been able to teach their parents about other aspects of malaria such as resistance to drugs and insecticides, as well as the use of mosquito nets to screen mosquitoes from the inside of the house culminating from the disease.

The effects of health workers' visits seemed not to have permeated the entire village. The next respondent (Ms. Linda) seemed to have benefited from such visits. Although Ms. Linda knew the season that malaria struck the inhabitants of the Hamakuya village to be *"In summer when it is hot and the rain is falling"*, she did not prepare for the malaria season.

According to her, she was attacked by malaria in 2015. She proclaimed: I always have malaria. I had malaria because of mosquitoes. I called the emergency number and an ambulance came to take me to the clinic. It was not a good experience because I could not eat and I had stomach pain. Ms. Linda did not seem to know the preventive practices associated with malaria. In her statement, she said that her knowledge about the disease was superficial. If she knew about the preventive practices, she would have put them to practice. These practices (that the other parents embarked upon) were keeping yards clean; not allowing rainwater to accumulate inside used cans; and disposing of cow dung. Her proclamation that she "always" had malaria attacks was an indication that she did not benefit from the health talks given by the health workers who visited the village. It can be deduced that if Ms. Linda's child was taught about malaria at her school she could have passed the knowledge about malaria prevention to her mother. She could probably have learned about the use of mosquito nets at their home.

Apart from constant visits by the health workers, personal experiences serves as a way of learning about the devastating effects of malaria.

Having survived malaria attack once, Ms. Phadala made it a point to do all she could, in order to prevent further attack. Ms. Phadala knew the time that malaria ravaged the village during summer. She disclosed what she knew about the time that malaria was prevalent in the Hamakuya community:

It is always a time that people are ill because of malaria. This happens where the yard is not properly cleaned. Some people do not know what to do to prevent the disease. They do not maintain clean yards.

She was asked whether she knew about malaria and she said, "*I know the symptoms of malaria*." This was the prominent narrative characterising her story. She knew the symptoms of malaria as" *Headache, weakness of the body, and vomiting*." Knowing about the symptoms was a fundamental knowledge that one could display to combat the disease.

Ms. Phadala once was a victim of the disease. The researcher asked about her experience on malaria and she said, "*In 1994 I was attacked by malaria. I was admitted for two weeks in a hospital.*" Experiential learning may furnish an understanding of a disease because of the experiences.

In a similar fashion, Ms. Cynthia knew about malaria and experienced the illness in a severe way. According to her, she learnt her lessons and sought information to prevent the disease. The last time she had malaria was in 1996. She told the researcher how she prevented malaria since the last time she was ill:

She related her story:

Malaria is a disease that is spread by mosquitoes. When mosquitoes bit me in 1996 I was admitted to the health centre. When my situation did not improve because of severe abdominal pain I was transferred to Polokwane to see a specialist. I prevent malaria by cleaning the whole yard, I wear long clothes and dispose of waste products of cattle in the basket for a long time and I close my window and the door in the evening to prevent mosquitoes from flying into the house.

The researcher was inquisitive and wanted to know her level of understanding about the disease. Ms. Cynthia did not initially know that she had malaria until the doctor diagnosed her:

I didn't know it was malaria at first. I was feeling hot in my body, I had a headache. When I got there the doctor said it was malaria disease.

Ms. Hannah's story showed that an unpleasant experience by one member of the family could provide an unforgettable lesson to other members. The prominent narrative characterising her story evolved from the question put to her by the researcher, in an attempt to inquire whether she had been ill as a result of malaria or not. She responded as follows: *"I have never had malaria but my parents had malaria in 2015."* She was probed further to know the history of her parents' illness. She said:

My parents were dropping some left-overs in their yard and mosquitoes were coming to breed there. When I saw that they were ill because of malaria, I was afraid of being attacked by malaria."

Ms. Hannah's parents were fortunate to get the help they needed because they lived next to the clinic. From Ms. Hannah's story we can see that she knew the cause of the disease. She did not know anything beyond the requirement to keep her compound clean. She obtained the information about malaria from healthcare workers who went from house to

house teaching the inhabitants of Hamakuya about malaria. This implies that when parents have information about the causes and prevention of malaria, they would be empowered to take good care of their children. Absenteeism could thus be averted and children would have access to the education they need.

It is important to note that from all the parents interviewed, Ms. Jane was the first participant to tell the researcher about the use of insecticides. This is very significant because it means that she recognised how important the use of insecticide was to her welfare. The researcher was curious to know how she survived the disease despite being in a malaria endemic environment. She said:

We allow the people who come to spray houses to spray our house with insecticides to kill mosquitoes."

Although Ms. Jane knew the basic things to do in order to prevent malaria, she recognised the significance of the use of insecticides by the health workers.

Further probe on what she did to prevent malaria led her to say:

I have learnt that to prevent malaria, I should not leave stagnant water at all because mosquitoes will come and breed in the stagnant water."

Ms. Jane knew the importance of sustaining the efforts of the health workers. She knew that she had a part to play so as to continually live in good health and be free from a malaria attack.

Category 2: Parents Engaged in Malaria Prevention Cultural Practices

Mr. Muvhango was the only male among the parents who were interviewed in the study. He was the only one who admitted to using some traditional methods in preventing malaria. He was asked whether he had been attacked by malaria since he started living in the Hamakuya village. He responded that he was yet to be attacked. His response prompted the researcher to ask him how he escaped the attack of malaria despite the fact that Hamakuya was an endemic region, ravaged by malaria. His practice was interesting: I spray used engine oil on the bushes around the house. Other people burn dry cow dung to prevent the mosquitoes from having breeding spots because after rainfall, cow dung holds rainwater which becomes a breeding container to mosquitoes.

It was the practice of the villagers to collect cow dung that was set on fire around the houses. The interpreter explained to the researcher that they believed that the smell of burnt cow dung served as repellant to mosquitoes. This was indigenous knowledge that they have upheld since the discovery of malaria in the Hamakuya village.

The researcher further asked Mr. Muvhango whether he knew any other western method of preventing malaria:

The government provides mosquito coils through the healthcare workers. Sometimes when people go to the clinic they are given mosquito coils free of charge. Some people burn some plants with a foul smell that drives the mosquito away but I do not remember the name of the plant.

Mr. Muvhango's knowledge of how to prevent malaria was a blend of both traditional and western methods. This demonstrated that he did not have access to proper tutelage as far as malaria education was concerned.

Category 3: Parents wanted more action from the school with regards to malaria education. They looked forward to a curriculum that would influence their actions through what they would learn from their children.

All the parents unanimously desired that the school curriculum implemented a structure to include malaria education in their children's education. Ms Pinky thought is presented:

It would be a good idea to include malaria in the curriculum because our children will be better informed on how to prevent malaria. If my child understands how to prevent malaria, I will be able to learn from the child.

It is obvious that including malaria in the Life Skills curriculum in the Foundation Phase may be beneficial. The children may thus become change in the community. This would happen when they acquire a cognitive level of understanding that could be shared at the home front. If malaria were included in the Life Skills curriculum in the Foundation Phase, learners would have to demonstrate an understanding of the subject through assessment tasks set in the curriculum. In this way parents may become more aware of the steps to take to prevent the spread of the disease, the medication required to treat the disease, and the importance of drug abuse, to mention but a few.

Another parent, Ms. Flora, was of the opinion that:

It will be of help to include malaria in the Life Skills curriculum in the Foundation Phase. If the child sees someone vomiting or losing weight she can see that somebody is attacked by malaria.

In Ms. Linda's opinion, "*If malaria is in the school curriculum, my child would help to spread the message about malaria in the community*." In essence, Ms. Linda's statement centred on the importance of the child becoming a change agent in the community when equipped with the necessary knowledge, skills and attitude to combat malaria.

Ms. Hannah shared the same view:

It would help if malaria is included in the Life Skills curriculum in the Foundation Phase because we would learn to keep our houses clean when our children know the causes and the prevention methods. If my child sees me doing something that can lead to the spread of malaria, she would be able to correct me and I would listen.

Ms. Hannah touched on a very important aspect in her response. She said "*my child would be able to correct me and I would listen*." The "*listening*" aspect is very important. This is because, in the African culture, children are considered less intelligent than adults. They are often seen as 'inexperienced" in life matters. This mindset hinders the agentic capacity of children in the African setting. This is why the listening aspect is very important.

Ms. Tania believed that learners in the Foundation Phase were knowledgeable enough to understand what they were taught at school. She reiterated the fact that though they were young, they could act on the dictates of the curriculum as reflected in what they are taught. She responded as follows:

If malaria is included in the Life Skills curriculum, our children will be able to learn how to prevent malaria because they will follow the instructions given to them.

Ms. Tania pointed to the cognitive capacity of children to adhere to instructions that are given to them at the school. It shows that the information that she had about malaria prepared her to develop self-efficacy to combat the disease. This can be inferred from her narrative. She did contract the disease as a result because she knew how to prevent malaria.

Ms. Phadala admitted that children in the Foundation Phase in the Hamakuya village were deficient in knowledge as far as malaria education was concerned. She suggested that the school acquired the capacity to nurture these children in a way that they would grow up to become responsible change agents among community members. The researcher asked Ms. Phadala whether the inclusion of malaria in the Life Skills curriculum could assist in enlightening learners and community about malaria. She responded as follows:

The knowledge the children have about malaria is not enough at the moment. Teaching them in the classroom will allow them to have more knowledge about malaria. That will be another way of spreading the education of malaria to people in the community. If my child in Grade Three comes home to tell me something that she learnt in school about malaria, I will listen to her.

The abovementioned narrative from Ms. Phadala points to the agentic capacity of children in assisting both the home front and the community to combat malaria if it is taught through the curriculum.

Ms. Rihanna highlighted the importance of equipping young children with the knowledge that incorporates the causes and prevention of malaria. She said:

If malaria is included in the Life Skills curriculum, the children will have more knowledge of malaria. They will learn the causes of malaria and how to prevent malaria."

When children know more, they are able to do more. Classroom instruction on malaria education provides an avenue for children in the Foundation Phase to propagate knowledge about malaria disease:

If malaria is included in the curriculum of our children at school, they will bring the knowledge to us in the house. When this is done, I would be glad to learn more from my children about the other things I need to know about malaria.

The above revelation by Ms. Jane further reveals the agentic predisposition of children in terms of their efficacy to expound the knowledge base of parents at the home front. The incorporation of malaria in the Life Skills curriculum in the Foundation Phase could become an avenue to elucidate understanding of the Hamakuya community at large.

According to Ms. Cynthia, having an early understanding of malaria provides a solid health foundation for the child. It also enables the child's understanding of the relevance of the disease in its entirety. She said:

If they start to teach our children in the Foundation Phase about malaria they will know that malaria disease is real. I would also be able to learn from my child because she would have been taught well. Our community can also benefit because we would tell those who are ignorant about the disease.

Mr. Muvhango was of the opinion that incorporating malaria into the Life Skills curriculum would have an immense advantage to him and the entire community. Here is what he said:

If our children are taught about malaria in the school, they will have better understanding about how to prevent malaria. My child would be able to correct me when I am not doing the right thing. The community will also learn how to prevent the disease.

From Mr. Muvhango's response, it was clear that he knew he had the wrong approach towards prevention practices. Since he was the only parent who engaged in traditional ways of malaria prevention, he believed that his child could be a useful agent capable of helping him change his beliefs.

Summary of Findings from the Parents of Learners in the Foundation Phase

The findings obtained from parents of learners in the Foundation Phase revealed a blend of knowledge acquired from the healthcare workers, personal experiences and experiences of other indigenes in the village who had been ill as a result of malaria. Many parents knew the season that malaria was prevalent. A major issue was the inability of the parents to communicate the knowledge of malaria to their children, especially the parents whose children had malaria. If they had been able to communicate the knowledge of malaria to their children at the home front, they would have been regarded as effective change agents, capable of consolidating knowledge, had the knowledge been officially communicated to the learners in the Foundation Phase at the school. It therefore becomes a predicament of this study to propound a theory that connects the cognitive potential of learners in the Foundation Phase to the social and academic perspectives at their disposal.

5.4 CONCLUSION

This chapter commenced with providing detailed background information on each of the 38 participants of this study. Employing the narrative of each of the participants, the researcher presented key data that related to their experiences with respect to their understanding of malaria. These experiences were about their awareness levels of malaria, preventive routes, and the curative modes they knew. Some of the parents had traditionally acquired beliefs on how to tackle malaria. Some of the teachers did not have fundamental understanding about malaria because malaria was not specifically detailed in the Life Skills curriculum to be taught to the learners in the Foundation Phase. The teachers wanted to gain better understanding of the disease because it was endemic in the Hamakuya village. Their narratives point to the importance of including knowledge of malaria in the Life Skills curriculum in the Foundation Phase. Parents of learners as well as teachers who taught learners in the Foundation Phase unanimously agreed that it was important to include malaria education in the Life Skills curriculum in the Foundation Phase. Their unanimous decision was based on their stance that this would assist their children to better understand the disease. They believed that their children could also become useful change agents at the home front. The learners in the Foundation Phase generally did not know much about malaria. This finding raised a concern that negates the claim that some of their teachers taught them about malaria. Mentioning malaria has thus Page | 151

been found to be insufficient because learners were not equipped with adequate knowledge about the disease. This could imply that the informal tutelage they had about malaria did not communicate the essence of the disease to the learners. In the next chapter the researcher will discuss the findings of the research study.



6.1 INTRODUCTION

In Chapter Five the findings of the study are presented and analysed in relation to the three broad themes identified as representative of the voices of the research participants. In this chapter, the findings obtained from the 38 participants of the study are analysed in an attempt to decipher how malaria education could be promoted through the Life Skills curriculum in the Foundation Phase. The findings presented in Chapter five are juxtaposed with the theories of action set out in Chapter Three and the cogent findings obtained from the extant literature in Chapter Two. An attempt is made to carve out the findings obtained from these three tiers of chapters (Chapters Two, Three and Five) so as to critically take note of the similarities and differences therein. Attention is given to the two theoretical frameworks namely, Social Cognitive Theory (Bandura, 1986) and Situated Cognition (Brown et al., 1989) so they could serve as lenses through which the research findings can be analysed. This strategy creates a platform on which arguments devoid of sweeping statements are made, in an attempt to arrive at well-argued outcomes, culminating in recommendations and implications fit for practice. The new knowledge that emerged from the research study concludes the chapter.

6.2 SYNTHESIS OF THE RESEARCH FINDINGS IN RELATION TO THE FORMULATED RESEARCH QUESTIONS

In an attempt to unravel the study, the researcher contemplates the findings obtained in Chapter Five by taking note of the research questions formulated in Chapter One:

6.2.1 Primary Research Question

What is the role of the curriculum in improving malaria awareness among children in the Foundation Phase?

6.2.2 Research Subquestions

- How is malaria health education addressed in the Life Skills subject area in the Foundation Phase curriculum?
- How do teachers in the Foundation Phase sensitise children in grasping an understanding of the relevance of malaria to their health issues?
- To what extent do learners in the Foundation Phase educate their parents to achieve maximum health condition with regards to malaria?
- What are the cultural practices impacting the knowledge, attitude and practice of children in the Foundation Phase with regards to malaria?
- What is the level of knowledge of malaria health issues among children in the Foundation Phase?

6.2.3 What is the role of the curriculum in improving malaria awareness among children in the Foundation Phase?

The researcher commences her argument by taking a brisk look at the definition of curriculum proffered by Oliva (1997:4) as "content or set of programs of learning." In a related sense, Mortimer (2004:170) defines curriculum as everything a child is engaged in, observes, listens to, and experiences in the locale. This implies that learning may only take place when there is a set curriculum, stipulated and targeted at an audience. Inasmuch as the work of Olivia (1997) and Mortimer (2004) provide a pedestal on which to situate the findings of this study, their definitions seem to lack the capacity to judiciously address the concerns of the curriculum at hand at the research sites of the study. The researcher perceives the curriculum itself as an agent of change, capable of navigating the path of the teachers to know how to structure the curriculum in ways that would suit the learners to comprehend the dynamics of the scourge. As mentioned in Chapter Two section 2.3 that the available literature did not perceive the curriculum as an agent of change, this study argues that the curriculum, if properly structured for the use of the teachers could become an agent of change. A major point to note is that the teaching of malaria was not incorporated into the curriculum in the Life Skills subject area in the Foundation Phase (see Chapter Five section 5.3.2 Theme 2, Category 2). This important fact raises a predicament that should be carefully analysed. There arises a need for a platform where aggressive arguments and consideration of salient points needs to be brought to the

forefront in order to address the main research question. As the researcher reflectively ponders on the obtained data, she engages with the findings obtained from the teachers who taught learners in the Foundation Phase, the parents and the learners themselves.

Starting with the teachers who taught the learners in the Foundation Phase, the researcher summatively attempts to address a question that comes into her mind about their exposure to the planned, enacted and assessed curriculum as stipulated by Kurz et al. (2010). There seemed not to be a point of association among the three levels of curricula needed to attain explicit understanding about malaria among the learners in the Foundation Phase. In other words, the teachers did not demonstrate that they had the holistic knowledge that embraced the entirety of the content they needed to teach the children in the Foundation Phase about malaria. I argue that the teachers did not recognise the agentic potency of the curriculum to advance the teaching about malaria in the Foundation Phase (see Chapter Five section 5.3.2).

Secondly the teachers who taught the learners in the Foundation Phase claimed that they informally taught them about malaria. They did not feel compelled to teach about malaria because it was not stipulated in the Life Skills curriculum in the Foundation Phase (see Chapter Five section 5.3.2, category 2). The majority of the learners did not demonstrate an understanding of the dynamics of malaria in terms of recognising the vector of the disease, the mode of transmission, resistance to malaria drugs, the use of insecticides and mosquito nets used to prevent malaria disease (see Chapter Five section 5.3.1, , Theme 1, category 1). According to the findings obtained from the transcribed data, the learners did not seem to perceive the disseminated knowledge as important. This could have arisen because the teachers who taught them did so at break times and during informal periods. This action seems to confirm the concerns of Leger (1999), that health programmes are not designed to accommodate the dictates of the curriculum.

Thirdly the researcher argues that the incorporation of malaria into the Life Skills curriculum in the Foundation Phase may become efficacious because all the teachers in the Foundation Phase reiterated their support for the incorporation of malaria education into the Life Skills curriculum (see Chapter Five section 5.3.2). They did so because they believed that they (the teachers) would be well prepared to teach about malaria. If malaria is incorporated into the curriculum there would be a more concerted effort to enact its teaching after engaging in proper planning.

The teachers would have used assessment strategies to ensure deep learning among the learners in the Foundation Phase. Based on the obtained data from this study, the teachers merely mentioned malaria to the learners in the Foundation Phase without an opportunity to monitor the learning accomplished by the learners through different assessment strategies. Hence deep learning did not likely take place. This argument is supported by the scholarly work of Uddin and Habib (2012), that assessment has the capability to monitor how learners learn by motivating them to develop meta-learning (deep learning) initiatives. If this was the practice, the teachers would have been able to identify weak learners as suggested by Uddin and Habib (2012) that assessment enables the teacher to recognise superficial learners.

The unanimous agreement of all the teachers that teaching about malaria should be incorporated in the Life Skills curriculum reiterates its role at enabling the learners to experience deep learning. This would have invariably enabled them to become agents of change in terms of showcasing their learning at home and within the Hamakuya community. This argument is supported by the research of Bundy et al. (2000) that proposes that children can become positive agents when change is required in terms of skill acquisition and attitudes.

The argument proposed by Dillon (2009) assists us to understand the dynamics between the teachers of the learners in the Foundation Phase. Before the implementation of the curriculum can be set in motion, a teacher has to understand what should be taught, why the teaching exercise is important as well as the culmination of the teaching-learning dynamics. These were concerns of Dillon (2009) about the effectiveness of a sustainable curriculum. In an instance that the teachers at the two research sites could not demonstrate the "what" of the curriculum, they did not demonstrate the expertise required to determine the extent to which the learners grasped what they taught them informally.

The researcher delves into a major tenet of Situated Cognition theory which emphasises the ingenuity of knowledge as a "tool" (Brown, et al., 1989:33). It must be borne in mind that the researcher conceptualised the curriculum as a tool in Chapter Three, section 3.2.2. The researcher has a basis to think in that direction because Brown et al. (1993) stated that knowledge can become a tool. As the researcher ponders, she begins to think that the curriculum can become a reservoir for the contemplation and disbursement of knowledge. The actors of the curriculum can delve into this by planning how to enact it before they assess the curriculum. Hence the researcher also postulates that the curriculum can be visualised as a tool for knowledge creation and exhibition.

The teachers of the learners in the Foundation Phase did not have the expected content knowledge about malaria, which would have become a tool to communicate content about malaria to the learners. The researcher interweaves the discourse of Brown et al. (1989:33) with the reality on the ground about the teachers of learners in the Foundation Phase. Brown et al. believe that the effectiveness of a tool is tested in its capacity to confront a predicament in a definite context. They also posit that the efficacy of acquired knowledge is exhibited in an important scenario, which calls for the demonstration of what has been understood. In this regard, the teachers of learners in the Foundation Phase did not have the necessary reinforcement to test the effectiveness of the tool they had at a superficial level of understanding, because they were not charged to do so by the curriculum.

If the teaching of malaria had been incorporated into the curriculum, the teachers of the learners in the Foundation Phase would have upgraded their knowledge economy, and this would have reflected in the three dimensions of curriculum namely, the planned, enacted and assessed curricula. Hence they would have had the necessary self-efficacy to demonstrate and engage their knowledge base with the learners in the Foundation Phase.

The argument of Durning and Artino (2011) about Social Cognition would have mattered with relevance. According to Durning and Artino (2011), the lucid exhibition of the efficacy of acquired knowledge demonstrates the worth of the knowledge. The fact that the teaching of malaria was not specified in the curriculum of the Life Skills subject area made it seem as if the knowledge of malaria was not relevant. The incorporation of malaria into the Life Skills curriculum in the Foundation Phase would have exhibited its importance. Hence the efficacy that teachers were required to demonstrate would have been clear..

The researcher uses the argument of Durning and Artino (2011) that the tool, the person handling the tool, the environment in which the tool is used, the specific context in which the tool is used and the culture of the people all mutually depend on one another to articulate the ingenuity of the curriculum at empowering the stakeholders. The researcher takes the tool as the knowledge about malaria. This tool can be activated through the

curriculum; the person handling the tool (the teacher); the environment in which the tool is used (the school setting); the specific context in which the tool is used (the school setting), and the entire Hamakuya village. In addition, the culture of the people also perceives its importance of this tool and its potency at alleviating concerns.

The researcher refers to the conceptualisation that was defined at the outset of this study to identify the relevance of the curriculum in bridging the gap between knowledge about malaria, which she takes as a tool via the use of the curriculum and what she found in the research field. The researcher refers to the figure (Figure 3.2: The Curriculum as Tool) in Section 3. If the curriculum was absent, there would not be any means of furnishing learners in the Foundation Phase with knowledge about malaria. Hence they would not become the desired change agents.

If the teaching of malaria had been specified by the Department of Education from the outset, the researcher argues that the teachers would have negotiated the terrains of assessment strategies to verify the compliance of the learners to the planned and enacted curricula. It is thus important to state that the planned curriculum would have initiated how to enact and assess the curriculum.

At this juncture the researcher considers one of the tenets of SCT, echoed by Luszczynska and Schwarzer (2005:128) from Bandura's scholarship. Luszczynska and Schwarzer contend "human motivation and action are extensively regulated by forethought." The motivation to teach malaria to the learners in the Foundation Phase has to evolve from its incorporation into the Foundation Phase curriculum. The onus to teach malaria to the learners has to evolve from the teachers if it was stipulated to be taught in the Life Skills curriculum. These two dimensions of actions are to be amalgamated by "forethought", which in this case, the researcher refers to as curriculum planning. None of these was in place when this research study was being conducted.

The next phase of analysis pertains to what the researcher refers to as the behavioural predisposition of stakeholders (teachers, learners and the Department of Education). According to SCT, behavioural predisposition is key to understanding the outcome of actions taken to achieve desired outcomes. A prominent factor that the researcher perceived as one of the determinants of the behaviours exhibited by the teachers towards the learners and vice-versa borders on an important aspect of SCT referred to as self-

efficacy (Bandura, 1977). Self-efficacy, according to Bandura (1977), pertains to the mindsets of people with respect to their capacities to do certain things that should produce expected results.

Applying the SCT lens to the behaviours exhibited by the teachers who taught the learners in the Foundation Phase at the two research sites, reveals their unpreparedness, in terms of the required knowledge to teach malaria to the learners. This unpreparedness likely predisposed them to having mindsets that displayed diminished self-efficacy. The learners also could not connect to the essence of what was being communicated to them through the informal teaching exercises that they had from their teachers. The learners did therefore not achieve deep learning.

The second construct that the researcher engages in to explain the learners' actions (in terms of their predispositions to the informal learning they received from their teachers on malaria), hinges around what Luszczynska and Schwarzer (2005:128) refer to as outcome expectations. Luszczynska and Schwarzer (2005:128), drawing on Bandura's scholarship, explain outcome expectations as the mindsets of humans about the results of what they do. The researcher analyses the mindsets of the teachers who taught the learners in the Foundation Phase by taking their actions into account. They knew that the learners would not be assessed on what they taught to them about malaria. Their teaching was devoid of an outcome because there was no element of assessment. The learners on the other hand did not likely see the teaching on malaria as consequential because it was not stipulated in the curriculum. The teachers and the learners did not demonstrate any element of self-efficacy because the learning that took place was not spelt out at the outset to be important. If the learning about malaria was important, it would have been treated as a proper topic, and the learners would be assessed in terms of this topic, to know whether they have learned something or not.

In an attempt to consolidate discussion, to come up with a summative answer to the main research question, the researcher utilise the concerns of the parents of the learners in the Foundation Phase as an adjunct. The parents of the learners in the Foundation Phase saw the need to incorporate malaria education in the Life Skills curriculum because they knew that their children would be able to teach them about malaria (see Chapter Five, section 5. 3. 3). In other words, they saw their children as possible change agents.

The voices of the parents of the learners in the Foundation Phase echoed the importance of agency resounded by Bandura (2001). According to Bandura, change agents have the ability to influence their immediate environment by deliberately taking control of happenings around them to achieve desired goals. The incorporation of malaria education in the Life Skills curriculum in the Foundation Phase was perceived by the parents of the learners as potent enough to communicate the entirety of what they needed to know in order to be able to take relevant actions when the symptoms of the disease become identifiable to them.

To answer the main research question, the curriculum is capable of enlightening the teachers of the Foundation Phase learners to be better prepared to teach about malaria with confidence. When malaria is incorporated into the Life Skills curriculum, the teachers would take adequate effort to know about the symptoms of the disease, the vector of the disease, issues pertaining to drug resistance, the use of insecticides and mosquito nets. As specified by Kurz et al. (2010), the planned, enacted and assessed curricula would become paramount. Adequate preparation on the part of the teachers would give them the holistic orientation about the requirements of the curriculum. The teachers of learners in the Foundation Phase would not just become passive teachers of malaria. They would decide to plan on how to teach it. They would also be able to decide on the necessary assessment strategies in order to ensure alignment between the planned, enacted and assessed curriculum would be capable of informing the teachers about the learners' extent of knowledge acquisition.

Furthermore, it was the desire of the parents of the learners in the Foundation Phase to see their children teach them about malaria instead of the sporadic information heralded by the community health workers. Based on the analysis that the researcher has put forth so far, she argues that the inclusion of malaria into the Life Skills curriculum in the Foundation Phase is capable of achieving the following points:

(a) First, the teachers of the learners in the Foundation Phase would become active curriculum implementers such that they would tenaciously approach the planned, enacted and assessed curricula to achieve an outcome. The identified outcome in this case is emergent learning that guarantees agentic tendencies among the learners in the Foundation Phase.

(b) Second, it would equip the learners in the Foundation Phase with sufficient knowledge to become agents of change at the home front.

(c) Third, the parents of the learners in the Foundation Phase would be benefitted in such dimension that they would be capable of knowing what to do when they see signs of malaria incursion. Parents would thus be enabled to seek medical help before it is too late. When this is achieved, the issues reported by the teachers about absenteeism (see Chapter Five section 5.3.2.) may be alleviated. Invariably, when absenteeism is minimised, the learning experiences of the learners in the Foundation Phase would flourish.

(d) Fourth, as suggested by Temperly et al. (2008), and Bundy et al. (1999), in their studies of the cost-effectiveness of delivering intermittent preventive treatment of malaria and the role of schools in curriculum delivery respectively, the incorporation of malaria into the Life Skills curriculum in the Foundation Phase may become a cost-saving device.

This is because knowledge that is initiated by teachers to learners may eventually reach the parents. In such a way the strain placed on the national healthcare strategies is lessened.

6.2.4 How is malaria health education addressed in the life skills subject area in the Foundation Phase curriculum?

In the analysis of the Curriculum and Assessment Policy Statement (CAPS) (DBE, 2011), Grades R-3 (English version), topics bordering on malaria were absent. On page 55, nine hours was allocated to the teaching on insects. Only in Term 2, Grade 3 was this specification made. In the earlier classes (Grades R-2), such topics about insects did not exist. In Grade 3, the mosquito was mentioned as a type of harmful insect, which was not related to malaria at all. Knowing that the mosquito is harmful is not sufficient knowledge at this level because it leaves learners in a state of oblivion. There was no statement or topic that directly addressed the teaching of malaria. At the two schools where this study was conducted, the teachers were not compelled to teach about malaria by the CAPS curriculum. The main reason why teachers informally taught about malaria was because of the prevalence of anopheles mosquitoes, which are the carriers of the plasmodium parasite, implicated for causing the disease. As the researcher continued to analyse the

Department of Basic Education's CAPS (2011:14) document, she found a clause that needs to be scrutinised:

Beginning knowledge and personal and social well-being in the Life Skills curriculum are organised in topics. The use of topics is suggested as a means to integrate the content from the different study areas where possible and appropriate. Teachers are encouraged to adapt the topics so that they are suitable for their school contexts. Teachers are also encouraged to choose their own topics should they judge these to be more appropriate.

A thorough analysis of this CAPS statement suggests a divergence from rigidity as was perceived by the teachers at the two schools where this research study was conducted. All of the teachers reiterated that the teaching about malaria was not stipulated in the Life Skills curriculum in the Foundation Phase. First, the CAPS curriculum gave a mandate to curriculum implementers (teachers) to identify useful topics. It thus becomes obvious that the teachers of the learners in the Foundation Phase at the Hamakuya village did not understand the content of the CAPS curriculum. They were not able to identify the clause that gives them the flexibility to adjust topics accordingly.

In Chapter Five section 5.3.2., only one of the teachers (Ms. Zinhle) mentioned that malaria was indirectly part of the curriculum. However, she did not demonstrate this stance based on her foreknowledge that the CAPS document gives flexibility to the teaching of malaria. Furthermore, the teaching she offered to her students on malaria did not translate into knowledge that the learners could carry to the home front as change agents. It was discovered that none of the learners was able to grasp an understanding that could be identified as an acquisition of transferable knowledge. This was found lacking at the two schools where this study was conducted.

A gap has now been identified regarding the lack of ability to interpret the curriculum statements provided by the government. This clause found on page 14 of the CAPS Life Skills document totally reveals that the teachers would not have been penalised for teaching about malaria as many of them claimed. Based on the analysed document the researcher argues that the teachers of the learners in the Foundation Phase at the two research sites flippantly taught the learners about malaria without an undertone of the

dictates of the curriculum, which Dillon (2009) identifies as the "what" and the "how" of the curriculum:

Curriculum consists of essential questions to which our practices represent particularized answers. To know what we are doing, then, is to know the questions that we are answering in action; and to do curriculum rightly, let us say that we may permissibly give certain different yet possibly right answers yet *we must ask the same right questions* to begin with (Dillon, 2009:357).

The researcher uses Dillon's guidelines (2009) to identify and elucidate an understanding of the predispositions of the teachers of the learners in the Foundation Phase at the two research sites of this study. The teachers needed to know that the initiation of curriculum has to inculcate asking questions about the situation that they found themselves in. They taught learners in the Foundation Phase in a malaria endemic region of South Africa.

According to Dillon, this knowledge ought to have provoked in them, a series of questions that they needed to have acted upon as facilitators of learning. In order to do the right thing, they should have identified the questions they needed to ask. These questions, which were context based, should have enabled them to take actions that would have assisted them in doing the right thing as far as the implementation of the curriculum was concerned. In other words, these relevant questions should have been asked before embarking on teaching about malaria health issues.

The analysed CAPS document provides a basis for answering the first research subquestion. The researcher argues that the teaching of malaria to the learners in the Foundation Phase was done randomly without proper consideration of the flexibility stipulated in the CAPS Life Skills curriculum in the Foundation Phase. Hence the learners in the Foundation Phase could not engage with the disseminated knowledge offered by the teachers. As the researcher argued while answering the main research question, the informal teaching about malaria was not planned. Likewise, it was improperly enacted and also not assessed to determine the extent to which learners understood the topic.

6.2.5 How do teachers in the Foundation Phase sensitise children in grasping an understanding of the relevance of malaria to their health issues?

Most of the teachers sensitised the learners in the Foundation Phase about malaria by mentioning their own basic knowledge to the learners. The teachers taught the learners about the symptoms of malaria. Some of them familiarised the learners with knowledge that the clinic was the next place to visit when they felt that they had malaria. They also made learners aware that malaria was endemic at the Hamakuya village (see Chapter Five section 5.3.2.).

Teachers flagged sanitation as important as an avenue to sensitise learners in the Foundation Phase about malaria. The teachers mentioned issues such as disposing of empty cans that could collect water around the learners' compounds. They mentioned to the learners that dry cow dung needed to be swept and burnt so that it would not retain water. This is because cow dung could constitute breeding spots for mosquitoes. Their teachers told learners in the Foundation Phase that mosquitoes were the carriers of malaria. However, these teachers did not have the basic understanding required to adequately communicate the essence of how the disease is spread from one individual to the other.

One of the teachers, Ms. Joni, to be precise, instructed her learners to desist from wearing short clothes, and to stay indoors at night to avoid mosquito bites. Ms. Joni displayed relevant knowledge but information about the nature of mosquitoes was not adequately explained to the learners. Inherent nature in this respect points to the nocturnal nature of mosquitoes as revealed by Angarita-Jaimes et al. (2016). Knowledge about stagnant pools of water was mentioned to learners in the Foundation Phase as breeding spots for mosquitoes. This knowledge could be identified as an avenue capable of sensitising learners in the Foundation Phase about the spread of malaria through mosquitoes.

A thorough analysis of Ms. Joni's narrative in Chapter Five section 5.3.2. demonstrated her level of diminished self-efficacy. She believed that health workers "*are more suitable to talk to the learners about malaria*." Ms. Joni's latter response indicated that she perceived herself as unsuitable to teach the learners about malaria. According to Bandura, Ms. Joni seemed to display her inability to teach about malaria to the learners probably because she did not have the inherent self-efficacy to do so. If she actually felt inadequate to teach

matters about malaria to the learners, it could imply that she perceived the topic on malaria as a challenge that she was not prepared to undertake. The action exhibited by Ms. Joni seems to corroborate the argument put forth by Bandura that people will only be able to confront tasks that they believe they are able to undertake. Ms. Joni would have needed to inculcate an inherent strong self-efficacy to have offered and agreed that it was her duty to teach maters about malaria to the learners. This could have assisted her to achieve an outcome, capable of making the learners become desired change agents.

On the other hand, it was discovered that not all of the teachers of the learners in the Foundation Phase had cogent and authentic ideas about malaria. One of the teachers, Ms. Tessy, communicated inaccurate knowledge to the learners in the Foundation Phase. She taught the learners to "*wash their hands before eating and not to go to the river often to fetch dirty water so that they would be free from malaria*." The knowledge about malaria communicated by Ms. Tessy was not valid because fetching dirty water from the river is not known to cause malaria. This kind of information reveals the need for Ms. Tessy and some of the teachers with inaccurate knowledge about malaria to gain more in-depth knowledge.

According to Brown et al. (1989), knowledge is a tool. The curriculum is also a tool. If Ms. Tessy had interpreted the curriculum in terms of its flexibility, malaria could be taught to the learners, and she would have engaged her cognitive potential. She would have done so by making sure to interact with the content about malaria before embarking on teaching about the disease. The researcher interprets Social Cognition in this context as the knack to socially engage with content via the dictates of the flexibility afforded by the Life Skills curriculum to achieve an outcome. Based on the inappropriate knowledge that Ms. Tessy taught the learners within her jurisdiction about malaria, a probable explanation of the inaptitude demonstrated by the learners in the Foundation Phase is made.

The inappropriate knowledge base of Ms. Tessy was an isolated case out of all of the experiences narrated by the teachers of the learners in the Foundation Phase. The teachers who taught their learners based on the rudimentary understanding at their disposal did not achieve any outcomes that could predispose the learners in the Foundation Phase to becoming agents of change. The inappropriate teaching by Ms. Tessy also did not culminate in any outcomes. The entire scenario was thus very complex and challenging to comprehend. As stated earlier on, the reasonable assumption that

could be made is to attribute the lack of demonstration of desired outcomes to the teachers' inability of the teachers to interpret the flexibility of the curriculum. It may thus imply that the teachers did not possess the social cognition to engage with the dictates of the curriculum to achieve intended outcomes capable of making the learners in the Foundation Phase perform agentic predispositions.

A thorough look at the responses obtained from the learners in the Foundation Phase furnishes us with an understanding that they did not demonstrate that they had sufficient ideas about malaria. There were no forms of coherence in instruction about malaria at the two schools. As the researcher argued earlier on in the main research question and research subsection, a major dilemma was identified. This dilemma centred on the inabilities of the learners in the Foundation Phase to demonstrate cogent levels of understanding about malaria. Again the researcher argues that the incoherence in disbursing and interpreting the CAPS document (DBE, 2011), that malaria education could be taught at Hamakuya village likely led to the dearth in knowledge among the learners in the Foundation Phase were completely unutilised (planning, enacting and assessing learning outcomes). To further expatiate on the issue at hand there were no learning outcomes at the outset of the teaching exercises on malaria.

If the teachers could interpret the CAPS document, they probably would have agreed to unanimously and deliberately incorporate the teaching of malaria into the curriculum to achieve intended purposes that would have culminated in learning among the learners. Such learning would have been spelt out at the outset, and the learners would have paid attention to learning the basics that would have been assessed for learning to take place.

In an attempt to consolidate an understanding of the actions embarked on by the teachers of the learners in the Foundation Phase the researcher brings the subject of self-efficacy to limelight. The researcher discusses an important point that she raised in Chapter Three section 3.2.1, that the components of SCT should encompass activities pertaining to the setting of tasks and experiences that are deeply embedded in concrete actions. The teachers of learners in the Foundation Phase did not design tasks that enabled the learners to metaphorically grasp an understanding of the concept of malaria. For example, if the learners were cognitively engaged and instructed to draw the picture of a mosquito,

this task could have probably enabled them to reflect as they engaged with the task of drawing what a mosquito looked like to them.

Therefore, this implies that the teachers needed to have planned to use teaching methods that could have assisted the learners in the Foundation Phase to construct their own meaning of what they were being taught. Hawes (2003) suggests that teachers should design lessons in avenues capable of allowing learners to connect the learning at the school to obvious happenings at the home front. They could also use storytelling to facilitate learning as suggested by Hodge et al. (2002). The teachers of learners in the Foundation Phase were too quick at providing instruction about malaria to the learners without allowing them to go through the process of meaning construction. The learners did not understand the teaching about malaria because it was devoid of the necessary self-efficacy that the teachers needed to transmit to them.

To answer the research subquestion at hand, the researcher argues that the teachers of the learners in the Foundation Phase did not provide the required knowledge base expected to translate into meaningful learning outcomes capable of making the learners become agents of change at the home front.

6.2.6 To what extent do learners in the foundation phase educate their parents to achieve maximum health condition with regards to malaria?

This research question provides an understanding of parents' view on their knowledge base about malaria. The question intended to determine whether parents were informed about malaria through their children in the Foundation Phase. As the literature informs us about the agentic predisposition of children (e.g., Bundy et al., 2000), it was envisaged that the learners in the Foundation Phase engaged their parents in discourses that pertained to malaria education. If this was the case, it would imply that the parents' sources of knowledge about malaria were a culmination of the tutelage they received from their children. The extent of knowledge exhibited by the parents was perceived to be capable of stimulating them to seek medical help before it was too late, should their children be attacked by malaria.

In Chapter Five section 5.3.3. it was found that all of the parents who participated in the study had basic understanding about malaria, but that this information was not gained Page | 167

through their children. The implication of this finding is that their children did not perform the agentic roles they were thought to be capable of performing, as stipulated in the literature. The following statements depict the basic knowledge that the parents of the learners in the Foundation Phase demonstrated:

- (a) Cleaning of the yard and getting rid of stagnant water inside containers and cow dung.
- (b) They knew about the cause, symptoms and prevention of malaria through their interaction with the health workers.
- (c) They knew the season when the disease was prevalent.

The parents of the learners in the Foundation Phase acquired the abovementioned understanding through the health workers who visited the Hamakuya village annually. None of their children ever taught them about these important issues. The health workers did their best when they came to educate the community once a year because they also had other duties to perform. They concentrated more on treating infected people than on teaching the community. These findings support the finding of Atkinson et al. (2010) that health workers were not usually chanced to engage in teaching the community about health issues. Rather, they were preoccupied with attending to medical issues at their disposal.

It is obvious that both the parents and their children needed to know much more than what was demonstrated. However, the parents of learners in the Foundation Phase believed that the incorporation of malaria in the curriculum through the Life Skills subject area could broaden their understanding of malaria. The voices of the parents of the learners in the Foundation Phase echoed the argument of Mortimer (2004) that it may be beneficial to involve parents in health matters. The little understanding displayed by the parents of the learners in the Foundation Phase supported the argument of Morris et al. (2013) that health workers at times demonstrated better content knowledge than teachers. As literature suggests, children enjoy learning when they are actively involved in the learners' failed to fulfill agentic roles is that the curriculum was not deliberately designed to accommodate topics on malaria. It is argued that the incorporation of topics on malaria

could have taken learners through the learning processes via methods that would have involved them in the learning process.

This discourse could become a starting point that brings the incorporation of malaria into the curriculum. The parents of learners in the Foundation Phase probably felt that their children would be capable of teaching them about malaria more regularly than the health workers did. One of the parents (Ms. Tania) indicated that the health workers only came to Hamakuya village to teach them the basics of malaria during summer. Other aspects of malaria that could have been taught through the curriculum would include the following, as stipulated by the National Department of Health (2009:9) document:

- (a) Staying indoors between sunset and sunrise;
- (b) Putting on clothes that properly cover the body, hands and legs;

(c) Screening windows and doors with mosquito nets and making sure that doors are at night if mosquito nets are not available;

(d) Administering insect repellents on exposed parts of the body;

(e) Using of mosquito mats infused with an insecticide, or igniting mosquito coils in living and bedrooms during the night;

- (f) Covering beds with mosquito nets and making sure that the nets are tucked in to prevent the net from trapping mosquitoes within the sleeping area;
- (g) Using insecticides to spray the room after doors are closed;
- (h) Using ceiling fans and air conditioners to reduce the temperature of the room; and
- (i) Administering chemicals on clothes with government certified insecticide e.g., a pyrethroid.

Children have been reported to be capable of acting as change agents (Bundy et al., 2000). In the present context children could not fulfill that role towards their parents probably because of the reasons mentioned while answering the previous research questions. The claims made by parents that they were taught by the health workers resounds the stance of O'Keefe and Coat (2009) that parents are important when issues pertaining to the development of health curriculum are considered.

The parents of these learners thus advocated that malaria should be included in the Life Skills curriculum in the Foundation Phase. They heralded the inherent potentials of their children because they felt that they had the ability to communicate what they were taught to them. The call by parents in terms of incorporating malaria into the curriculum, points our attention to the gap that needs to be filled in the Foundation Phase, and especially in the Life Skills subject area in the Vhembe district.

To summarise the answer to the research subquestion it is stated that the parents of the learners in the Foundation Phase had basic knowledge that was communicated to them through the health workers who came to the Hamakuya village in the Vhembe district during summer periods. Their children could not furnish them with any understanding about malaria probably because the teaching of malaria at the two schools was done without an undertone of the tenets of the curriculum. Hence the report in the literature (e.g., Bundy et al., 2000) that children can become change agents did not materialise because they were not judiciously engaged in the teaching-learning dynamics with an undertone of curriculum stipulations.

6.2.7 What are the cultural practices impacting the knowledge, attitude and practice of children in the Foundation Phase with regards to malaria?

This research question adds value to the main research question because it assists us to understand the beliefs and practices that impact malaria education and the health-seeking attitude of children in the Foundation Phase. The consideration of these practices furnishes us with an understanding of the indigenous knowledge the children displayed and the relationships that we are able to draw from the reality on the ground with respect to their beliefs. A number of interesting discoveries were made from the parents of the learners in the Foundation Phase. Some of these interesting discoveries were also echoed by some of the learners. The researcher starts this discussion by analysing the statement made by Mr. Muvhango in Chapter Five section 5.3.3, Category 2:

(a) The use of engine oil.

In an attempt to discuss and extract the cultural practices obtained from Mr. Muvhango, I find it pertinent to critically consider his narrative:

I spray used engine oil on the bushes around the house. Other people burn dry cow dung to prevent the mosquitoes from having breeding spots because after rainfall, cow dung holds rainwater, which becomes a breeding container to mosquitoes. At first, the researcher tried to make sense of the usefulness of spraying engine oil on the surrounding bushes. The knowledge of biology assisted the researcher to understand the probable merit that could be advantageous in this practice. The nodes of plants are capable of containing water after rainfall. These nodes constitute breeding spots for mosquitoes, and can increase the risk and spread of malaria when the eggs of mosquitoes laid on the nodes of plants are hatched. Engine oil deprives water of oxygen after rainfall. Hence, the eggs laid by mosquitoes would die because of suffocation.

The cultural practice embarked upon by Mr. Muvhango echoes the scholarly work of Amer and Mehlhorn (2006), who determined the impact of the oil producing capacities of certain plants in ensuring that malaria causing mosquitoes were hindered from breeding after rainfall.

From their research we are able to infer that oil prevents the lava stage of mosquito from obtaining oxygen. This cultural practice exposes the deficiency of knowledge about malaria at the school because none of the teachers of the learners in the Foundation Phase mentioned the use of oil to the learners during their informal teaching sessions about malaria. If the teachers of learners in the Foundation Phase were flexible enough to have seen the necessity to teach learners about malaria, they would have been compelled by the demands of the curriculum to explore and solicit better dimensions of understanding about the ingenuity of used engine oils to limit the multiplication of mosquitoes.

Again the researcher delves into major concerns about the curriculum that demand that the teachers should be concerned about knowing "what" to teach as suggested by Dillon (2009). Knowing what to teach entails deliberations in line with the context of the curriculum (Dillon, 2009). The flexibility afforded by the DBE (2011) CAPS curriculum would have likely led the teachers into deliberating about how to address the concerns of malaria in the Vhembe district if they could interpret the document. The teachers of learners in the Foundation Phase did not demonstrate strong self-efficacy that could have launched them to take strides in solving the challenge that ravaged their community.

In a way, Mr. Muvhango had a measure of cultural self-efficacy, which he probably could not understand. He did not explain the importance of applying used engine oil to

the bushes around his home. The important thing that we are able to grasp from him is that he had a measure of self-efficacy, which empowered him to do what he knew he could do. This measure of knowledge could possibly reach his child so that the child would also be able to know that the application of used engine oil is capable of combating malaria disease. The cultural display of knowledge demonstrated by Mr. Muvhango elicits an understanding that cultural practices can be perceived as an agency to effect change in the community.

(b) The burning of cow dung

The same argument proffered in (a) seems to apply to the burning of cow dung. This cultural practice symbolises the knowledge that dry cow dung is capable of containing water after rainfall. Contained rainfall within cow dung is capable of constituting breeding spots for mosquitoes. A cultural understanding displayed by the villagers was that the smell produced from the cow dung after it was burnt had the tendency to drive mosquitoes away from their homes (see Chapter Five section 5.3.3). The interpreter who translated during the data collection also informed the researcher that the community believed that the smell produced from burning cow dung drove away mosquitoes.

This indigenous knowledge coincides with the report of Maharaj et al. (2010) that certain communities in South Africa possess historical indigenous knowledge. This knowledge is still subject to further research. However, what can be deduced from the burning of dry cow dung is that it prevents mosquitoes from breeding. This kind of indigenous knowledge may not be totally true. However there is merit in the burning of dry cow dung because it hinders the breeding of mosquitoes. It is clear that indigenous knowledge can lead to cultural practices that subvert malaria (Hemingway et al., 2016).

(c) The burning of certain plants with a foul smell

In addition to the burning of cow dung, the burning of certain undisclosed plants with a foul smell is a cultural means of controlling mosquitoes in the Vhembe district. This was indigenous knowledge that was carried over from one generation to the next. Kariuki et al. (2016) confirmed the burning of certain plants as a mosquito repellent, although Kariuki et al. (2016) recommended that further research was needed to ascertain the actual mosquito repelling action of a number of these plants. None of the learners in the Foundation Phase demonstrated an understanding of burning certain plants with a foul smell as a control measure of malaria. This indigenous knowledge seemed to have

remained with the parents and was not yet transferred to the learners. None of the teachers mentioned the use of indigenous plants with a foul smell as a control measure of malaria. Teachers were wary of disseminating untested knowledge about controlling the spread of malaria. The researcher reverts to the issue of the curriculum because teachers would have been equipped with these cultural practices, and would have taught and assessed the learners to know whether they understood what they were taught.

(d) Eating of green fruits and snacks

Only one of the learners (Riaan) (see Chapter Five section 5.3.1) mentioned, "*I want to know how not to eat green fruits because green fruits cause malaria*." This knowledge did not coincide with the finding of Asase et al. (2005) that the barks of *Mangifera indica* (mango) have since been employed in treating malaria in Cameroun, especially when boiled or when the fruit is eaten while still green (unripe).

Furthermore, Saotoing et al. (2011) and Titanji et al. (2008) confirmed the presence of anti-malarial substances in fruits such as *C. limonum* (citrus or sweet oranges) in the Southern area of Cameroun. The indigenous claim revealed about not eating green fruit can be regarded as the transference of wrong knowledge to Riaan. Similarly, the notion that the eating of snacks can cause malaria is not correct. At this juncture, it becomes relevant to note that the curriculum of the Life skills subject area could act as a bridge in communicating the correct dimension of knowledge to Riaan and other learners in the Foundation Phase. The curriculum, when meaningfully interpreted by the teachers, could comprise information capable of addressing these anomalous beliefs about not eating green fruits.

6.2.8 What is the level of knowledge of malaria health issues among children in the Foundation Phase?

The value of this research question is that it assists in deciphering the extent of awareness about the cause, prevention and treatment of malaria among the children in the Foundation Phase.

The researcher commences an analysis of this research subquestion by contemplating the value it adds to this research. First, the researcher explores learners' extent of awareness Page | 173
about the cause of malaria. Second, the researcher analyses their level of understanding of malaria prevention methods.

Learners' extent of awareness about malaria

As the researcher stated in Chapter Five section 5.3.1, learners in the Foundation Phase did not demonstrate an understanding of the dynamics of malaria. Their level of awareness was haphazard. Only 29% of the learners who participated in this study demonstrated an awareness of malaria. Among those learners who claimed to be aware of malaria as a disease, their level of understanding was very shallow (see Chapter Five section 5.3.1). The researcher analyses how learners with malaria awareness acquired an understanding of the disease.

First, the researcher considers Fheli as the first example. Fheli knew about malaria through the health workers who came to teach about malaria once a year at Hamakuya village. She demonstrated self-efficacy by saying, *"Headache and pain in the stomach are the symptoms of malaria."* This implies that she had the potential to learn more about malaria if the opportunity to do so was provided. The informal teaching that Fheli received from the health workers only once in a year equipped her with a reasonable level of awareness that translated into knowing the symptoms of malaria.

Fheli did not accord her level of understanding to the teaching that her teacher in the Foundation Phase offered. The researcher attempted to identify the teacher who taught Fheli and found that Ms. Joni taught her. The researcher had a look at the narrative of Ms. Joni and found that she said, *"I think that I teach them the basic things I know about malaria but the health workers are more suitable to talk to the learners about malaria."* According to Bandura's (1994) scholarship on self-efficacy, Ms. Joni did not seem to have the self-efficacy required to teach Fheli and the other learners in the Foundation Phase about malaria. Her action was an exposition of the deficiency observed due to the non-incorporation of malaria into the curriculum. She seemed to lack the necessary cognition about malaria because she attributed the teaching of malaria to the health workers who only came to the community once a year. It was thus a matter of transferring the responsibility to teach the learners to the health workers. The other learners taught by Ms. Joni were Mukdzani, Philo, and Michael. None of them knew about malaria. Michael's

case was an outstanding one because he did not know anything about the Life Skills subject area. Taking a critical look at the learners that were taught by Ms. Joni it becomes obvious that Ms. Joni demonstrated that she did not have what was required to teach about malaria. The learners, whom she claimed to have taught about malaria, reflected her lack of self-efficacy.

Furthermore, Ms. Joni did not fulfill her role as a potential agent of change to the learners in the Foundation Phase. The health workers took over that role and became agents of change by imparting the level of awareness about malaria to Fheli. Based on the notion that the health workers came once a year to teach about malaria, the researcher argues that the learners in the Foundation Phase could have grasped better understanding of the dynamics of malaria if it was deliberately taught to them by the teachers in the Foundation Phase. The level of awareness demonstrated by Fheli became a fulcrum on which this argument is based. It shows that Fheli had the required cognition level to grasp an understanding of concepts despite having minimal contact time to learn from the health workers. These findings are in line with the declaration of Morris et al. (2013) that health workers are trained to demonstrate the required competence to communicate issues bordering on malaria.

Learners' Level of Understanding of Malaria Prevention Methods

Out of all the learners in the Foundation Phase who participated in this study, Tessy was the only learner who demonstrated some understanding about the prevention of malaria. She said, *"The house and the whole yard must be clean"*, when she responded to the researcher's question about how to prevent malaria. According to Dillon's (2009) scholarship, she knew a little bit about the "what", but did not know anything about the "why" (see Chapter Five section 5.3.1). The researcher found that Ms. Zinhle was Tessy's teacher. Tessy understood what her teacher taught her because her teacher told the researcher the following:

I teach them that mosquitoes cause malaria. To prevent malaria from attacking them I tell them that they must always clean their compounds at home. They must always collect papers and dispose of used tins because the used tins can hold rainwater and mosquitoes will lay eggs inside the used tins. After the eggs are hatched the mosquitoes will come to attack them and spread the disease.

Tessy demonstrated an understanding of the scope of learning opportunity presented to her by her teacher. This was proof that she had the potential to grasp an understanding of concepts about malaria. Her limitation was that she was presented with very limited scope of knowledge. Tessy did not know the reason associated with keeping the yard clean because the teaching that she received was devoid of the inculcation of the tenets of the curriculum namely, the planned curriculum, assessed curriculum and enacted curriculum (Kurz et al., 2010).

6.3 CONCLUSIONS

This chapter presented the study findings. It analysed the research questions and sought to answer the questions outlined at the outset of the research study by considering the findings in the extant literature and the theories of action found fit to explain the findings of the study. A prominent issue that characterises this study is the fact that children may be perceived as change agents in matters pertaining to health (Nicotera, 2008). The findings obtained from this study could not corroborate this claim. It therefore may imply that not all claims made may be applied to issues bordering on children especially because the curriculum was not properly designed to incorporate the knowledge about malaria. It is furthermore argued that children may become agents of change as long as the stakeholders in the design and implementation of the curriculum. This argument is hinged on the claims of Simovska and Carlsson (2012) that agency is possible when appropriate direction is given. It is therefore theorized that change agents require adequate dimensions of orientation to become change agents.

The theories engaged are the Social Cognitive Theory and Social Cognition. A number of new findings emerged from the study; these are discussed in Chapter Seven. Chapter Seven summarises the findings and the generated new knowledge. Furthermore, it makes recommendations, outlines the limitations of the study and draws conclusions.

CHAPTER SEVEN: SUMMARY OF FINDINGS, GENERATION OF NEW KNOWLEDGE, RECOMMENDATIONS AND CONCLUSIONS

7.1 INTRODUCTION

In Chapter Six the findings of the research study were presented. This paved the way for an elaborate presentation of the cogent findings that would be used to make informed decisions about the incorporation of malaria into the Life Skills subject area in the Foundation Phase. Chapter Seven summarises the findings and the significance of the study; explains new knowledge; makes recommendations and implications fit for practice; sets out the limitations of the study; and concludes the study.

7.2 SUMMARY OF FINDINGS

This study evolved novel knowledge about the possibility of incorporating knowledge about malaria into the Life Skills curriculum of the Foundation Phase. The study explored the roles played by the teachers of the learners in the Foundation Phase in terms of how they addressed the prevalence of malaria in the Vhembe district where the two research sites were situated. The level of awareness and content knowledge of the teachers were explored. Their capacity to interpret and appropriate curriculum statements was analysed. The teachers of learners in the Foundation Phase were particular about a number of issues relevant to propagating knowledge about malaria at the two schools where the study was conducted.

The parents of the learners in the Foundation Phase demonstrated their own level of knowledge and their sources of knowledge. They also made recommendations in terms of what they found useful in assisting their children to know more about malaria. Issues of the benefits of agency were paramount in this study, as perceived by the parents and the researcher. Learners in the Foundation Phase also expressed their desires and readiness to be taught about malaria, which was already becoming a threat to the entire community, especially during rainy seasons. Therefore, the researcher presents the following statements, based on an elaborate analysis of events and the constructive interpretations from the study findings:

1. The curriculum is capable of acting as a tool that can empower the teachers to fulfill their roles as competent facilitators of learning. This is because the curriculum initiates the propensity to ask questions in line with curriculum development, as suggested by Dillon (2009). Such questions are directed to know what should be taught, why the teaching should take place, and how the teaching would be conducted. The teachers would eventually become active implementers of the planned, enacted and assessed curricula.

2. The consideration to incorporate malaria education into the curriculum of the Life Skills subject area presents an opportunity to teachers to reconsider the flexibility in the DBE (2011) CAPS document. If this incidence of malaria at the Hamakuya village did not arise, the consideration to incorporate malaria into the curriculum may also not have arisen. This consideration was embarked upon because of the identified need to enlighten the teachers, parents and the learners in the Foundation Phase about malaria education. Although the parents of the learners were not the primary focus of this research, the researcher identified the need to engage with them in an attempt to recognise the role that the informal teaching of malaria at the school had on at the home front. The foundation of this consideration was informed by the discourse in the literature that children can act as useful change agents (Bundy et al., 2000).

The ingenuity of the curriculum at communicating knowledge was thus revealed because the informal teaching on malaria by the teachers did not achieve the aims of the teaching that was carried out. Curriculum considerations engulf the three basic tenets (planning, enacting and assessing of the curriculum) (Kurz et al., 2010). The informal teaching on malaria therefore did not achieve its aims because the children could not become change agents at the home front. Instead, some of the learners who demonstrated little understanding about malaria did so because the health workers who came to teach them once a year taught them.

3. The incorporation of malaria into the curriculum resonates the relevance of assessment strategies in assisting us to know the level of understanding that learners can demonstrate to become the desired change agents in the community.

4. Sustained learning did not take place among the learners. The knowledge displayed by a few of the learners was due to the yearly teaching conducted by the health workers who came to Hamakuya village in the Vhembe district to sensitise the community about malaria health issues. The teaching of malaria health issues was addressed in the Life Skills subject area of the Foundation Phase without due consideration of the basic tenets of the curriculum. The teaching of malaria was done without any serious demonstration of self-efficacy on the parts of the teachers.

5. The teachers of the learners in the Foundation Phase did not follow the dictates of the curriculum when they attempted to sensitise learners in the Foundation Phase about malaria. They claimed to teach the learners about the symptoms of malaria and the need to visit the clinic when they found that they had symptoms of malaria. They mentioned sanitation as an important aspect of preventing malaria. The importance of disposing of used containers was explained to the learners since they could become breeding spots for mosquitoes. Disposal and burning of cow dung constituted the informal teaching about malaria to the learners. The learners were taught that mosquitoes were the carriers of the malaria parasite (plasmodium).

6. The parents of the learners in the Foundation Phase were furnished with basic ideas taught to them by the health workers who came to the Hamakuya village once a year. They knew that they had to keep their yards clean. They also had some knowledge about causes, symptoms and reasonable measures of prevention. They also knew the season that malaria was rampant.

7. The parents of the learners in the Foundation Phase engaged in cultural practices that they believed could reduce the incidence of malaria. These cultural practices included the following:

(a) The use of engine oil.

(b) The burning of cow dung, which they believed had the capacity to keep mosquitoes away from their yards (Maharaj et al., 2010).

(c) The practice of not eating green fruits was a cultural practice adopted by the parents. This practice was contrary to the literature findings about the consumption of green fruits This disseminated knowledge impacted the children. According to literature green fruits were consumed as local treatment of malaria. Not consuming green fruits was a cultural practice that contradicted the essence of eating green fruits.

(d) The use of certain plants is a cultural practice capable of informing the knowledge, attitude and practice of learners in the Foundation Phase. This practice was found important because it was supported by the literature (Kariuki et al., 2016; Mukungu et al., 2016).

8. Twenty-nine percent of the learners interviewed had knowledge about malaria to varying extents. Only one of them demonstrated knowledge about the symptoms of malaria. This knowledge was received from health workers who came to the village once a year. This particular learner did not learn about malaria symptoms from teaching at school. Only one of the learners in the Foundation Phase had some understanding of malaria prevention. The remaining 71% of learners did not know about malaria despite claims made by teachers that they informally taught them.

7.3 SIGNIFICANCE OF THE STUDY

First, this study is significant because it generates awareness to revisit the implementation of the Life Skills curriculum in the Foundation Phase. A thorough analysis of the DBE (2011) CAPS curriculum stipulates that teachers should use their discretion to incorporate topics and teaching methods suitable for their contexts. However this flexibility to adjust the curriculum was not identified by the teachers of the learners in the Foundation Phase. The flexibility provided by the Life Skills curriculum necessitates that teachers convene discussions around the essence of curriculum development. This implies that they have to study to grasp the tenets of curriculum development, in terms of knowing what to teach, how to teach and the assessment strategies to use to drive learning. A possible aspect that this study could convey to teachers and the people assigned to implement the curriculum is that teachers of learners in the Foundation Phase should be thoroughly trained to interpret the curriculum so as to meet the needs of the learners. This kind of training may empower teachers to ensure that learners become desired change agents. The teachers would have to embark on planning, enacting and assessing the curriculum to monitor the progress of the learners as far as malaria health issues are concerned.

Second, this study is capable of equipping learners in the Foundation Phase with the knowledge, attitude and practice necessary to guarantee sustained health statuses after becoming empowered by the curriculum. Hence they could become effective agents of change at the home front and within the community.

Third, the learners in the Foundation Phase may be better informed to know the causes, symptoms, and develop health seeking attitudes necessary to guarantee sustained health.

Fourth, this study is significant because malaria causes anaemia in children, which can result in high childhood mortality (Geerligs, Brabin & Eggelte, 2003). Malaria is also a major cause of absenteeism and diminished academic performance (Bundy, Lwin, Osika, McLaughlin, & Pannenborg, 2000). Malaria education will help children grow up with the capacity to address issues that pertain to their health.

7.4 GENERATION OF NEW KNOWLEDGE

The following statements showcase the new knowledge that emerged from this study. The statements are discussed elaborately to necessitate action for change.

7.4.1 Inability to Interpret the Flexibility of the Life Skills Curriculum

The teachers of the learners in the Life Skills subject area, in the Foundation Phase did not recognise flexibility in the DBE (2011) CAPS curriculum statement to adapt the Life Skills curriculum to suit the situation at their disposal. The reason for their inability to interpret the curriculum could be due to the fact that some of them probably did not have the necessary training to do so. Their inability to interpret the curriculum seemed to limit them in becoming curriculum implementers. If they had been able to interpret flexibility in the curriculum, they would have acted on the clause in the DBE (2011) CAPS curriculum statement by incorporating health issues in the curriculum. They would have planned to teach about malaria. They would have been confronted by a number of the questions of the curriculum as outlined by Dillon (2009). These questions relate to knowing what to teach, how to teach and which methods of assessment to use to test the knowledge acquired by the learners.

7.4.2 Implementation of the Tenets of the Curriculum is a Deciding Factor before Children can Become Change Agents

It was found throughout the research that a major reason why the majority of children could not demonstrate an understanding about malaria was because it was not

deliberately included in the Life Skills curriculum. Simovska and Carlsson (2012) support the knowledge that children can become agents that are capable of promoting health changes if provided with the necessary direction. In this study the adjustment of the curriculum to incorporate knowledge of malaria constitutes what Simovska and Carlsson (2012) refer to as direction. The curriculum navigates the teaching of topics to ensure an outcome that is able to promote change.

7.4.3 The Agentic Role is not Limited to Teachers and Learners

Teachers of learners in the Foundation Phase are expected to be capable of performing the role of engaging learners with teaching methods that could furnish them with an understanding of malaria concepts. They could not fulfill this role because they thought that the teaching of malaria was not compulsory. The learners could also not become change agents because the dictates of the curriculum were not appropriately negotiated with them. The health workers who visited Hamakuya village once a year delivered their informal curriculum with such an impact that some of the learners were capable of understanding the symptomatic effects of malaria.

The health workers portrayed the role of informal (nonacademic) teachers who engaged the dictates of their so-called hidden curriculum with Hamakuya village to evolve learning experiences that produced change. It is taken in this study that the curriculum that the health workers negotiated at the community level carried an undertone of change, which impacted some of the learners in the Foundation Phase. A prominent example of the agentic role of the health workers was felt by Fheli, who expounded an understanding of malaria symptoms to the researcher. None of the learners who were taught by the teachers at the schools was able to decipher the symptoms of malaria except those who were attacked by malaria.

According to Horn (2003), the hidden curriculum comprises all learning that is not recognised and not intended for academic learning to take place. The yearly teaching offered to the Hamakuya community by health workers was unrecognised and nonacademic. This type of teaching was primarily based on providing the inhabitants of the Hamakuya village with rudimentary information, which was not going to be tested for proper understanding. The learning that evolved from Fheli was achieved through this kind Page | 182

of hidden curriculum that produced a change in her behaviour to identify the symptoms of malaria. This knowledge was sufficient to change her attitude to seek clinical help. Hence this study evolved a new knowledge that the hidden curriculum of the health workers can result in change among the learners in the Foundation Phase.

7.5 RECOMMENDATIONS FIT FOR PRACTICE

The following recommendations are put forth to enable the teaching of Life Skills in the Foundation Phase become more understandable and implementable so that teachers, learners and parents can work together to achieve the aims of the curriculum:

First, the Life Skills curriculum in the Foundation Phase should be explicitly stated to appeal to the understanding of teachers in such a manner that they will be able to interpret it for proper use. This statement should lucidly add the teaching of malaria to the Life Skills curriculum.

Second, the teaching of malaria should be included in the curriculum so that the learners who are not in malaria endemic zones of South Africa would be furnished with an understanding of the dynamics of malaria. This recommendation is made based on the fluidity of people in South Africa. The parents of learners in South Africa may at one time or the other relocate to malaria endemic regions of South Africa. When such parents are faced with this challenge they would be able to know how to seek medical assistance. Preventive measures such as the use of insecticide-treated nets, keeping the yard clean to avoid breeding spots, and issues pertaining to malaria drug resistance would not be new to them.

Third, it is recommended that the Department of Basic Education should embark on training sessions about malaria to teachers on a regular basis. This would ensure that teachers knowledge is up to date so that they can teach with the necessary self efficacy that result in children becoming the desired agents of change in the society.

Fourth, the government should provide resources (textbooks and story books such as Sibo Fights Malaria) that are capable of sensitising learners and teachers about the incursion of malaria. Sibo fights malaria is a storybook meant to enlighten school children about malaria. Posters and charts that are capable of educating learners about the causes, transmission and prevention of malaria may be distributed to various schools in both urban and rural areas of South Africa.

7.6 LIMITATIONS OF THE STUDY

The following statements are presented as limitations of this research study. These limitations does not allow the researcher to make certain claims because certain circumstances were beyond the researcher's control:

(a) Out of the 21 learners that were interviewed, only four of the learners' parents could participate in the research data collection. The narratives of these parents and their biological children assisted in establishing the authenticity of their narratives. The other parents were also parents of the Foundation Phase learners. However, these parents' children could not be directly reached to be interviewed. This was a limitation of the study because the narratives of learners and their parents could have been used to evaluate the authenticity of their responses.

(b) At the time of the data collection for this study, it was the rainy season. However, there was drought. The researcher could not observe the practices at the two schools in terms of how they disposed of used containers, and how the drainage facilities at the two schools were maintained. The rivers were dry and there were no stagnant water spots. The researcher could not authenticate whether the open tanks that were used to collect rainwater were properly closed to prevent the breeding of mosquitoes.

(c) The researcher did not have the opportunity to visit the homes of the parents of learners in the Foundation Phase to observe their cultural practices that they claimed were keeping away the mosquitoes. If the opportunity to do so had arisen, the researcher would have had the privilege of matching their narratives with the observed practices.

(d) Language was a limitation. If the researcher was able to communicate with the participants in English, important gestures such as body language would have probably assisted the researcher to make informed judgments about the responses.

7.7 RECOMMENDATIONS FOR FURTHER RESEARCH

The following research topics are recommended for further research based on the study findings and areas, which could not be covered due to circumstances that could not be controlled while the data capture was ongoing:

(a) Comprehending the dynamics of malaria in the Grades R-3 band to guarantee learners' agentic predisposition at each grade level.

(b) The influence of stakeholder expectations of malaria knowledge acquisition on curriculum change.

(c) Promoting malaria awareness among Foundation Phase learners in non-endemic regions of South Africa.

(d) An exploration of the cultural methods used in malaria prevention and treatment that can inform curriculum development in the early childhood education band.

(e) The consequences of malaria health education inclusion the Life Skills curriculum.

7.8 CONCLUSIONS

This research study advocates the promotion of malaria education through the Life Skills curriculum in the Foundation Phase. It was established in this study that teachers who taught Foundation Phase learners at the two research sites of this study, could not engage with the flexibility pertaining to the DBE (2011) CAPS document. This document recommends that teachers of Foundation Phase learners develop teaching and learning materials according to emergent needs within their contexts. Although the teachers of the learners in the Foundation Phase claimed that they taught learners about malaria at the two research sites of this study, most of them could not demonstrate an understanding of the dynamics of malaria.

The learners who possessed rudimentary knowledge of malaria were those who listened to the health workers who visited once a year to raise awareness about malaria. The parents of the learners in the Foundation Phase knew the symptoms of malaria, the cause, and the ways to treat and prevent the disease. Social cognitive theory assisted in understanding that the teachers lacked the required self-efficacy to teach about malaria. They lacked the dynamism and mastery of the health workers who visited the Hamakuya village once a year. Bandura's SCT paved the way to comprehend that the teachers did not have self-efficacy, and that they need to possess a stronger self-efficacy in order to be capable of teaching Foundation Phase learners about malaria. Consideration of the tenets of the curriculum could have enabled the teachers to delve into the requirements of the curriculum. If they had strong self-efficacy, they would have been challenged to take initiatives in the direction of consciously immersing themselves in content knowledge acquisition.

The teachers did not employ the dictates of the curriculum namely, the planned, enacted and assessed curricula to unravel the discourse on malaria. This study revealed that assessment is a strong driving force behind learning. The learners in the Foundation Phase probably observed that their teachers' teaching about malaria was informal. They therefore did not perceive the teaching that they received from their teachers as important. They compared the teaching by their teachers to the teaching by the health workers. The nonacademic teaching by the health workers was found to carry a weightier amount of self-efficacy than the teaching conducted by teachers at the school. The teaching conducted by the health workers was described as having an undertone of the hidden curriculum. The learners in the Foundation Phase did not have the required dimension of cognition to grasp an understanding of the taught concepts about malaria because they did not confront the correct level of teaching and learning engagements with their teachers. None of the learners in the Foundation Phase was able to become a change agent at the home front or in the community. This finding challenges the description in literature (e.g., Bundy et al., 2000) that children are capable of becoming desired change agents. This study states with clarity that children are likely to become change agents if they are taken through specified limits of the curriculum with the correct dimension of purpose and plan to achieve desired outcomes. For the purpose of this study however, the learners did not experience the necessary level of social cognition from their teachers to become knowledgeable enough to demonstrate an understanding of the dynamics of malaria.

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Faculty of Health Sciences

20 June 2015

Circuit manager Vhembe District Limpopo Department of Education

Dear sir / madam

RE: PERMISSION TO CONDUCT RESEARCH IN PRIMARY SCHOOLS IN VHEMBE DISTRICT

The University of Pretoria Centre for Sustainable Malaria Control (UP CSMC) is a fully integrated, multidisciplinary, interfaculty initiative. The aim of the Centre is to coordinate and promote collaborative research on safer and sustainable malaria control and management, and generate new knowledge and support new activities pertaining to safe malaria control in Africa. This includes research on malaria education and health promotion. The UP CSMC is working closely with the National Department of Health and the Provinces to achieve the government's malaria elimination goals.

UP CSMC post-graduate students from the University of Pretoria's Education faculty aim to conduct research on the impact of malaria on teaching and learning. The proposed research sites are primary schools in rural Ha-Makuya and surrounding areas in the Mutale Municipality, Vhembe District, Limpopo Province. The students need to obtain approval from the ethics committees of the University of Pretoria's faculties of Health Sciences and of Education, and from the Department of Health and Social Development, Limpopo Province, to conduct research. To obtain ethics approval they need permission from the Circuit Office to approach the schools. They also need permission from the principal of each school to allow research to be conducted in his/her school. The students already have permission from the Department of Education to conduct research in Limpopo Province.

Nine primary schools in the area have been identified by staff at Tshulu Trust situated in Ha-Makuya, as suitable to partake in this research. These schools include:

- Khavhambe primary,
- Maholoni primary,
- Fandani primary,
- Karel Nngigideni primary,
- Matshikiri primary,
- Tshikalange primary,
- Maluzawele primary,
- Tshikondeni primary, and
- Mukomawabani primary.

Could you kindly assist in providing the names and contact information of the respective principals in order for the relevant students to contact them directly?

Prospective participants will vary depending on the aim and objectives of the individual research projects. Participation in this research is voluntary and informed consent will be obtained from all participants. All participants are at liberty to withdraw their participation at any stage of the research without supplying a reason and without penalty. Participation will be anonymous and at no time will a participant's identity be revealed.

Measures are also in place to protect all participants in this study from any probable risk. Strict ethical guidelines and practices will be observed at all times. All information gathered from participants will only be used for research purposes. The students will adhere to ethical principles of confidentiality and anonymity as directed by the ethics committees of the University of Pretoria. The results of the study may be helpful to schools and the Department of Basic Education as to how the problem of malaria is viewed in the area and how it can be managed in future. The results of this research can be shared with the Department of Education.

The research will occur over the period 2015 to end 2016 but additional projects may be identified within the area in years to come. Field visits to the schools will take one to two weeks, depending on the specific project, and will be communicated to the principals at the start of each research cycle.

Included with this letter please find the Department of Education's letter of approval. Please do not hesitate to contact me if you need more information. Looking forward to your positive response.

Yours sincerely,

loclefages

Prof Tiaan de Jager Deputy Dean: Research Director: UP Centre for Sustainable Malaria Control



DEPARTMENT OF HEALTH

Enquiries: Latif Shamila 015 2936210

Ref:4/2/2

Adebanji O University of Pretoria Department of Early Childhood Education

Greetings,

RE: Strategies to promote awareness and prevent malaria occurrence through life skills programme in the foundation phase

The above matter refers.

- 1. Permission to conduct the above mentioned study is hereby granted.
- 2. Kindly be informed that:-
 - Research must be loaded on the NHRD site (<u>http://nhrd.hst.org.za</u>) by the researcher.
 - Further arrangement should be made with the targeted institutions.
 - In the course of your study there should be no action that disrupts the services.
 - After completion of the study, a copy should be submitted to the Department to serve as a resource.
 - The researcher should be prepared to assist in the interpretation and implementation
 of the study recommendation where possible.
 - The above approval is valid for a 3 year period.
 - If the proposal has been amended, a new approval should be sought from the Department of Health.

Your cooperation will be highly appreciated.

Head of Department

al Inbois

Date

18 College Street, Polokwane, 0700, Private Bag x9302, POLOLKWANE, 0700 Tel: (015) 293 6000, Fac (015) 293 6211/20 Website: http://www.limpopo.gov.za



15 February 2016

Dear Educator

INFORMATION CONCERNING RESEARCH BEING CONDUCTED AT YOUR SCHOOL

I am a student of the University of Pretoria. I am studying for my Doctoral degree in Early Childhood Education. In fulfilment of my Doctoral qualification, I am required to complete a relevant research study. The purpose of my research project is to explore strategies to promote awareness and prevent malaria occurrence through the Life Skills programme in the foundation phase curriculum. I also believe that the result of this study will generate recommendations that will be useful to the school administration and the community.

I would like you to answer short interview questions and I would like to observe the Life Skills lessons in your classroom. This is strictly for the purpose of data collection. Data collection will also include audio recording of learners' activities inside the classroom during the Life Skills lessons. This is to help me interpret data collected, that is, make sense of what I think it means, to write the research report. Your name will not be mentioned in the research report. Fictitious names will be used in place of your real name. Your confidentiality is assured as no information given will be traceable to you. No information given will be used against you, now or in future. Measures are also in place to protect all participants in this study from any probable risk. Apart from the permission of the Ethics committee of the University of Pretoria, the approval of the Department of Education is obtained to proceed with this study. You are at liberty to discontinue at any point should you feel uncomfortable. There are no penalties or consequences for non-participation.

Please feel free to contact me for any query or question.

Yours faithfully

Adebanji O.T (0714152041) Researcher Prof. N. C. Phatudi Dr T. Kruger Supervisors

℅------agree to take part in the above research.

Signature



15 February 2016

INTERPRETER/TRANSLATOR CONFIDENTIALITY AND NONDISCLOSURE AGREEMENT FORM

Title of project: Strategies to promote awareness and prevent malaria occurence through the Life Skills programme in the Foundation Phase curriculum.

I, _____ have been hired as an interpreter in the above-titled project by the researcher, Mrs. O. T. Adebanji.

I agree to the following terms and conditions as stated below:

- 1. That I shall keep all the research information (such as name, date of birth, identity) shared with me confidential.
- 2. That I shall not discuss or share the research information in any form or format (e.g., disks, tapes, transcripts) with anyone other than the researcher.
- 3. That I shall keep all research information in any form or format (e.g., disks, tapes, transcripts) secure while it is in my possession.
- 4. That I shall return all research information in any form or format (e.g., disks, tapes, transcripts) to the researcher when I have completed the research tasks.
- 5. That I shall erase or destroy all research information in any form or format regarding this research project that is in my possession and which is not returnable to the researcher after receiving her permission to do so.
- 6. That I shall not obtain any personal profit or advantage from any confidential information during my interpretation/translation services.

These terms and conditions are fully understood by me.

Interpreter

Signature

Date

Witness

Name and signature

Date

Faculty of Education Fakulteit Opvoedkunde Lefapha la Thuto



15 February 2016

Dear Learner

LETTER OF ASSENT

My name is Opeyemi. I am a student of the University of Pretoria. I am studying for my Doctoral degree in Early Childhood Education. I am doing a study on how we can learn more about malaria in the Life Skills subject in the Foundation Phase. In the Life Skills subject, we learn about how to keep healthy and protect ourselves from diseases. This study that I am doing is also about keeping us healthy and be safe from malaria infection. I call the study "strategies to promote awareness and prevent malaria occurrence through the life skills programme in the foundation phase curriculum."

I am asking you to be a part of this study. Your parents and the school have also been informed about the study but I still like you to know about it as well because you are very important in the study. You don't have to say yes if you are not sure. You are free to make your own decisions. Please note that I will not do anything that is not right or unfair. Be assured that you will not be subject to any form of harm or harassment. When we start the research and you don't feel good about it, you are free not to continue. I will not be angry with you and I will not punish you in any way.

I will be asking you short questions for thirty minutes after school hours. The purpose of this is to collect information that will be used to write a report for the study. This report will be useful to your school, the Department of Education and other schools in South Africa. I will also visit your home just to look around your house. False names will be used instead of your real names when I am writing the research report.

If you have any questions or concerns you are welcome to contact me. Thank you for your cooperation. Yours sincerely

Adebanji O.T Researcher 0714152041 Prof. N. C. Phatudi Dr. T. Kruger Supervisors

⊁

in Grade _____ hereby agree to take part in the

research that will be conducted at the school.

Learner's Signature

Date

Room 4-1.7, Level 4, Building University of Pretoria, Private Bag X20 Hatfield 0028, South Africa Tel +27 (0)12 420 1234 Fax +27 (0)12 420 5678 Email name.surname@up.ac.za www.up.ac.za Faculty of Education Fakulteit Opvoedkunde Lefapha la Thuto





15 February 2016

Dear Parent / Guardian

www.up.ac.za

LETTER OF PERMISSION

I am a student of the University of Pretoria. I am studying for my Doctoral degree in Early Childhood Education. I am doing a study on strategies to promote awareness and prevent malaria occurrence through the Life Skills programme in the Foundation Phase curriculum. This simply means that I want to look at ways we can teach children to be aware of malaria at school. I think this is going to help them know how they can protect themselves from this disease.

I am inviting your child to participate in the research. I will like him/her to answer short questions. These questions will be about what he/she knows about malaria and where he/she got the information. No private questions will be asked. The Department of Basic Education, principal and teachers are aware of this study. Interviews and observation will be conducted within the school premises in the presence of your child's teachers. Interviews and observations will be recorded and transcribed. This is only to help me write a report on the study.

Your child is free to refuse to participate if he/she is not comfortable. If your child agrees to participate, his/her real name will not appear in the research report. No information supplied will be used against them in any way neither will they be made to face any consequence from the school authority. All ethical procedures are being followed and any unfair or unethical practices will be avoided. All information will be handled in strict confidence. Your child will not be at risk during the research. You are welcome to ask any question to clarify any aspect of the research that is not clear to you.

Thank you for your cooperation.	
Yours sincerely	
Adebanji O.T. (0714152041) Researcher	Prof. Nkidi Phatudi Dr T. Kruger Supervisors
X	parent/guardian of
in Grade hereby agree to allow my chil	d to take part in the research that will be conducted
at the school.	
Signature	Date
Room 4-1.7, Level 4, Building	Faculty of Education
University of Pretoria, Private Bag X20	Fakulteit Opvoedkunde
Hatfield 0028, South Africa	Lefapha la Thuto
Fax +27 (0)12 420 5678	
Email name.surname@up.ac.za	





PROVINCIAL GOVERNMEI REPUBLIC OF SOUTH AFRICA

Enquiries: Dr. Makola MC, Tel No: 015 290 9448. E-mail: MakolaMC@edu.limpopo.gov.za

UNIVERSITY OF PRETORIA

FACULTY OF EDUCATION

EARLY CHILDHOOD EDUCATION DEPARTMENT

PRETORIA

0002

DR MG STEYN

RE: Request for permission to Conduct Research

- 1. The above bears reference.
- 2. The Department wishes to inform you that your request to conduct a research has been approved- TOPIC: THE IMPACT OF MALARIA ON TEACHING AND LEARNING.
- 3. The following conditions should be considered
 - 3.1 The research should not have any financial implications for Limpopo Department of Education.
 - 3.2 Arrangements should be made with both the Circuit Offices and the schools concerned.
 - 3.3 The conduct of research should not anyhow disrupt the academic programs at the schools.
 - 3.4 The research should not be conducted during the time of Examinations especially the forth term.
 - 3.5 During the study, the research ethics should be practiced, in particular the principle of voluntary participation (the people involved should be respected).
 - 3.6 Upon completion of research study, the researcher shall share the final product of the research with the Department.
- 4. Furthermore, you are expected to produce this letter at Schools/ Offices where you intend conducting your research as an evidence that you are permitted to conduct the research.

Page 1 of 2

Cnr. 113 Biccard & 24 Excelsior Street, POLOKWANE, 0700, Private Bag X9489, POLOKWANE, 0700 Tel: 015 290 7600, Fax: 015 297 6920/4220/4494

The heartland of southern Africa - development is about people!

5. The department appreciates the contribution that you wish to make and wishes you success in your investigation.

Best wishes.

doren

Dederen K.O

05/05/2014

Date

Acting Head of Department



Page 2 of 2

Semistructured interview protocol for Foundation Phase teachers

Research topic: Strategies to promote awareness and prevent malaria occurrence through the life skills programme in the foundation phase curriculum

Interviewer: You are welcome to this interview session. Thank you for agreeing to be a part of this research. Please know that you may choose not to answer any question you are not comfortable with.

- May you please tell me your name?
- How long have you been a teacher?
- How long have you been teaching in this school?
- What do you teach?
- Have you always taught children in the Foundation Phase or were you teaching other grades previously?
- What is the content of the curriculum with regards to health issues? (What do you teach the children about their health?)
- What are the methods you use in teaching the children about health issues?
- Have you ever heard about malaria?
- When is the malaria season in this area?
- Please tell me what you know about malaria?
- How did you get this information?
- Do you teach the children about malaria?
- Can you please tell me what you teach the children?
- (if children are being taught about malaria at school) Is this from the curriculum or from your private information?
- Do the children that you teach sometimes fail to attend school?
- What reasons do they give for not coming to school?
- What follow-ups do you make to confirm their reasons for not coming to school?
- What more do you think can be done to further help the children have control over their health especially with regard to malaria?

Thank you for your patience and for being a part of this study.

Semistructured interview protocol for parents of learners

Research topic: Strategies to promote awareness and prevent malaria occurrence through the life skills programme in the foundation phase curriculum

Interviewer: You are welcome to this interview session. Thank you for agreeing to be a part of this research. Please know that you may choose not to answer any question you are not comfortable with.

- What is your name?
- How old are you?
- How many children do you have?
- How old is the oldest?
- How old is the youngest?
- Do your children go to school?
- What grades are they?
- Did you go to school?
- At what level did you stop?
- Who takes care of this family
- What do you do for a living? (How do you get money to take care of your family?)
- How long have you been living in this village?
- Do you go to the clinic/hospital?
- What do you go to the clinic for?
- How often do you go there?
- Do you know what malaria is?
- What time of the year is the malaria season in this place?
- Please tell me what you know about it- like what causes malaria, mode of transmission, etc.
- How did you get this information?
- Have you ever had malaria fever?
- What did you do/where did you go to get help?
- (If help was sought at the community clinic) How far is the clinic from here?
- How easily did you get to the clinic?
- How soon were you attended to?
- Do you have any knowledge of how to prevent yourself from being infected?
- Do you think the school can be of help in making people know more about malaria?
- In what way?

Thank you very much for your patience and contributions.

Semistructured interview protocol for learners in the Foundation Phase

Research topic: Strategies to promote awareness and prevent malaria occurrence through the life skills programme in the foundation phase curriculum

Interviewer: You are welcome to this interview session. Thank you for agreeing to be a part of this research. Please know that you may choose not to answer any question you are not comfortable with.

- What is your name please?
- How old are you?
- What grade are you?
- When did you start coming to this school?
- Do you like this school? Why?
- How often do you come to school in a week? Why? (based on response)
- Do you miss school often?
- What happens when you don't come to school? (do your teachers ask why)
- (Show the child a picture of mosquito). Do you know this insect?
- Tell me what you know about it. (Further question depending on response)
- How did you learn about it?
- Do your teachers teach you anything about this insect? Tell me what?
- Can you tell me what to do so that this insect doesn't harm us?
- What more do you wish to know about malaria?

Thank you very much for your patience and contributions.

OBSERVATION SCHEDULE

Research topic: Strategies to promote awareness and prevent malaria occurrence through the Life Skills programme in the foundation phase curriculum

This observation schedule is aimed at gaining insight into the classroom experiences of learners in the Foundation Phase during the Life Skills lessons. I will observe the classroom atmosphere and interaction between the teacher and learners in the classroom. I will observe the school environment and also the home environment. The observation of the environment will give insight into the level of the people's knowledge about causes and prevention of malaria.

I will document my findings in my field notes and interpret these documented observations in order to enhance my understanding of the knowledge of learners about malaria health issues.

A) CLASSROOM SETTING AND INTERACTION

- 1. What are the major teaching aids on health issues in the classroom?
- 2. How do learners respond in class in terms of knowledge and attitude?
- 3. Do learners participate actively during Life Skills lessons?
- 4. What role did the teacher play in the class?
- 5. How was the lesson introduced?
- 6. What language was used most frequently during the lesson?
- 7. Did the teacher give room for learners to ask questions?
- 8. How were the questions answered?
- 9. Was there interaction between the teacher and learners?

B) CLASSROOM AND HOME ENVIRONMENT

- 1. What level of cleanliness is observed within the environment?
- 2. Are there water-retaining containers around the schools and houses?
- 3. What health-enhancing practices are carried out by the people?
- 4. Does the way of dressing change towards the evening?
- 5. Do the houses have nets or any other protection from mosquitoes?



RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE	CLEARANCE NUMBER:	EC 14/11/01
DEGREE AND PROJECT	PhD	
	Malaria education in the Fou Life Skills curriculum	undation Phase
INVESTIGATORS	Ms OT Adebanji	
DEPARTMENT	Early Childhood Education	
APPROVAL TO COMMENCE STUDY	27 March 2015	
DATE OF CLEARANCE CERTIFICATE	6 July 2017	
CHAIRPERSON OF ETHICS COMMITTEE	Prof L Ebersöhn	

СС

Ms B Swarts Prof NC Phatudi Dr T Kruger

This Ethics Clearance Certificate should be read in conjunction with the Integrated Declaration Form (D08) which specifies details regarding:

- Compliance with approved research protocol,
- No significant changes,
- Informed consent/assent,
- Adverse experience or undue risk,
- Registered title, and
- Data storage requirements.