

**AN ETHICAL EVALUATION OF THE PERCEPTIONS, ATTITUDES AND
PRACTICES OF TEACHERS AND LEARNERS TOWARDS THE PREVENTIVE
MAINTENANCE SYSTEM (PMS): A CASE STUDY OF THREE GOVERNMENT
CO-EDUCATION DAY SECONDARY SCHOOLS IN LUSAKA DISTRICT IN
ZAMBIA**

BY

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**A Dissertation Submitted to the University of Zambia in partial Fulfilment of the
Requirements of the Degree of Master of Arts in Applied Ethics**

THE UNIVERSITY OF ZAMBIA

2021

Declaration

I, declare that this dissertation:

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Approval

This dissertation of, is approved as the fulfilling the partial requirements for the award of the degree of Master of Arts in Applied Ethics by the University of Zambia.

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Date

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Dedication

To my wife Priscilla, my children Luyando, Luka, Lubomba and Luumuno. I dedicate this study also to my late father Joseph, and late brothers Cletus, Victor and Fred. I remember my mother Mary for making sure I developed interest in school.

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List of acronyms

ASM	Assistant School Manager
CDC	Curriculum Development Centre
CSO	Central Statistics Office
DEBS	District Education Board Secretary
FGD	Focus Group Discussion
GAO	Government Accounting Office
GRZ	Government of The Republic of Zambia
HOD	Head of Department
MESVTEE	Ministry of Education, Science, Vocational Training and Early Education
MGE	Ministry of General Education
MGEEC	Ministry of General Education and Early Childhood
MoE	Ministry of Education
NAOT	National Audit Office of Tanzania
PMP	Preventive Maintenance Programmes
PCSC	Parent Community School Committee
PMS	Preventive Maintenance System
PMSC	Preventive Maintenance System Committee

PTA	Parent Teacher Association
SB	School Boards
TEVET	Technical Education, Vocational and Entrepreneurship Training
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USA	United States of America

Abstract

This dissertation conducted an ethical evaluation of the perceptions, attitudes and practices of teachers and learners towards PMS in three government co-education secondary schools in Lusaka district of Zambia. One school was selected for the research from high income areas, middle income homes and low income homes. The specific objectives of the research were: (i) to examine the perceptions and attitudes of teachers and learners towards PMS, (ii) to assess if the practices of teachers and learners corresponded to what they said, (iii) to determine the actual condition of property in the schools and (iv) to make an ethical evaluation of the findings.

The research used a case study design involving a mixed methodology with an ethical component. The methods included primary and secondary sources. Primary sources were in-depth interviews, Focus Group Discussions (FGDs), questionnaires and observations. The primary data was collected from the following: in-depth interviews conducted with 6 PMS prefects, 3 PMS coordinators and 3 Assistant School Managers; questionnaires administered to 30 grade twelve learners and 6 teachers; 6 focus group discussions held with grade twelve learners; and observations made on school property and grounds. Purposive, convenience, and random sampling methods were used. Purposive sampling was used for selecting PMS prefects, PMS coordinators and Assistant School Managers (ASMs) for interviews. Convenience sampling was used when choosing schools and selecting teachers to administer questionnaires. Simple random sampling was applied when choosing classes, learners to participate in FGDs and answer questionnaires. Secondary sources involved literature from various relevant sources. The secondary data was gathered from books, dissertations, theses, and journals as well as from the internet. The research findings were ethically assessed through the application of value theory, environmental virtue theory and care ethics.

The research findings were that the perceptions and attitudes on the part of both teachers and learners were largely negative. Hence, their practices were not very supportive of the PMS policy. This resulted into a compromised state of school property and grounds. Amongst the recommendations made were the following: (i) that the Ministry of Education needed to place greater emphasis on character formation in education and (ii) that it should also include the teaching of environmental ethics in teacher training colleges: (iii) that the spirit of the government PMS policy directives needed to be more greatly emphasised in terms of value-orientation in order to motivate action and (iv) that government schools needed to have their own clearly defined and published policies based on the government PMS.

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CHAPTER ONE

INTRODUCTION

1.1 Background

The school is a leading agency in helping young people to form socially acceptable habits and to adopt a set of personally held values. The education of a young person in today's world would not be complete if it does not include preparation for living responsibly within society. The overarching aim of school education, is to promote the full and well-rounded development of among others the moral and spiritual qualities of all pupils so that each can develop into a complete person, for his or her own personal fulfilment and the good of society. To develop respect for the school property and school grounds in learners is one of the goals enshrined in the education policy. The Ministry of Education stresses the central importance of instilling a spirit of hard work and developing desirable values, attitudes and qualities among others towards the aesthetic area. Hence schools are encouraged to promote a sense of caring towards the school property and the school environment through PMS (GRZ, 1996).

One of the ways learners can be helped to develop a sense of respect, responsibility and caring towards the school property and grounds is largely with the help of trained dedicated teachers. The quality and effectiveness of an education system depend heavily on quality of its teachers. They are the key persons in determining success in meeting the system's goals. The educational and personal well-being of children in schools hinges crucially on their competences, commitment and resourcefulness. The training of teachers should also make provision of the personal education and growth of the students. They are expected to have

developed a coherent set of attitudes, values, and beliefs in this case towards maintaining the environment (ibid).

According to Dykiel et al. (2009: 99), maintenance of property is important in every educational institution because it prolongs the usable life of any facility. Maintenance of the features of a school's physical environment involves the repair, replacement and general upkeep of physical features as found in the school's buildings and grounds (Nhlapo, 2006: 42). Hence, it is necessary that PMS be accorded high priority as part of a school's functioning as a way of promoting a sense of ownership of the schools. There is a clearly laid down program by the Ministry of General Education (MGE) on how the maintenance of school property should be carried out in schools.

There is, however, a tendency for people who don't own property to neglect it. *Educating Our Future* national policy questioned the community's sense of ownership for its school. While some communities have developed this sense of ownership, others still felt little responsibility towards the schools. Education was still viewed as government's responsibility and the schools as government property. Therefore one of the responsibilities rested on families and with the wider community in which families lived. This was the challenge of increasing the community's sense of ownership for the local school and of fostering an interest in the maintenance of its fabric (GRZ, 1996).

Hamid et al. (2010: 44), for example, noted that deferred maintenance was often not immediately reported and sometimes not at all. Consequently, both school property and school surroundings run down. Indeed, most government school environments seem not to be very suitable for teaching and learning as enumerated by reports like The United Nations International Children's Emergency Fund (UNICEF, 2016: 62). It can be argued that PMS

is a subject that has continued to be one of the most overlooked areas of school administration.

The United Nations Educational Scientific and Cultural Organization (UNESCO, 2016) states that all the learners and teachers are to take part in PMS. All prefects and monitors are expected to supervise preventive maintenance activities. These are expected to work together with teachers in organizing the tools, the learners and places to do the maintenance exercise.

The presence of a reasonable ethical framework can greatly help in reinforcing PMS. Its success depends largely on the perceptions, practices and attitudes of teachers and learners. For this reason, the Ministry of General Education and Early Childhood (MGEEC, 2015) expects learners and teachers to have positive perceptions and attitudes towards PMS in leading to positive practices.

In Zambia, Chitamaluka (2016) carried out a study on the state of the infrastructure in upgraded schools in Muchinga Province using a case study design and qualitative methodology. Three District Education Board Secretaries (DEBS), five head teachers, ten teachers, thirty pupils and thirty parents were asked to give their own opinion on the state of infrastructure of the schools. The highest response indicated that the state of infrastructure was bad. Some indicated that the state of infrastructure was fair but those who responded that the infrastructure was good were very few.

In 2017, Likando carried out a study with the intention of collecting the views of participants on home and school factors contributing to the poor academic performance among female pupils in secondary school pupils of Lusaka District in Zambia (Likando,

2017). He used a descriptive research design. The total study sample was 54, comprising 15 teachers, 24 pupils and 15 parents. According to this study, teachers blamed the low academic performance among female pupils on dirty surroundings of the schools under study. The physical infrastructure of a school and its surroundings are considered to have a considerable influence on the academic performance of pupils. Some form of preventive maintenance in schools is clearly very important. Some form of responsible behaviour towards preventive maintenance in schools is clearly very important also.

1.2 Statement of the problem

Clearly, the Ministry of Education in Zambia wants to make learners grow holistically by developing value, responsibility, and care towards school property and surroundings through participating in PMS activities. However, it has not yet been established how seriously PMS is being implemented. Furthermore, no link yet has been made between how failure to adequately carry out PMS by teachers and learners has contributed to the deterioration of school property and surroundings as the studies carried out mainly focus on the relationship between the condition of school property and a conducive environment for learning. The issue of the motivation involved for implementing PMS policies, however, has not been investigated. Whereas there may be forms of external motivation such as pressure to obey the directives of the PMS policy, or pressure from school authorities in terms of rules and regulations, or an enhancement of status, or increased financial benefits, the issue of internal ethical motivation among both teachers and learners for the care of school property and surroundings has been noticeably lacking in studies so far carried out. Teaching and learning are, of course, central to the educational system but they don't necessarily result in character formation as referred to in the document *Educating Our Future* (GRZ, 1996). The

kind of adequate motivation required for responsible behaviour is not one that can be imposed externally but rather can only come from within the individuals in question. This is a gap in the literature which pays relatively little or no attention to the inner ethical dimension of caring for property. While such a lack of inner ethical motivation may not be the only cause of failure to look after school property, as forms of justified punishment clearly have a part to play, this study examines whether or not a lack of inner ethical motivation is a significant contributory factor.

1.3 Aim of the research

The aim of the research was to make an ethical evaluation of the perceptions, attitudes and practices of teachers and learners towards the preventive maintenance system (PMS) in three government co-education day secondary schools in Lusaka district of Zambia.

1.4 Conceptual ethical framework

Practices are preceded by attitudes and perceptions. In other words, attitudes follow perceptions just as practices follow attitudes. Perceptions are influenced by the value which one attributes to things and this value can be intrinsic, inherent or utilitarian. Intrinsic value refers to the value of things-in-themselves; inherent value refers to the value which combines the appreciation of the valuer along with the object being valued - in inherent value, the perception of the valuer, therefore, is not separated from the value in question. However, this kind of value assumes the “intrinsic value” of the object in itself. If this value is not present, there is nothing for the valuer to appreciate. Utilitarian value refers to the instrumental or use value of something to the user. Motivation depends on the manner in which a person appreciates the value in objects which may involve intrinsic, inherent or utilitarian value or a combination of all three. Consequently, an attitude is the more fixed

habitual stance that results from one's perception. Practices (or actions), in turn, are an expression of one's perception and attitude towards an object.

1.5 Operational definition of terms

PERCEPTION: An overall understanding of persons, things or events that includes an appreciation of value which is a key source of motivation

ATTITUDE: A habitual fixed stance taken in view of one's perception.

PRACTICE: An action that results from one's perception and attitude.

1.6 Theoretical framework

The three ethical theories that were applied were Value Theory, Environmental Virtue Theory and Care Ethics. These ethical theories were selected with reference to perceptions (value theory), attitudes (environmental virtue theory), and practices (care ethics).

1.7 Research questions

The objectives of the research were:

- (i) What were the perceptions and attitudes of teachers and learners in the three co-education government day secondary schools in Lusaka district towards implementing the PMS government policy?
- (ii) Did the practices of teachers and learners correspond to what they said?
- (iii) What was the actual condition of property in the three co-education government day secondary schools in Lusaka district?
- (iv) What did an ethical evaluation of the findings reveal?

1.8 Design

This research involved a case study design with an ethical component.

1.9 Methodology and Methods

A mixed methodology was used in the study and the methods included primary and secondary sources. Primary sources were in-depth interviews, Focus Group Discussions (FGDs), questionnaires and observations. Purposive, convenience, and simple random sampling were used. Purposive sampling was used for selecting PMS prefects, PMS coordinators and Assistant School Managers (ASMs) for interviews. Convenience sampling was used when choosing schools and selecting teachers to administer questionnaires. Simple random sampling applied when choosing classes and learners to participate in FGDs and answer questionnaires. Secondary sources involved literature from various relevant sources.

1.10 Ethical considerations

The research was approved by the Humanities and Social Sciences Research Ethics Committee of the University of Zambia. Clearance was also obtained from the Ministry of General Education (MGE) to go ahead with the research through the Provincial Education Officer (PEO) for Lusaka and the DEBS office (2018). Permission to involve the learners was obtained from the administrators of the three selected schools. The sanitary facilities of the girls were only accessed in the presence of the matron. Principles of respect, justice and beneficence were observed and confidentiality was ensured. Participants were informed about the nature of the research before beginning and about the benefits and risks of participating in

the research. Furthermore, informed consent was sought from all participants before the interviews commenced.

1.11 Significance of the study

This study will help to raise awareness on the importance of inner ethical motivation in keeping school property and surroundings well maintained and in promoting the development of greater responsibility regarding public property. It will highlight the importance of ethical theories which can help bring about active participation in maintenance. The government, which is the owner of school property and grounds and which has introduced the PMS policy will be the first beneficiary of this study. A second beneficiary will be the schools themselves. A third beneficiary will be teachers and learners who will hopefully develop greater sensitivity and respect for the value of school property and grounds from greater awareness of the importance of environmental ethics.

1.12 Delimitation of the study

The study did not cover all the schools in Zambia but restricted itself to three government co-education day secondary schools in Lusaka district which were selected as representative of primary, private, and mission schools.

Appendix I on PMS guidelines from MGEEC (2015: 86-88) contains many items that were not considered in the study. The ones considered are relevant to the focus on teachers and learners perceptions, attitudes and practices towards the programme.

1.13 Limitations

All schools investigated had two streams of morning and afternoon sessions. The study only considered the learners and teachers who were engaged in the morning sessions since

the afternoon sessions ended late. Furthermore, it was not easy to find all the grade twelve learners free at any particular time. The study was carried out only among grade twelve learners who seemingly considered themselves too senior to do manual work. It was not easy to convince teachers to answer the questionnaire as they seemed to be somehow negative about the whole research. Getting permission to carry out the research from the MGE required following a protocol which took time and hence delayed the process. In addition, gathering secondary sources of information from UNICEF, Examination Council of Zambia (ECZ), and National Archive libraries proved to be problematic.

CHAPTER TWO

LITERATURE REVIEW

2.1 Maintenance of school property

The concern that people must have good attitudes and practices towards school property can be traced to UNESCO in 1975. This document aimed at developing a world population that was aware of, and concerned about the environment and its associated problems. It noted that education should bring about interest, awareness, values and sensitivity in teachers and learners towards the environment. People were encouraged to have knowledge, skills, attitudes, motivations, and commitment to individually and collectively work towards solving current and future environmental problems. PMS policies are deeply embedded in such a document. However, while awareness may be there among teachers and learners, nevertheless, if they do not understand the value of maintaining school property and develop the appropriate attitudes towards promoting its well-being, the desired result may not take place. Motivation is one of the key ingredients in ensuring a favourable outcome and, while motivation can be material or policy driven, the kind that is most likely to greatly drive individuals and communities to care for their immediate environments, such as schools, is the inner motivation which is driven by ethics. The UNESCO document failed to highlight this important ingredient. This ingredient was similarly missing in the Tbilisi Declaration which advocated for programmes aimed at creating new patterns of behaviour towards the environment identifying its objectives as increasing awareness, building knowledge, changing attitudes, and encouraging participation in pro-environmental behaviours (UNESCO, 1977).

In an effort to get the teacher and learner more closely related to their environment, the World Commission on Environment and Development defined education for a sustainable

future as a learning process that would result in a commitment to development “that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). It aimed at developing a programme through the curriculum that could promote good attitudes and practices in the way people interacted with their total environment. However, although it was concerned with promoting sustainable living, it did not specify the basis for the underlying ethic that would support this programme in terms of personal and social responsibility.

2.2 Promoting a more holistic perception of education

Grafweg has explored the challenges of improving the national educational infrastructure in Rwanda (Grafweg, 2010). His aim was to change the way communities valued their schools by changing their perception of the school from a place for formal state schooling, predominately concerned with academic attainment, into a place concerned with overall life-education. However, whereas the intended goal of the study was to improve the lives of children by educating them to be responsible not just for themselves but for the overall environment, the manner in which it hoped to bring about this change was not clearly stated. While drawing attention to the problems faced in schools that militated against the attainment of a more holistic understanding of education, it did not specify the means by which school communities might be motivated to instil appropriate attitudes and practices in both teachers and learners.

A study was carried out in the Netherlands by using a participatory research design that was framed as a project giving Dutch primary schoolchildren the opportunity to discuss their views and ideas about their school playground (Caro et al., 2016). The study involved 34 primary schools in and around Amsterdam. According to the study, the children considered

it important that their school grounds remained undamaged and clean. They identified a clean environment as an important quality of enjoyable playgrounds. They valued the trees, bushes, flowers, plants and grass as important ingredients for enhancing the beauty and pleasant atmosphere of the school environment. The trees and bushes especially provided for hide-and-seek games as well as climbing and rolling on the ground. Some children even wanted to have a vegetable and fruit garden. In addition, there was enthusiasm about the idea of having animals like pigeons in the playground although they realised that it would be difficult to care for and maintain them. This study, however, did not consider the wider educational structure of the schools or the extent to which the school buildings themselves were being maintained.

2.3 Types of maintenance

According to the U.S Department of Education (2003: 74), there are four types of maintenance: emergency (or response) maintenance, routine maintenance, predictive maintenance and preventive maintenance. The one everyone dreads is emergency maintenance as, for example, repairing the only water pump when it fails. Sweeping of the classroom everyday early in the morning could be considered as routine maintenance. Predictive maintenance considers the likelihood of something failing and putting measures beforehand to insure smooth running. Preventive maintenance, however, is perhaps the most important category of maintenance of school facilities. Dykiel et al. (2009: 102) noted that while traditionally, school maintenance often aimed at a fix-it-as-it-breaks approach, schools now find it more economical to invest at the beginning by initiating Preventive Maintenance Programmes (PMPs) that address failing school facilities before they come to complete failure. The main aim of the Preventive Maintenance System (PMS) is to fix

something before it requires emergency repairs which are often costly, time consuming and disruptive to academic programmes.

These four types of maintenance are more specifically focused on the consequences of not caring for property in good time or not making provision for the future upkeep of property. The maintenance of property, however, requires people to carry out the activities required in order to enable maintenance to take place. Accordingly, in addition to other factors, people require the necessary moral motivation to commit themselves to action if maintenance is to be responsibly carried out.

2.4 PMS committees and their functions

2.4.1 Membership of the PMS committees

The task of planning and implementing PMS policies rests on the main PMS committees. The main PMS committees draw up programmes, policies, schedules and budgets for the entire school PMS. The PMS committee is comprised of the head teacher as chair, the deputy head as secretary, the chairperson of the Parent Teacher Association (PTA), all teachers who are chairpersons of various sub-committees, class teachers and some selected learner representatives from the board of prefects. The MESVTEE (2015) directed that there should be a Preventive Maintenance Programme (PMP) chart at school, class and learner levels in addition to a PMP calendar. Although the composition of members appears to be very inclusive, the crucial role of the treasury is not adequately considered which can result in a failure to account for PMS resources. This in turn can lead to a breakdown in the successful implementation of the PMS. Community representation may not be adequate as it is only a representative of the PTA who sits on the committee. Furthermore, although

comprehensive plans may be drawn up, they can end up on paper unless there is a sense of commitment present in members which in turn is dependent on the required motivation to put the plans into action.

There are four types of PMS committees, namely, the building and construction PMS committee, the School furniture PMS committee, the School grounds PMS committee, and the waste management PMS committee. These will now be considered.

2.4.2 The building and construction PMS committee

The building and construction committee is concerned with the general condition of schools. The industrial arts teacher is supposed to head it but very few schools have such teachers. This committee is expected to see to the inspection of buildings, dusting, arranging of desks, painting, the replacement and cleaning of window panes, roof maintenance, door hardware adjustments, lubrication of mobile equipment, washing walls and applying cobra on floors. In this context, Hoffman Architects (1997) has noted that missing window screws or bolts and broken panes should be replaced; Wakeham (2003: 31) has pointed out that doors often have problems with locks and handles as a result of loose screws just needing tightening; Ndlapo (2009: 115) has written that it is actually the responsibility of every staff member to be concerned for the upkeep of buildings. Some repairs, however, such as roof maintenance require special skills which can only be provided by trained human resource persons. They will also require the provision of equipment such as screw drivers, hammers, welding machines, etc., which schools may need to purchase.

2.4.3 The school furniture PMS committee

The school furniture committee is tasked with ensuring that all desks and teachers' furniture that are not in good condition are taken for repair (Adeoye and Tayo, 2012: 237). Furthermore, learners are expected to help with the repair of tables, chairs and desks. As furniture provides comfort in the learning process, it should be valued and cared for in view of the service it is providing. However, not all schools are likely to have workshops where teachers and learners can keep and repair broken furniture. In some cases, maintaining furniture requires specialised skills which teachers and learners may not have. For instance, the MESVTEE (2015) urged the employing of specialised workers for special maintenance such as repairing the floors, ceiling boards, chalk boards, vehicles, computers, drainages and pathways. They were also encouraged to employ caretakers who were expected to carry out specialised maintenance works such as the repair of electrical equipment, machinery, and furniture. In addition, they were directed to employ sanitary officers and other general workers to supplement maintenance works if there was enough money in the school treasury.

2.4.4 The school grounds PMS committee

The committee in charge of the school grounds needs to carry out maintenance on a preventive basis (Szuba and Young, 2003: 83). It can divide the entire school surrounding into zones that are all allocated to different classes depending on whether they are hard or soft landscapes. Hard landscapes which are sidewalks, parking lots and driveways should be well maintained through repair and cleaning so that they don't pose risks to the school community. For instance, these are sometimes made of gravel which easily erodes but can be replaced. Soft landscapes require planting, pruning, fertilizing and watering trees, flower

beds, lawns and gardens in order to enhance the appearance of the landscape. These are easily affected by climate and the condition of the soil which is manifest in the rate of plant growth, drainage systems and surface water control (Ndlapo, 2009: 36). The appearance of the school grounds often gives the first impression of how actively PMS is being implemented in schools.

2.4.5 The waste management PMS committee

The waste management PMS committee has a huge task of preventing poor garbage disposal leading to the breeding of flies and vermin that may cause diseases. Stock (1991) wrote that the spread of infectious diseases could be achieved by cleaning vomits, urine and excreta and ensuring that there were no sharps that could cause injury. Infectious that are cited are bacillary dysentery, food poisoning, hepatitis A, Hepatitis B, measles, rubella, meningitis, mumps, chicken pox, whooping cough, poliomyelitis, and HIV/AIDS. To avoid these, PMS can take the form of randomly collecting garbage, unblocking drainages, emptying bins and cleaning waste disposal areas (Ndlapo, 2006: 22). Emptying of trash cans from the classrooms and outdoor areas should be done every day and trash cans and bags should not be overloaded. The committee also makes sure that all sanitary facilities like toilets and ablution blocks are cleared of excreta, graffiti and running water. By and large, waste management is inevitably important in schools. Handling solid waste such as excreta and emptying bins often results in being dirty and leaving a bad smell on the people doing it. This can result in stigmatisation ending in resentment of doing the work. Consequently, few teachers and learners are likely to be proud to belong to the waste management committee.

2.5 School maintenance in some countries outside Zambia

A study carried out Ifeoma (2012b) to investigate school facilities in public secondary

schools in Delta State in Nigeria. The purpose of the study was to find out the following: (a) the state of the facilities available, (b) the types of maintenance carried out by school administrators, (c) the factors encouraging the depreciation of school facilities and (d) the roles of school administrators in the management and maintenance of school facilities. The study employed an ex-post-facto research design using a questionnaire on 640 respondents selected through stratified sampling techniques from all the 358 public secondary schools in the State. The study revealed that the maintenance carried out on school facilities was inadequate for the majority of the facilities. Little attention was paid to the school surroundings. Amanchukwu and Ololube (2015: 99) noted in their study that there were laxities with regard to the maintenance of school plants in some Nigerian public secondary schools. Lack of a maintenance culture had eaten deep into the fabric of the nation's citizenry. Although the study highlighted the presence of a poor maintenance culture, it failed to offer any solutions to this problem.

Srivastava (2013) carried out a study that included a survey of selected schools in six districts in India and was aimed at providing the status of sanitation and hygiene in these schools. The study concluded that there was poor maintenance of available facilities. Restricting itself to sanitation and hygiene issues, it did not focus on the relationship between the condition of school property and grounds to health issues.

Muzir (2017) conducted a review of the maintenance of four Malaysian secondary schools using a mixed methods research involving a survey questionnaire and face-to-face semi-structured interviews, in addition to walk-through observations of the schools and school documents. The study did the following: (a) examined the current policy, procedures and mechanisms of maintenance in Malaysian secondary schools; (b) established the key

challenges of school building maintenance in Malaysia; and (c) assessed the level of satisfaction of the administrators and end users with respect to the condition and maintenance of the school buildings. Multiple key-holder perspectives were drawn from the experiences of education officers, school principals, teachers and students. The study noted that the underlying factor which affected the condition of the buildings was that maintenance received scant consideration. It drew attention, however, to the fact that schools needed to be viewed from an ecological perspective where school building maintenance is understood more holistically within an educational, social, cultural and geographical context.

In 2016 in America, the Office of Inspector General examined the condition of school facilities funded by the Bureau of Indian Affairs and the Bureau of Indian Education focusing on the efforts being taken to maintain the facilities in the best condition possible and in a manner that would be safe for staff and students (OIG, 2016). Onsite inspections of facilities had been carried out in 13 schools. Interviews were limited to school officials and the schools were told to prioritize maintenance needs based on health and safety and the extent to which they negatively affected learning. However, there was no focus on the importance of motivation in teachers to enable learners to develop a caring attitude to property and grounds.

The National Audit Office of Tanzania carried out an audit to assess whether the Ministry of Education, Science, and Technology and the President's Office–Regional Administration and Local Government had taken the necessary steps to establish the mechanisms for ensuring the maintenance of primary schools infrastructures in the country (NAOT, 2017). The study concluded that the steps taken were inadequate to warrant proper maintenance and

rehabilitation of school infrastructure. A focus on the condition of school surroundings was absent and no account was given as to why the steps taken were inadequate.

Chimombo et al. (2000) carried out a study on classroom, school and home factors that negatively affected girls' education in Malawi. The selected districts were those where there were UNICEF funded projects in Mangochi, Mchinji, Kasungu and Nkhata-bay. The study used both qualitative and quantitative methods. The selection of the schools was based on convenience and purposeful sampling. The study reported that many primary schools were in bad condition. However, the focus was not comprehensive enough to include the school surroundings.

Ndlapo (2009) conducted a study aimed at determining how a whole-school approach to the maintenance of facilities could be developed in schools in South Africa. It used an exploratory qualitative empirical research design involving the use of ethnographic observation, photography and interviews. It investigated the nature of the maintenance of the school facilities and what the practices were in fourteen schools in South Africa. The study found that the maintenance practices of facilities at the schools mainly comprised of routine, corrective and emergency maintenance and that maintenance was not treated as an integral component of the educational programmes. Preventive maintenance in this case was not much considered.

From all of the above, it is clear that the lack of proper maintenance of school property and grounds is a widely recognised problem. The lack of adequate school maintenance has been noted in all of those countries mentioned above where studies on schools have been carried out. It has also been noted that attention to school grounds is not much emphasised. More especially, these studies fail to offer adequate solutions to the problem of school

maintenance and there is no focus on the motivation that may be required for the successful outcome of school maintenance programmes.

2.6 School maintenance in Zambia

In Zambia, successive governments and school policies have always wanted to enable learners to participate in maintaining property and the environment. According to the Northern Rhodesian Government, the general aims of primary education were to develop the highest possible standards of individual conduct and social behaviour and develop an understanding of the immediate environment (NRG, 1963: ii). Its goal was to develop the highest possible standards of individual conduct and social behaviour in addition to an understanding of the immediate environment. It was assumed, for example, that educated human beings would willingly show concern for the environment by individually participating in caring for its maintenance. It was not clearly stated, however, how this ideal form of behaviour would be achieved.

There was a directive issued by the Ministry of Education in 1977, *Educational Reforms: Proposals and Recommendations*, stating that the upkeep and maintenance of educational facilities must be done regularly to promote a good learning environment where, for example, no window was broken which would allow rains and unwanted winds to enter learning rooms (MoE, 1977: 83). This was also understood to be a cost saving measure. Schools were tasked on a self-help basis to undertake the maintenance of equipment and the general upkeep of school grounds, including horticultural aspects. Accordingly, school buildings and equipment were supposed to be kept in a reasonable state of repair and the school grounds were supposed to be kept presentable. In addition to imparting knowledge to students, teachers were expected to guide learners in forming positive and acceptable

social values in life. This was to be achieved by stimulating student interest and encouraging their positive role in the welfare of the school. It stated that teachers should take collective responsibility for the school. However, the basis for such collective responsibility was not specified in order to ensure the desired attitudes and practices.

In 1992, the Ministry of Education issued the *Focus on Learning National Education Policy* emphasising that arrangements needed to be made for the development and dissemination of a training manual for teachers in school construction and maintenance. It acknowledged that the physical condition of a large number of primary schools had deteriorated to a shocking degree (MoE, 1992). However, a training manual in itself does not give an assurance that teachers are going to automatically engage in maintenance. In other words, having knowledge does not spontaneously lead to practice. Four years later, the Ministry of Education issued another document, *Educating Our Future Policy*, which reiterated that one of the goals of the Ministry of Education was to produce a learner capable of being animated by a personally held set of civic, moral and spiritual values, a learner who was able to participate in the preservation of the ecosystem in one's immediate and distant environment (MoE, 1996: 5). Once again, however, being knowledgeable about the importance of protecting property and one's natural environment is in itself no guarantee of its implementation in practice. Whereas the document rightly made reference to the importance of moral and spiritual values, it did not elucidate on what these entailed with reference to the maintenance of school property and grounds. In 2006, the government's *Fifth National Development Plan* also stated that the condition of most government buildings such as schools was poor mostly due to many years of neglected maintenance (GRZ, 2006: 85).

In 2007, the *National Implementation Framework 2008-2010* recommended the continuation of the policy of the maintenance of schools (MoE, 2007: 2). While it was assumed that the focus on maintenance was promoting efficiency and cost-effectiveness, there was no review of previous frameworks to assess if they were successful in implementing maintenance or not. The Technical Education, Vocational and Entrepreneurship Training policy (TEVET) was issued in 2013 (CDC, 2013). It had been informed by *Educating Our Future Policy* which recommended that learners were to have civic, moral and spiritual values and concern for the environment. The intention was that training in preventive maintenance as a social objective would result in the successful care of school property and tools. However, such a training manual was not likely in itself to achieve its purpose without the support of underlying ethical values and principles.

The MESVTEE (2015) in Zambia tasked school administrators with supervising PMS. It issued policy guidelines on how the Preventive Maintenance System (PMS) should be conducted in schools (see appendix I). It recommended that at least once a year, the Ministry was expected to inspect school environments with the help of Education Standards Officers from the district. None of these researchers, however, gave reasons as to why inspections were not being adequately carried out. It made clear that the school administration in Zambia should play its role by, for example, forming policy. The chairpersons of the sub-committees and class teachers were supposed to implement the decisions made by the main PMS committees.

However, passing this responsibility from one to another down the line by giving it to juniors could have the ultimate effect of failing to carry out the required action. The process of supervision descending from the head teacher, through the deputy head, the coordinator,

sub-committee chairperson and eventually class teachers could render the final outcome of the exercise ineffective. Whereas the PMS policy guidelines were well intended directives for action, there was no guarantee that they would be sufficient to ensure implementation in practice.

2.7. Poor school maintenance vis-a-vis education

2.7.1 Poor infrastructure in schools

Zwier and Vaughan (1984: 263-264) reported that by 1984, one third of schools in the U.S.A needed extensive repair or replacement. One half of schools had at least one unsatisfactory condition such as poor ventilation, heating or lighting problems, or poor physical security. In 2003, the U.S. Department of Education (2003: 29) went further to note that nearly half of the nation's school buildings in the USA needed to be renovated or replaced. The OIG (2016) of U.S.A recorded that Ahfachkee Day School had damaged floors in two classroom portables to the extent of rendering them unsafe.

Brierley noted that the standard of school buildings was intolerably low in England (Brierley,1991). The portables being used were in visibly poor condition and past their useful lifespan. In South Africa, Ndlapo (2009) mentioned the problem of graffiti in schools, especially in toilets, and he referred to two schools out of sixteen having bird droppings from resident pigeons. He also expressed an awareness of an overpowering and unpleasant smell from the toilets. The doors were no longer opening easily but instead were becoming stuck. He also found damaged desks and chairs heaped up and left unrepaired.

Adeoye and Tayo (2012: 232-236) pointed out in their study in Nigerian that primary school buildings were dilapidated, displaying broken window panes or shutters, plaster peel offs, broken floors, leaking roofs and no ceilings. Using a descriptive survey research design,

Ifeome had carried out a study on common types of indiscipline in Delta State secondary schools during the 2007/2008 academic session in Nigeria (Ifeome, 2012a). His stratified sampling technique involved 935 respondents comprised of 205 principals, 310 teachers and 420 students drawn up from 60 secondary schools. The schools were located in urban and rural areas. The study concluded that one of the causes of indiscipline was a school environment that was not well maintained. Ifeoma (2012b) acknowledged that school facilities in the schools in Nigeria were generally in a state of disrepair.

The NAOT (2017) reported on the dilapidation of classrooms to the extent of falling down. An example was given of Kiboriani primary school at Mpwapwa District Council, Dodoma Region, where the school failed to conduct maintenance leading to the collapse of two classrooms. The physical damage caused was massive and attracted much attention. It was noted during site visits in Mpwapwa District that a number of broken desks were collected and stored in one of the classrooms although those desks needed only minor maintenance.

2.7.2 Poor care of school grounds

Stock (1991) found that a third of all staff injuries in schools resulted from slips, trips and falls. Some of the causes of these accidents were moss, leaves, lichen and litter on external paths. He also observed that no one was attending to the care of playgrounds. Brierley (1991) similarly drew attention to the fact that there was a growing concern that many school playgrounds created unnecessary risks. Ndlapo (2009: 115) pointed out that teachers and learners bring dirt, sand and other substances into classrooms from outside. He also noted the presence of litter and eroded soil in township schools. According to Caro et al.

(2016), even children complained that some places were dirty and stinking due to urine, vermin, mud, sand or moisture.

2.7.3 Negative impact on teaching and learning

Berry (2002) carried out a case study on how the 1997 renovations of Charles Young Hill Top Academy in the District of Columbia affected educational performance. He concluded that the cleaning and maintenance of schools was vitally important for healthy education. According to (Ndlapo, 2009: 28), school buildings provide protection from water, wind and pollution and maintain a suitable heating system for teaching and learning just as skin does for the body. Nevertheless, he observed the presence of broken windows in all the sixteen schools that he studied. Grafweg (2010) also noted that the lack of window panes posed problems during rains.

Srivastava (2013) found that only 34% of girls and 49% of boys completed school and one of the reasons he gave for this was due to poor sanitation and hygiene facilities. Amanchukwu and Ololube (2015: 99) observed that defective lighting in classrooms resulted in poor education performance. Muzir (2017) similarly noted that the maintenance of school buildings affected the quality of education, teaching and learning as well as occupants' feelings and emotions. The GAO (2017) was concerned that the poor physical condition of school facilities endangered students.

The studies referred to above demonstrate that the physical conditions of schools and school grounds should not be overlooked with respect to the quality of education. The following are some of the reasons given as to why the maintenance of school property and grounds tends to be neglected: poor supervision; inadequate training; lack of inspection; enrolment

explosion; insufficient funding and resources; over-centralisation; and lack of proper planning.

2.8 Reasons for poor maintenance

2.8.1 Poor supervision

Berry (2002) noted that the environmental quality of a school was always symptomatic of a school administrator's attitudes. Ndlapo (2009) acknowledged the ineffectiveness of school maintenance committees. Wakeham (2003: 5) regretted that head teachers, despite chairing the main PMS committees, appointed deputy head teachers as chairpersons of sub-committees thereby reducing the overall effectiveness in practice of the PMS committees. Furthermore, the school management system often appointed a teacher as a Preventive Maintenance System Coordinator in place of the deputy head teacher. Adeoye and Tayo (2012: 232-236) recommended that the head teacher as the custodian of the school plant should ensure the proper utilization and maintenance of the school plant in order to prevent loss of time, money and space.

2.8.2 Inadequate Training

Ndlapo (2009: 48) emphasised the need for hygiene education for learners and training for maintenance staff. Adeoye and Tayo (2012: 237) also noted that maintenance staff may not have the training required to carry out their task effectively. It can be argued that in addition to needing adequate training, they also needed adequate motivation to commit themselves to the task. Otherwise, the exercise was not likely to yield the intended results.

2.8.3 Lack of inspection

Jones et al. (2003: 1572) carried out a study on 13 Schools in the U.S.A as a representative sample of public and private elementary, middle/junior, high and senior high schools on whether these schools performed inspection and maintenance. The study revealed that more than 80% of schools carried out inspection and maintenance with most types of inspection and maintenance being performed by more than 95% of schools. The issues investigated were fire extinguishers (99.3%), halls, stairs, and regular classrooms (96.6%), kitchen facilities and equipment (96.6%), playground facilities or equipment (94.8%), lighting inside of the buildings (97.5%) and lighting outside of the buildings (94.6%). The study concluded that the physical environment in schools was receiving increased national attention in the U.S.A.

Despite the above, Stock (1991: 55) referred to the failure of formal inspection in some schools. He noted that inspection could help staff to identify PMS needs which could be set as priorities. Preventive maintenance teachers were expected to carry out inspections and offer some recommendations on whether the work had been done to satisfaction. Ndlapo (2009: 47) also commented on poor maintenance activities with respect to failure in inspection reports. Ifeoma (2012b) emphasised that the role of school administrators in the management and maintenance of school facilities should include the periodic inspection of facilities. Amanchukwu and Ololube (2015: 99) noted in their study, however, that management rarely carried out inspection in schools.

2.8.4 Enrolment explosion

GRZ (2006: 85), Adeoye and Tayo (2012: 232-236), Ifeoma (2012b) and Grafweg (2010) all noted that the enrolment explosion had exerted pressure on available school facilities

leading to their depreciation. On the other hand, there were ways in which a large school going population could increase the potential to carry out maintenance; firstly, serious commitment towards maintenance from large enrolled numbers could be a solution to degrading schools, and secondly, increased enrolment could be the means of providing more resources to carry out maintenance if properly managed.

2.8.5 Insufficient funding and resources

Adeoye and Tayo (2012: 232-236) drew attention to the importance of fundraising towards school maintenance. Ndlapo (2009: 47) also noted that poor funding de-motivated those involved in carrying out maintenance as it resulted in minimal access to the equipment needed. Furthermore, Amanchukwu and Ololube (2015: 99) and the NAOT (2017) identified inadequate funding as one reason for poor maintenance in schools. In Zambia, the Ministry of Education planned to revamp school buildings through government funding because schools were not meeting the costs (MoE, 1996: 5). The MESVTEE (2015) directed that the whole community, the School Boards and Parent Teacher Associations, and not only teachers and learners, needed to get involved in the maintenance of schools with respect to financing and fundraising and by even adopting sections of the schools.

2.8.6 Over-centralization

Adeoye and Tayo (2012: 232-236), Ifeoma (2012b) and Amanchukwu and Ololube (2015: 99) all pointed to the need for the decentralisation of the process of school maintenance. More committed involvement of teachers and learners could be an effective means of decentralising the process. However, the success of such involvement would require the existence of appropriate incentives and motivation to ensure its effectiveness.

2.8.7 Lack of proper planning

Berry (2002) acknowledged that a healthy school environment could only be kept in a steady state with a thoughtfully organized cleaning and maintenance programme. Ndlapo (2009) recommended that schools needed to implement a comprehensive and systematic process of maintenance of facilities with a strong strategic dimension. The Department of Education in America noted that a sound facilities' maintenance plan would serve as evidence that school facilities would be cared for appropriately (U.S. Department of Education, 2003: xi). Jones et al. (2003: 1570) noted that decisions about how a school was maintained and how programmes were implemented have important implications for the health and the learning potential of children.

The MESVTEE (2015) in Zambia recommended that there should be a PMP chart at school, class and learner levels in addition to a PMP calendar. One of the strategies identified by the Ministry of Education in Zambia was to strengthen the PMPs to ensure that the school infrastructure was cared for on a regular basis - although it was not clear what steps should be taken to strengthen the infrastructure (MoE, 1996: 5). The NAOT (2017) emphasised that the absence of a coordinated plan for maintenance led to the poor states of schools because the maintenance of the infrastructures of primary schools had only been carried out on *ad hoc* basis.

2.9 Irresponsible attitudes and practices among teachers and learners

In Malawi, Chimombo et al. (2000) were of the view that there was excessive emphasis on children's labour in carrying out school development and maintenance works. However, it would be important to clarify between the educational value of school works and the exploitative labour of children which would be seen as an infringement of human rights.

Caro et al. (2016) found that children often liked to paint graffiti designs and colours sprayed everywhere on walls, doors and floors and even in toilets instead of considering it as damaging school property.

Amanchukwu and Ololube (2015: 99) referred to the situation where, in some tertiary institutions, the works department staff played a nonchalant attitude when they were informed about the bad state of the school property. Instead of using available resources to maintain schools, they preferred to complain to Ministry authorities for attention and action. Adeoye and Tayo (2012: 232-236) also identified bad attitudes to government property by school heads, teachers and students which expressed a lack of a maintenance culture among Nigerians.

Oluwatoyin (2014) carried out a study to determine whether the attitudes of users contributed to the deteriorating conditions of public secondary school buildings in Ogun State, Nigeria. He used a stratified random sampling technique in selecting thirty-six public secondary schools out of forty-seven in the study area. A structured questionnaire was used to gather primary data from the users of the academic buildings. Direct observations were also made on the state of disrepair of the buildings. The quantitative data was analysed using univariate and multivariate analyses while the qualitative data was analysed using content analysis. The result was that around 58.4% of the respondents were of the opinion that users had poor attitudes towards maintenance of the schools. Nosiku (2016) similarly found that communities and schools had the attitude of expecting others to clean up their mess by pointing accusing fingers at councils for the failure of waste collection.

Adeoye and Tayo (2012: 237) noted in their study of government schools that dragging furniture on the floor, moving it to different points, wrongly sitting on it, and so on, caused its rapid wear and tear in most of the schools. In view of observations such as these, they were not surprised that most academic buildings, especially classrooms in the public secondary schools which they investigated, were in a state of disrepair. They recommended that a study be carried out examining the relationship between the poor conditions of public secondary school buildings and user attitudes. Oluwatoyin (2014) also referred to the harmful practice of learners dragging furniture.

A study carried out by Makoba aimed used a descriptive exploratory research design combining both qualitative and quantitative data (Makoba, 2014: 51). The target population involved the District Education Board Secretary (DEBS), head teachers, teachers, pupils and parents from selected schools in Nchelenge district. He noted that it was through PMS outside the classroom environment that teachers and pupils learnt about good environmental management practices. However, such knowledge unfortunately did not automatically translate into actual concern and commitment to solving maintenance problems.

In a descriptive cross sectional design study conducted by Namukolo (2014) which employed both qualitative and quantitative approaches, 62 primary school teachers were asked whether they thought the maintenance and repair of appliances, tools and other equipment fell into the category of (i) important, (ii) not at all or (iii) not sure. The findings established that although teachers were fairly well informed about maintenance activities, more than half of the teachers did not involve themselves in such activities.

In Zambia, Nosiku (2016) carried out a research among Ndola urban primary schools with the aim of investigating factors that affected the management of solid waste. The research design used was a descriptive survey. The study sample involved a total of 80 pupils, 16 teachers, 4 administrators and 2 officials making a total of 102 participants. In view of the failure to deal adequately with waste disposal, he recommended the need for a change in behaviour in order to improve the situation and ensure that the school surroundings were kept clean. However, he did not indicate what kind of attitudes lay behind such practices nor did he give guidance on how such irresponsible practices could be improved. It became clear that the knowledge which some had received in environmental protection remained as an academic exercise and was not translated into responsible practices

Brierley (1991) noted that teachers are expected to have a responsible duty of care for the overall education of learners in their care. Such education should include moral as well as intellectual development. Hence, Ifeome (2012a) recommended the need for moral as well as academic education. Moore pointed out that teachers were expected to “foster environments that reflected ethical behaviour, of respect, kindness, safety and care” and that they were expected to manage school environments (Moore, 2013: 5). School authorities are thus expected to act as good role models for the holistic education of learners which should include caring for school property and grounds.

According to Kowalski, the major players in the actual maintenance of schools are teachers and learners as they are the frequent users of these facilities (Kowalski, 2002: 63). Berry (2002) has also noted that the successful restoration of a school can be achieved by the collaboration of dedicated teachers and learners. Amanchukwu and Ololube (2015: 99) similarly stated that if the teachers take care of the school properties, learners will emulate

them. In addition, older learners are expected to help and monitor younger learners in developing such caring habits (Ndlapo, 2009: 48).

2.10 Conclusion

The literature discussed above has drawn attention to the widespread lack of an adequate maintenance culture in government schools. Whereas a variety of reasons have been noted for this, they are largely focused on the more “external” factors such as poor supervision; inadequate training; lack of inspection; enrolment explosion; insufficient funding and resources; over-centralisation; and lack of proper planning. What is missing is a focus on the “inner” dimension of moral (ethical) motivation which is almost totally absent. Such motivation relates to the manner in which teachers and learners perceive the value of school property and school surroundings which in turn will have a major effect on their attitudes and practices. Attitudes and practices are underpinned by motivation. Whereas moral motivation may not be the only incentive to result in good maintenance behaviour as justified punishment may also be a necessary ingredient, it is one that plays an important part in ensuring the success of PMS programmes. This is the gap in the literature that this study aims to fill.

CHAPTER THREE

THEORETICAL FRAMEWORK

3.1 Introduction

This chapter presents the ethical theories that guided the research namely; Value Theory, Environmental Virtue Theory and Care Ethics.

3.2 Value theory

Curry (2006: 40) notes that there can be no ethics without value. Thomas Hurka notes that value theory, or theory of the good, is one of the two main branches of ethical theory, the other one being rights theory.¹ Value theory is about the states of affairs that are considered good in themselves or that make the world desirable such as, for instance, in the experience of pleasure whereas the opposite would be the experience of pain. Rights theory, on the other hand, identifies which actions are right such as keeping promises as distinct from lying. Value theory, therefore, identifies value with the good results of actions. Value, then, can be attributed to the natural environment insofar as actions related to the environment bring about good results. This value, unfortunately, is often associated with humans in the sense that things are valued to the extent that people benefit from them. Indeed, humans have often used the environment in such a way as to degrade it rather than manage it in a sustainable manner. According to Keller (2010: 253), environmental degradation is caused by the attitude that the world is there to be exploited to satisfy human needs and wants. Curry (2006: 42) argues that the best way to understand the environment is to dissociate it from usability.

¹'Value Theory' in Copp (2006).

Apart from utilitarian (or use value) where the focus is on the good results of actions, there is also intrinsic and inherent value. Whereas intrinsic value focuses on the value that an object has in-itself independently of humans, inherent value focuses on the relationship of the thing valued to the valuer. For instance, the universe has intrinsic value in-itself although it was there for millions of years before the emergence of humans who could appreciate that value. Inherent value is exemplified in the appreciation of a rainbow or some wonderful sight such as the Victoria Falls which requires the relationship of appreciation between the viewer and that which is being viewed. Intrinsic and inherent value, however, are often considered by many as one and the same.

According to Paul Taylor, respect for the environment should be our ultimate attitude.² His principle of moral consideration stipulates that living things deserve the concern and consideration of all moral agents simply by virtue of their membership of the earth's community of life on earth. This is a form of intrinsic value where respect is due to the value of the environment. We should adopt this attitude out of the recognition that all living things, and not just humans, have intrinsic/inherent value or worth and deserve to have the good of their existence appreciated. The principle of intrinsic value states that whatever kind of entity is a member of the earth's community of life has a value or a good-of-its-own. Hence, it should be preserved or promoted as an end-in-itself and for the sake of the entity whose good it is. Every organism, species population and life community has a good of its own which moral agents can intentionally further or damage by their actions. Equally, the abiotic environment (i.e., land, soil, water and air) is also entitled to moral consideration. Therefore, rational agents should morally account for their actions with respect to the

²'The Ethics of Respect for Nature' as found in Olen and Barry, 2002: 518–528.

environment for better or for worse. For example, actions of fertilizing and watering plants promote their well-being. This is so despite the fact that an organism (e.g., a tree) does not have awareness of the actions that we may take to promote its well-being. The good of an individual non-human organism consists in the full development of its biological power making it strong and healthy from one generation to the next. This awareness directs humans to live by certain norms which constitute the rules of conduct and standards of character that should govern the way the environment should be treated. It is the ethical framework within which our responsibility towards the environment develops. Respect for environments involves a recognition of the fact that we depend on the surrounding for survival making the adopting of this attitude a rational and intelligible thing to do. Hence, the environment has both utilitarian and intrinsic/inherent value.

The way people perceive the environment depends on the value they attribute to it. In other words, it depends on the respect people have for the environment. Although not explicitly stated, carrying out PMS entails the need for an attitude of respect for the value of surrounding objects by both teachers and learners. It means, in the context of this study, that the perceptions, attitudes and practices of both teachers and learners should be positively guided by respect for the value of the environment in schools. It was in this sense that value theory was applied to the effectiveness of the PMS policy in schools

3.3 Environmental Virtue Theory

Generally, a virtue is an admirable quality of character that facilitates good conduct and responsible behaviour (Chappell, 2006: 158). Virtue ethics focus on issues of character,

excellence and human flourishing.³ Virtue is enshrined in global and local education policies which have been very emphatic about educating holistic learners.⁴ Some virtue ethicists consider an ethic of character to be notionally prior to an ethic of action (Keller 2010). The *Educating Our Future* National Education Policy (MoE, 1996) puts emphasis on individual well-rounded growth of learners committed to work and solving problems.

According to Julia Annas, the environmental virtue theory approach focuses on the need to promote good moral habits and ultimately good behaviour.⁵ It seeks to cultivate environmental virtues, namely, those character traits, dispositions or attitudes that are conducive to the flourishing, not simply of human beings but also of non-human entities. An environmental virtue ethic is needed to make us relate well to the environment for two reasons. Firstly, it provides guidance regarding what we ought and ought not to do to the environment. Secondly, it is also an ethic of character providing guidance on what attitudes and dispositions we ought and ought not to have regarding the environment (Keller 2010). An environmental ethic is virtue-oriented to the extent that it assesses human behaviour in relation to the environment with reference to virtues and vices.⁶ Environmental virtues identified are gratitude, wonder, sensitivity, respectfulness, appreciation and stewardship (Keller 2010). These can enable a person to respond both emotionally and by action to the environment.

According to Idagu (2015: 3) “virtue can only be gotten through education which is the proper responsibility of the state.” In Zambia, the Ministry of Education assumes the state function of promoting virtues in citizens by making policies and implementing them. It is

³Cafaro at https://www.academia.edu/25210152/Environmental_Virtue_Ethics

⁴UNESCO (1975&1977), WCED (1987),NRG (1963), MoE (1996: 5), and CDC (2013)

⁵ ‘Virtue Ethics’ in Copp (2006).

⁶Longbottom

vital in an attempt to imparting virtues that the teachers and learners are versed or knowledgeable of the rules. Chappell (2006: 105) notes that virtuous habits should be talked about by teachers and usually in some form of instructive teaching guidance. Burnyeat (1980: 80) also notes that knowledge is extremely vital to moral education in the initial stages of an individual's growth as a starting point to the practice of following rules. One must know the rules that guide in acquiring virtue (Chappell 2006: 200). Furthermore, awareness and sensitization are vital in an attempt to promote virtues.⁷ Consequently, there is need for appropriate legislation in the respect of inculcating virtues (Sommers and Sommers, 2009: 251). For this reason, the MESVTEE (2015) came up with PMS guidelines.

However, knowledge alone does not complete the moral education process. Having knowledge about a particular need does not ultimately translate into an action swing in spite of having a natural ability to do so (Jonas 2016: 211). Makoba (2014) and Namukolo (2014) noted that awareness of environmental problems did not totally lead to action in order to address the situation. Hence it is important to figure out what else could be done to motivate learners to the point of wanting to participate.

Environmental virtue theory is relevant in the educational domain in promoting proper guidelines or policies with regard to how the school environment should be maintained. More specifically, it applies to the extent to which learners and teachers have acquired environmental virtues with reference to the implementation of the government PMS policy.

⁷UNESCO (1975), UNESCO (1977), WCED (1987) and MESVTEE (2015)

3.4 Care Ethics (or Ethics of Care)

Virginia Held writes that at least care ethics refer to an activity such as taking care of someone (or something).⁸ Caring is an attitude that typically accompanies an activity. Therefore, it is also acknowledged that caring means meeting the needs of those who cannot by themselves achieve them. Others see it as a practice and a value in as much as it is an expression of a virtue of caring.

Care ethics (or “ethics of care”) has emerged from virtue ethics. It differs, however, in that care ethics focuses on the actual conduct or behaviour of individuals in particular concrete situations rather than on the habitual trait that has become a structured feature developed in a person's virtuous character. Care ethics developed on the understanding that people are interdependent and relational.⁹ It places more emphasis on the importance of feelings or emotions than on abstract ideas. More emphasis is thus placed on human relationships and emotion-based virtues such as benevolence, mercy, care, friendship, reconciliation, and sensitivity. The family becomes the foundation of morality where people cultivate and develop their character. Failing to care, in spite of the ability to do so, or preventing others from caring, is considered evil. Ethical caring happens out of a conviction that caring is the appropriate way of relating with people.

Care ethics is motivated by the need to care for those who are dependent and vulnerable. It is a counter-reaction to traditional ethics that are believed to be male biased or patriarchal. Hence, it is associated with feminist movements. Today, the ethics of care is applied to many moral issues and ethical fields such as caring for animals and the environment. It is

⁸ ‘The Ethics of Care’ in Copp (2006).

⁹https://www.newworldencyclopedia.org/entry/ethics_of_carewebsite.

viewed broadly as involving care-giving activities in their breadth and variety.¹⁰ Hence, it goes beyond just caring for people.

In this study, care ethics has been applied to caring for school property and grounds. Care in this sense is also considered as a disposition to nurture and preserve what has value. Therefore, teachers and learners need to relate in a caring manner with the school environment with which they interact and on which they depend. It means caring for property and tools in such a way that they are not unduly damaged.

3.5 Conclusion

Each of the above ethical theories can contribute in an important way to the implementation of the government PMS policy. Value theory encourages the need to have a perception of respect towards school property and grounds. Environmental virtue theory encourages the acquisition of fixed habitual attitudes towards maintaining school property and grounds. Care ethics promotes the performance of practices that will ensure the proper maintenance school property and grounds in accordance with the intentions of the government PMS policy.

¹⁰<https://www.iep.utm.edu/care-eth>).

CHAPTER FOUR

METHODOLOGY

4.1 Introduction

This chapter presents the procedures involved in carrying out the research. It explains the study site, design, methodology and methods, sample frame, primary sources of data, secondary sources of data and method of data analysis.

4.2 Study site

Zambia has ten provinces which are Southern, Western, North-Western, Central, Copperbelt, Eastern, Northern, Muchinga, Luapula and Lusaka. Lusaka province has seven districts which are Luangwa, Chirundu, Chilanga, Chongwe, Kafue, Lufunsa and Lusaka itself. The district involved in this study is Lusaka comprising an area of 360 km² (See Figure 4.1).

4.3 Design

This research involved a case study design with an ethical component.

4.4 Methodology and Methods

A mixed methodology was used in the study and the methods included primary and secondary sources. Purposive, convenience and simple random sampling were used. Secondary sources involved literature from various relevant sources.

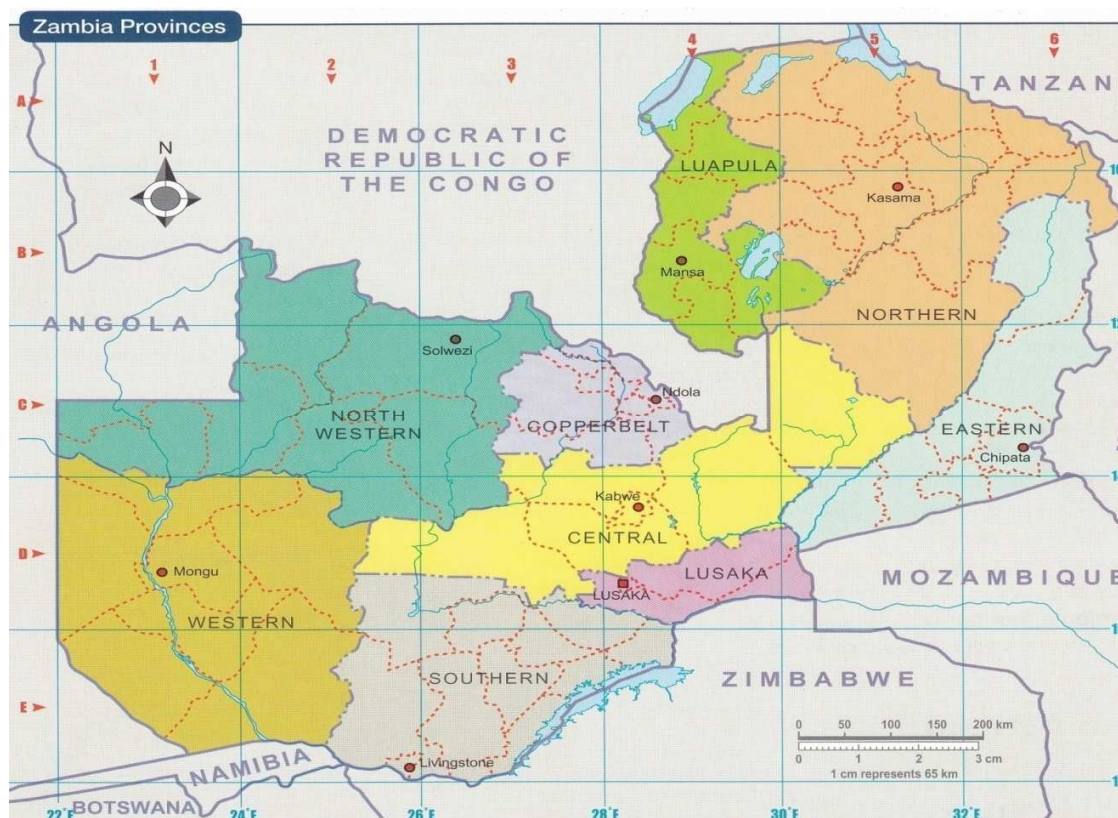


Figure 4.1: Map of Zambia with insert of Lusaka

Source: ZAMBIA, Basic School Active Learning ATLAS.

4.5 Sample frame

There were 1,744 female and 4,887 male teachers making a total of 6,631 in the district of Lusaka in 2018 (DEBS, 2018).¹¹ The total number of secondary school learners was estimated at 98,856 which 46,788 were boys while 52,068 were girls. The district had a total of 252 private schools including grant aided schools or mission schools. Government primary schools were 94 while secondary schools were altogether 34 out of which 20 were co-educational.

The sampling frame for secondary schools in the study involved twenty (20) government day co-education secondary schools in Lusaka District. These are Chelstone, Chilenje,

¹¹ This information was obtained from the statistician at Lusaka DEBSs office in 2018.

Chinika, Chunga, Highland, Kabanana, Kamulanga, Kamwala, Kamwala South, Kaunda Square, Libala, Lilayi, Matero, Nelson Mandela, New Mutendere, Northmead, Nyumba Yanga, Olympia, Twin Palm and Woodlands A. Of these, a representative sample of three schools was selected on the basis of low, medium and high population density. Population density was taken into account to ensure sampled schools came from all areas. Each population density was represented by one school. Convenience sampling was used to select a school from each group. Therefore, one school was selected from High Density Area, one from Medium Density Area and one from Low Density Area. Table 4.1 shows the distribution by density of the schools.

Table 4.1: Sample frame

Density	High	Medium	Low
Sample Frame	(i) Chinika, (ii) Chunga, (iii) Highland, (iv) Kabanana, (v) Kamulanga, (vi) Nelson Mandela, (vii) New Mutendere,	(i) Chelstone, (ii) Chilenje, (iii) Northmead, (iv) Kamwala, (v) Kamwala South, (vi) Kaunda Square, (vii) Libala, (viii) Matero,	(i) Lilayi, (ii) Woodlands A, (iii) Nyumba Yanga, (iv) Olympia, (v) Twinpalm,

4.6. Primary sources of data

Apart from observations, primary sources involved in-depth interviews, FGDs and questionnaires (see Table 4.2).

4.6.1 In-depth interviews

In-depth interviews were carried out with the following who were purposively selected: six Preventive Maintenance System Prefects (PMS prefects) - three boys and three girls. i.e., one boy and one girl from each of the three schools (= 6); three teachers responsible for coordinating PMS (one from each school) (=3); and three school administrators (Assistant School Managers) (ASMs) (=3). Total = 12.

4.6.2 FGDs

Six FGDs were carried out with three groups of grade twelve girls and three groups of grade twelve boys. Each FGD was comprised of eight participants ($6 \times 8 = 48$). With permission from the teachers involved, learners in each class were asked to put up their hands if they wished to participate in the exercise which was explained to them. Using simple random sampling, 8 boys and 8 girls were then selected to participate in each focus group.

4.6.3 Questionnaires

Questionnaires were distributed to five grade twelve girls and five grade twelve boys in each of the three schools ($10 \times 3 = 30$). The procedure followed was similar to that followed in selecting participants for the FGDs. Learners in the selected class were asked to volunteer to participate by raising hands. From the volunteers, the five boys and five girls were then selected using simple random sampling method. In addition, questionnaires were also administered to one female and one male teacher in each school using convenience sampling method (2×3).

Table 4.2: Breakdown of sample size

ACTIVITY	PARTICIPANTS	NUMBER	TOTAL
In-depth Interviews	-PMS prefects (boy and girl)	6	12
	-PMS coordinators	3	
	-ASMs	3	
FGDS	-Three groups of grade twelve girls of 8 in each	24	48
	-Three groups of grade twelve boys of 8 in each	24	
Questionnaires	-Five boys and five girls in grade 12 from each school (10 x 3)	30	36
	One male and one female teacher from each school (2 x 3)	6	
TOTAL			96

4.6.4. Observations

Observations were made by the researcher on the current state of the school environments and any other things which were related to the topic.

4.7. Secondary sources of data

Secondary data was collected from relevant books, theses, dissertations, newspapers, articles, and the internet.

4.8 Data analysis

The data collected was analysed in terms of common patterns emerging from the interviews, FGDs, questionnaires and observations. An ethical assessment was then made of the findings applying Value Theory, Environmental Virtue Theory and Care Ethics.

CHAPTER FIVE

FINDINGS, ANALYSIS AND DISCUSSION

5.1 Introduction.

The aim of this research was to make an ethical evaluation of the teachers and learners with respect to their carrying out preventive maintenance system of school buildings and grounds in three government co-education day secondary schools in Lusaka district. The first three research questions were: (i) What are the perceptions and attitudes of teachers and learners in the three co-education government day secondary schools in Lusaka district towards implementing the PMS government policy? (ii) Do the practices of teachers and learners correspond to what they say? and (iii) What is the actual condition of property in the three co-education government day secondary schools in Lusaka district? This chapter therefore presents, analyses and discusses the findings.

5.2 Perceptions and attitudes of teachers and learners towards PMS

To determine the perceptions and attitudes of learners towards the PMS policy, first the study had to find out if they were aware of the policy. Then the perceptions and attitudes were assessed using parameters of views and attitudes to specific policies, incentives and penalisation

5.2.1 Awareness

PMS coordinators were also asked about their familiarity with the policy. Coordinator 1 said they were familiar with the PMS policy.¹² She went further to justify the statement by saying that they had been appointed to PMS committees. Coordinator 2 said they were very

¹²In-depth interviews with PMS coordinators held in October, 2019.

much familiar with the policy because they were assigned duties every term. Coordinator 3 mentioned that there was no problem about lack of awareness of the policy as they knew the programmes involved, for example, that of reporting for duty during the holiday. She also said that the mere presence of coordinators was evidence enough that they were aware of the existence of the policy.

Teachers were asked to evaluate their awareness of the PMS policy. The responses were as shown in Table 5.4.¹³

Table 5.1: Teachers' awareness of PMS

QUESTION	RESPONSES		
Are you teachers aware of the PMS policy?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	6	0	0

Learners assessed their awareness of the PMS policy. As displayed in Table 5.5, all of them were aware of the policy.

Table 5.2: Learners' awareness of PMS

QUESTION	RESPONSES		
Are you aware of the PMS policy?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	30	0	0

¹³Questionnaire administered to teachers in October, 2019.

Regarding the same issue of awareness, PMS prefects gave various answers.¹⁴ PMS prefect 1 gave an example of learner requirements to pay PMS allocation among the school fees. Prefect 2 said a duty roster which was stuck on the school notice board was assigned to prefects. Prefect 3 illustrated that there were PMS prefects for both morning and afternoon sessions. Prefect 4 narrated that it was mandatory for learners to report during the holiday as allocated and this was made known to learners. Prefect 5 described that learners were asked to clean the classrooms and the surroundings especially on Fridays as required by the school. Prefect 6 answered that learners were fully aware of the policy as it was one of the rules learners were made to sign on acceptance letters.

Analysis

From the data gathered, all teachers and PMS coordinators showed that teachers were very familiar with the PMS. Equally all the PMS prefects and learners were of the view that familiarity with the PMS policy was not an issue. The study revealed that all the schools were implementing the government PMS policy to some extent in one way or the other. This was a requirement of MESVTEE (2015: 86) guideline on the maintenance of school property and the surroundings. As can be seen from the findings, teachers and learners were very much aware of the policy.

5.2.2 Views

The Assistant School Managers (ASMs) were asked for their views on how teachers looked at the PMS policy.¹⁵ Manager 1 said teachers considered the academic performance of learners to be more important than their immediate environment so that PMS did not matter very much to them. Manager 2 noted that teachers were very negative towards the policy.

¹⁴In-depth interviews with PMS prefects held in October, 2019.

¹⁵ In-depth interviews with ASMs held in October, 2019.

Manager 3 said that the teachers were more concerned with personal things such as study, preparing for lessons, personal businesses than with the PMS policy.

PMS coordinators were requested to give their opinions on how teachers considered the policy.¹⁶ Coordinator 1 said they considered it to be “a sheer waste of time.” Coordinator 2 said that if there was an option, teachers would rather go for it. Coordinator 3 said that “teachers consider the policy to be retrogressive in an age when cleaning companies are supposed to be hired.”

With reference to how learners looked at the PMS policy, the general responses from prefects are shown in Table 5.1.¹⁷

Table 5.3: PMS prefects views on how learners considered the PMS policy

QUESTION	<i>PREFECT</i>	<i>RESPONSE</i>
How do learners look at the PMS policy?	1	“They are forced to consider it.”
	2	“It’s not something they want to hear about.”
	3	“Learners are not happy with it.”
	4	“Learners think it is a bad policy generally.”
	5	“The policy is a bad one according to learners.”
	6	“It is considered punishment on the part of learners.”

¹⁶ In-depth interviews with PMS coordinators held in October, 2019.

¹⁷ In-depth interviews with PMS prefects held in October, 2019.

Focus groups were also asked if learners liked the policy.¹⁸ Group 1 shared in general that learners hated the policy very much. Group 2 similarly expressed feelings that learners did not care for the policy. Group 3 also emphasised that learners wanted to be free from the manual work which PMS referred to. Group 4 insisted that the PMS policy stood in the way of academic work. Group 5 argued that the policy was detested by most of the learners. Group 6 stated that the PMS policy resulted in making learners unclean, that it made them develop blisters and that it was an unnecessary waste of a lot of time. However, one learner mentioned that, although he disliked manual work, "PMS time is exciting as it is time to get away from too much academic work." This, of course, is a rather subtle way of disapproving of the policy.

Analysis

All the ASMs and PMS coordinators indicated that teachers were not in favour of the policy. The PMS prefects unanimously stated that learners did not like the policy. It is perhaps surprising that teachers and learners disapproved of the policy given that it was a directive from the MoE that teachers and learners were the major stake holders in implementing the policy (1996: 5). According to MoE (1977: 83), in addition to imparting knowledge to students, the teacher was expected to guide students in forming positive and acceptable social values in life. This was to be done by stimulating student interest in the welfare of the school and encouraging their positive role. The IUCN (1991) stressed that personal attitudes were essential for communities to care for their own environments. Brierley (1991) expected teachers to exercise the same standard of care as a reasonably caring parent, and Moore (2013: 5) pointed out that teachers were expected to "foster environments that

¹⁸FGDs carried out with grade twelve girls and boys in October, 2019.

reflected ethical behaviour, respect, kindness, safety and care.” Amanchukwu and Ololube (2015: 99) had similarly noted that if the teachers took care of the school properties, learners would emulate them.

5.2.3 Attitudes to specific school policies

The ASMs were requested to give their opinions on whether schools needed to have specific school PMS policies.¹⁹ ASM 1 noted that specific PMS policies were good as they promoted the importance of cleanliness and good attitudes to the environment as well as ensuring responsible attitudes and practices in teachers and learners. She went further to say that just like each school has a unique education motto, schools need to have their own policies translating from the MGE policy. ASM 2 answered that a PMS policy promotes periodic maintenance of school property and surroundings to make the teaching and learning environment ideal. ASM 3 noted that it is important to have such a policy because as each school has its own unique challenges, teaching and learning should take place in a clean, safe and tidy environment in order to maximize the benefits of education. She added that this reduced costs on maintaining school property, prolonging it, making it safe to use and supporting school ecosystems.

The PMS coordinators were asked as to whether their school had a specific PMS policy reflecting the government policy.²⁰ Coordinator 1 identified a general school rule on the notice board which read: “All learners to take care of the school.” She went on to say that the school made a duty roster which was implemented during co-curricular activities and that there was a holiday programme involving all teachers and learners. Coordinator 2 was

¹⁹In-depth interviews with ASMs held in October, 2019.

²⁰In-depth interviews with PMS coordinators held in October, 2019.

of the view that the school PMS policy was reflected in directives such as “throw litter in the bin,” and “clean classrooms before and after class.” Coordinator 3 said that the school did not have a PMS school policy as such but that it was guided by the government “keep Zambia clean, green and health campaign” held every Friday of the month to which everyone in the school was expected to participate. She further pointed out that, in the acceptance letters which every parent and learner had to sign before starting life in a new school, there was the stipulation for “all learners to participate in PMS.”

Analysis

It was evident that a PMS policy was considered by all the managers to be important. For instance, the aim of making the teacher and class operate in a conducive environment was most desirable. Furthermore, reduced costs on maintaining school property, prolonging it, making it safe to use and supporting ecosystems was equally good. In the end, education benefits could be maximized. Another point was that a PMS policy promoted an ideal teaching and learning environments, an observation also made by Ifeome (2012a) discouraging indiscipline among learners. It also meant timely maintenance resulting in increased performance, and shorter life spans of school property. The policy supported quality education, teaching and learning and involved feelings and emotions, a point that was also noted by Muzir (2017).

However, while attempts were made to encourage keeping the school and school grounds clean, and while general guidelines such as “throw litter in the bin” and “cleaning classrooms before and after class” were recommended, there were no clearly identified school policies in writing or publicised on notice boards to ensure the practical implementation of the government PMS. Nor was there any evidence of penalties that were

taken seriously or carried out in practice for failure to implement a PMS policy. A variety of reasons was given by both teachers and learners as to why insisting on the practical implementation of a school PMS policy was not feasible. For example, because some teachers and learners had some private commitments during holidays, because some teachers were involved in distance education, because some learners went to visit relatives and friends far away from the schools during holidays, because learners resented having manual works imposed on them as distinct from being involved in academic studies, etc. In other words, there was very little evidence that schools took any serious steps to implement the government PMS policy in practice. No specific PMS school policy was time tabled. The keep Zambia clean, green and health campaign was a convenient slogan which does not seem to have resulted in the desired motivation for keeping school property and grounds well maintained.

5.2.4 Incentives

To the question as to whether teachers usually expected an incentive for implementing the PMS policy, ASM 1 was for the idea that they did. She went further to say that this could be realised in many forms such as praise, awards during Labour Day, recognition in the form of promotion for working hard, and so forth. Manager 2 said that an incentive acted as a very good motivation for teachers and that when PMS coordinators were given an allowance by government in the olden days, they were seen to be working very hard. Manager 3 was of the view that teachers, especially the PMS coordinators, expected an incentive from

government but that since it was no longer being given, it was not easy to make teachers assume that responsibility.²¹

The PMS coordinators were also asked if they thought they should be given an incentive for their work.²² Coordinator 1 responded that they deserved an incentive for working very hard when fellow teachers were just busy lazing about. Coordinator 2 replied that an incentive was crucial to making them work extra hard in implementing PMS. Furthermore, she said that this was expected from the school on a monthly basis. However, since the government was no longer paying them an allowance, this was no longer being done. Coordinator 3 pointed out that she deserved an incentive from either government or the school as this extra-duty work was demanding. In referring to extra work, it would appear that implementing the PMS policy was not considered an automatic part of their duty as teachers.

Table 5.4: Opinions of teachers on the importance of incentives²³

QUESTION	RESPONSES		
Should incentives be given to implement the PMS policy?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	6	0	0

As can be seen from Table 5.2, all the six teachers answered that incentives should be given if they were expected to carry out the PMS policy.

PMS prefects were also asked to indicate if they and other learners expected an incentive for carrying out the PMS policy.²⁴ Prefect 1 suggested that food might be provided by the

²¹ In-depth interviews with ASMs held in October, 2019.

²² In-depth interviews with PMS coordinators held in October, 2019.

²³ Questionnaire administered to teachers in October, 2019.

school authority during the holiday PMS programme as this would motivate both prefects and other learners. Prefect 2 was for the idea of the school buying them a packed of candy for work well done every week. Prefect 3 suggested that the school might excuse those who participated in PMS work for the rest of the term, for instance, during the holiday. Prefect 4 said that the PMS prefects who took their work seriously deserved an incentive for their efforts whereas other prefects were not doing much. Prefect 5 emphasised that if incentives were given to learners, they would be very willing to participate. Prefect 6 also noted that an incentive was a serious motivating factor towards carrying out PMS.

The responses from learners with respect to the implementation of the PMS policy are shown in table 5.3.

Table 5.5: Opinions of learners on the importance of incentives²⁵

QUESTION	RESPONSES		
Are incentives important for implementing the PMS policy?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	18	4	8

Analysis

Every one of the ASMs, PMS coordinators and teachers answered that an incentive was important for carrying out PMS. Similarly, all the PMS prefects, all focus groups and the majority of learners were of the view that an incentive should be given. It is clear from the above that both teachers and learners were largely of the opinion that incentives should be given in order to successfully implement the PMS policy. In other words, they were seeking

²⁴ In-depth interviews with PMS prefects held in October, 2019.

²⁵ Questionnaire administered to learners in October, 2019.

for compensation for the work. While incentives in themselves can go a certain distance in improving perceptions and attitudes, incentives that focus on personal benefits alone are most likely to fail to generate the kind of motivation that will result in voluntary and fruitful behaviour.

5.2.5 Penalisation/punishment

ASMs were questioned as to whether teachers were penalised for deliberately not participating in PMS activity. ASM 1 said that teachers were only reminded of the need to continue carrying out the PMS policy by the administrators during briefings and staff meetings. ASM 2 noted that no teacher was ever given a penalty apart from removing them from committees when they were not very active, a point which they actually liked. According to ASM 3, it was considered to be very inappropriate to penalize a fellow teacher so that no teacher was ever reprimanded or publically blamed for failing in this respect.²⁶

PMS coordinators were asked how easy it would be to administer a penalty on a teacher for PMS offences.²⁷ Coordinator 1 remarked that it would be very difficult to punish teachers as it would just cause more resentment and antagonism in their behaviour. Coordinator 2 noted that teachers would just laugh at the idea of being scolded by administrators during briefings and staff meetings. Coordinator 3 similarly thought that teachers would highly resent the idea of being penalised in any way for failure with regard to the PMS policy.

PMS prefects were asked how easy they found it to administer penalties on learners for PMS related misbehaviour.²⁸ Prefect 1 indicated that it was not easy to penalize learners as they resented this kind of work. Prefect 2 stated that learners were sometimes penalized but

²⁶ In-depth interviews with ASMs held in October, 2019.

²⁷ In-depth interviews with PMS coordinators held in October, 2019.

²⁸ In-depth interviews with PMS prefects held in October, 2019.

resented it and only performed the work out of frustration without seeing any point or value in it. Prefect 3 was even more negative in his comments saying that learners would call prefects insulting names for what they were doing. Prefect 4 said that some learners who were faced with some form of punishment still managed to find a way of escaping it. Prefect 5 noted that learners did not like any form of reprimand or penalty whether it was related to PMS or anything else. Prefect 6 shared how learners associated prefects with penalties so that whenever they were called by prefects, they automatically assumed that it was with regard to some form of punishment.

Focus groups were invited to share about how they looked at people who administered penalties for PMS misbehaviour.²⁹ FGD 1 shared that learners did not like the people who imposed penalties on them for PMS related offences and called them offensive names. Group 2 discussed that learners were not fond of associating with such people. Group 3 said that supervisors who imposed penalties were considered to be very strict people who brought misery on the lives of learners. According to Group 4, bad comments were made about such people whenever they tried to take learners to task. Group 5 noted that such teachers were viewed as bad leaders and even those who carried out the work under them were somehow disliked as well. Group 6 stated that in many cases the names of those who penalised others were written down in the form of graffiti on furniture and walls.

Analysis

The ASMs and PMS coordinators all pointed out that penalising teachers was problematic and they resented it. PMS prefects and focus groups noted very strongly that it was not easy to administer penalty on learners for failure to carry out PMS. As can be seen from the

²⁹FGDs carried out with grade twelve girls and boys in October, 2019.

reactions above, teachers and learners were considered as people who would not take kindly to any form of penalty or reprimand related to PMS. Mtonga (2016) has noted that the abolishment of corporal punishment in schools was replaced with manual work as an alternative and more humane measure. However, manual work still seemed to be perceived as a form of corporal punishment or as a form of forced labour. Such a perception was bound to affect the attitudes of both teachers and learners regarding PMS. Whereas Tembo (2018) pointed out that imposing punitive measures may perhaps seem to be unavoidable, this may only be true in the absence of the kind of ethical motivation that can promote attitudes of care based on an appreciation of moral values. Indeed, unless teachers and learners were to appreciate the positive value of the PMS policy, attitudes would most likely not change. Punitive measures were clearly failing to bring about the desired attitudes and the practices towards caring for the environment.

5.3 Do the practices of teachers and learners match with what they say?

To ascertain if the practices of teachers and learners matched with what they said, measuring instruments used were involvement, organization, responsibility, care for tools, inspection and sensitization.

5.3.1 Involvement of teachers and learners in PMS activities

As can be seen in Table 5.6, the six teachers interviewed agreed that all teachers should be involved in PMS activities.³⁰

³⁰ Questionnaire administered to teachers in October, 2019.

Table 5.6: Involvement of teachers in PMS committees

QUESTION	RESPONSES		
Should all teachers should be involved in PMS committees?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	6	0	0

On the other hand, however, when questioned as to how many teachers were involved in committees, the Assistant School Managers responded very negatively to their involvement in practice.³¹ ASM 1 estimated that very few were involved; Manager 2 assessed that less than half of the entire teaching staff could be said to have been involved; and Manager 3 estimated that only about a quarter of the teachers were involved in the process.

Responding to the same question, PMS coordinators expressed the following opinions.³² Coordinator 1 stated that the committees existed only on paper as teachers were not active. She went further to say that even among the main committee members, only the coordinators were active. Coordinator 2 noted that only a few members were active in the various committees. Coordinator 3 said that they depended on the PMS committees for action and that teachers considered it the duty of the main PMS committees to implement the policy. In general, it would appear that the PMS coordinators are not very active.

Learners were also asked to assess their involvement during PMS activity.³³ The responses were as shown in Table 5.7.

³¹ In-depth interviews with ASMs held in October, 2019.

³² In-depth interviews with PMS coordinators held in October, 2019.

³³ Questionnaire administered to learners in October, 2019.

Table 5.7: Opinions of learners on their involvement in PMS.

QUESTION	RESPONSES		
Should all learners be involved in PMS?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	22	2	6

PMS prefects were asked to assess the involvement of learners during PMS activity.³⁴ Prefect 1 estimated that only a quarter of the class willingly participated in the activity. Prefect 2 similarly pointed out that very few learners, especially those in examination classes, were involved. Prefect 3 stated that majority of learners were not involved. Prefect 4 said that out of a class of 30 learners, only about 10 were actively involved in PMS. Prefect 5 noted that the majority of learners paid very little attention to doing the work but just spent most of the time chatting. Prefect 6 stated that most of the learners absconded from PMS and those who remained left soon after doing just a little work.

FGDs shared about the learners that rarely participated in PMS.³⁵ Group 1 noted that grade twelves in particular rarely participated and, when forced to participate, became antagonistic towards prefects. Group 2 noted that even grade nines pretended to be too busy with examination preparations. According to Group 3, some grade elevens felt that they were already as it were in grade twelve and so were big enough to stop involving themselves in activities like PMS. Group 4 significantly pointed out that children from rich families in private schools were too lazy to do the work of maintaining school property. They expected general workers to do all the maintenance work on their behalf just like in their homes

³⁴In-depth interviews with PMS prefects held in October, 2019.

³⁵FGDs carried out with grade twelve girls and boys in October, 2019.

where maids and garden boys did the work for them. Group 5 also contrasted themselves with private schools that engaged general workers to look after the maintenance of school property and grounds which were generally clean and well maintained. Group 6 felt that all those with any kind of health complications should be excused from participating. Overall, it seems there was a strong resistance by learners to become involved in PMS activities.

Analysis

Although all teachers agreed that they should be involved in PMS activities, ASMs and PMS coordinators estimated that only few were actually involved. Most of the learners answered that they should be involved in the activity whereas PMS prefects and focus groups indicated that learners were not very much involved. There is clearly a discrepancy between what teachers and learners say and what they actually do. This is in line with the conclusion of Ifeome (2012a) that very few teachers and learners were actively involved in maintenance activity. Ndlapo (2009: 48) also observed that elders, namely, some teachers and grade twelves especially, were not helping in maintaining the cleanliness and upkeep of school property. As against this, however, Chimombo et al. (2000) and Nosiku (2016) noted in their studies that some learners did participate in PMS activities. This suggests that other factors seem to be involved in the work culture of different schools. However, the ethical dimension has not been explicitly discussed.

5.3.2 Organisation of PMS programmes

As can be seen in Table 5.8, most of the teachers agreed that they "ought to" organise programmes.³⁶

³⁶ Questionnaire administered to teachers in October, 2019.

Table 5.8: Views of teachers on organizing PMS programmes

QUESTION	RESPONSES		
Should teachers organise PMS programmes?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	5	1	0

ASMs were asked to assess how teachers organised PMS programmes.³⁷ Manager 1 said that the majority of the teachers absconded from meetings which were called to plan activities. According to Manager 2, only a few teachers organised programmes. Manager 3 mentioned that some teachers never made any effort to respond to the call to organise learners as to where to work and fend for tools. Clearly, the ASMs had a rather low opinion of the commitment of teachers to organising PMS programmes.

On the other hand, PMS coordinators noted that it was teachers who were least available who were appointed to organise the programmes.³⁸ Coordinator 1 identified the teachers who were on studies; Coordinator 2 identified those especially having private businesses as being rarely available; Coordinator 3 said that those teachers doing administrative work such as procurement officers, HODs, cashiers and stores officers always gave excuses to avoid organising the activities. It would appear that, although some showed a willingness to be involved in organising PMS programmes, those who were appointed were not free to undertake the task. This suggests a level of disorganisation in the whole process.

³⁷ In-depth interviews with ASMs held in October, 2019.

³⁸ In-depth interviews with PMS coordinators held in October, 2019.

Most learners stated that they were well organised during PMS as shown in Table 5.9.³⁹

Table 5.9: On learners being organised during PMS

QUESTION	RESPONSES		
Are you learners well organised during PMS programmes?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	20	1	9

However, PMS prefects had a very different view.⁴⁰ Prefect 1 said that learners had tended to ignore calls to work. Prefect 2 complained that only a small group did the work. Prefect 3 pointed out that learners worked hard only when there was a teacher nearby supervising. Prefect 4 noted that it was difficult to organise learners as some were by nature lazy. Prefect 5 complained that some learners wanted to chat in a friendly way with them when it was time to work. Prefect 6 complained that learners were not very cooperative. For instance, when asked to pick up papers, they would leave most of them behind waiting for the prefect to point out every piece of piece of paper to be picked. It would appear that, despite the insistence of learners that they were well organised, they resisted every attempt to get them to work.

FGDs discussed various ways in which learners were disorganised during PMS work time.⁴¹ Group 1 shared that learners rarely carried tools such as mops, brooms and containers for use but instead ran about looking for them. Group 2 referred to their desire of learners to create as much noise as possible as a distraction from work. Group 3 mentioned that early

³⁹ Questionnaire administered to learners in October, 2019.

⁴⁰ In-depth interviews with PMS prefects held in October, 2019.

⁴¹ FGDs carried out with grade twelve girls and boys in October, 2019.

departures from work by learners were common. Group 4 noted idle sitting and standing of learners. Group 5 shared that prefects and class monitors were not very serious. Group 6 mentioned that at times it was not clear where learners were going to work due to lack of adequate information from the administration resulting in learners not doing any work.

Analysis

Teachers largely agreed that they ought to organise PMS activities. However, to a large extent, according to ASMs, they were not organising the activities to their consent. PMS coordinators noted the manner in which the least available teachers were appointed. Learners claimed that they were well organised but PMS prefects pointed out that, to the contrary, the manner in which they were organised was such as to result in the least amount of work done. There was clearly a lack of motivation on the part of learners in applying themselves to the work.

5.3.3 Responsibility

When questioned about their responsibility in carrying out PMS, four out of six teachers claimed that they were responsible. However, the other two denied this (see Table 5.10).⁴²

Table 5.10: Views of teachers regarding responsibility towards PMS

QUESTION	RESPONSES		
Do you consider yourself responsible regarding PMS?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	4	0	2

⁴² Questionnaire administered to teachers in October, 2019.

A contrary view, however, came from the ASMs who considered that the teachers in general were not acting responsibly.⁴³ Manager 1 said that their attitude of teachers was poor; Manager 2 said that it was very poor; Manager 3 said that it was fairly poor.

PMS coordinators were also asked for their opinion about the responsibility of teachers during PMS.⁴⁴ Coordinator 1 rated their sense of responsibility low. He gave an example of how teachers either usually reported late or did not report at all during the holiday PMS duty. Coordinator 2 shared that teachers were not responsible as most of them deliberately did not participate in the activity as they believed they had other more important things to do. Coordinator 3 rated the responsibility level of teachers towards PMS as very low as they wished to concentrate more on the academic part of the school rather than on care for the school property and on the surrounding environment.

The majority of learners also considered themselves to be responsible regarding PMS as can be seen in Table 5.11.⁴⁵

Table 5.11: Responsibility of learners to PMS

QUESTION	RESPONSES		
Do you consider yourself responsible regarding PMS?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	18	4	8

When PMS prefects were asked whether they considered learners to be responsible

⁴³ In-depth interviews with ASMs held in October, 2019.

⁴⁴ In-depth interviews with PMS coordinators held in October, 2019.

⁴⁵ Questionnaire administered to learners in October, 2019.

regarding PMS activity, they responded rather negatively as can be seen from Table 5.12.⁴⁶

Table 5.12: Views of PMS prefects on whether learners were responsible

QUESTION	PREFECT	VIEWS
How responsible are learners towards PMS?	1	“Very poor.”
	2	“Learners are not very irresponsible.”
	3	“They are only forced to do it.”
	4	“They have to be closely monitored otherwise.”
	5	“They are not generally speaking.”
	6	“They demonstrate resentment.”

FDGs described some of the ways in which learners demonstrated irresponsibility.⁴⁷ Group 1 noted that in a lot of situations, learners pretended not to hear the call from teachers and prefects for PMS even when they were very near. Group 2 indicated that learners were so irresponsible at carrying out PMS that, for example, when asked to pick litter, they ended up throwing it outside the bin as a way of protesting against the activity. Group 3 said that learners always had to be followed in order for them to do the activity. One member said that “the moment a prefect looked away, most learners stopped doing the work.” Group 4 noted that when asked to water the lawns, learners only applied water to wet the surface without letting it sink deep enough for the roots. A member of Group 5 said, “Only when teachers showed some signs of being tough did learners behave as if they were responsible.”

⁴⁶ In-depth interviews with PMS prefects held in October, 2019.

⁴⁷ FDGs carried out with grade twelve girls and boys in October, 2019.

Group 6 gave an example of a situation where learners enjoyed causing annoyance by only picking up very small stones to fill a hole.

Analysis

Majority of the teachers said that they were responsible against the views of the ASMs and coordinators that their response was poor. Most of the learners agreed that they were responsible. Nonetheless, PMS prefects were of the view that learners were not very responsible just like learners in focus groups were not short of the ways learners showed irresponsibility. Thus, teachers and learners generally said that they were responsible in carrying out PMS activity. To the contrary, their practical behaviour demonstrated that they were not as responsible as they indicated. In some cases, learners showed negative attitudes, for instance, by throwing litter in undesignated places, an irresponsible form of behaviour also described by Nosiku (2016).

Behaviour such as the above is very consistent with other similar studies carried out. Tembo (2018) emphasised the need to change the mind-sets of learners if the environments were to be made clean, health and green. Ifeoma (2012b) noted that a culture of preventive maintenance tended to be missing in teachers and learners. Adeoye and Tayo (2012: 232-236) and Amanchukwu and Ololube (2015: 99) also pointed out that there were laxities with regards to the maintenance of school plants and that lack of a maintenance culture had eaten deep into the fabric of the nation's citizenry.

6.3.4 Care of PMS tools

As shown in Table 5.13, whereas two-thirds of the teachers said that they took good care of PMS tools, the other third denied this.

Table 5.13: Care of PMS tools⁴⁸

QUESTION	RESPONSES		
Do you take good care of PMS tools?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	4	0	2

ASMs gave their views as follows on the way teachers were taking care of the PMS tools.⁴⁹

Manager 1 said the school had to spend a lot of money every year on buying PMS tools because most of it was not being accounted for by teachers. Manager 2 complained that even the storerooms where the tools were kept were not well maintained. Manager 3 said that very few teachers were concerned about the wellbeing of the tools and that this was usually left to the PMS coordinators. It would appear that teachers in general took very little interest in caring for tools.

PMS coordinators, for their part, expressed the problems they faced in relation to the way teachers failed to take care of the PMS tools.⁵⁰ Coordinator 1 said that the teachers seldom made sure that the tools which were taken out were recorded in the inventory book. Coordinator 2 stated that PMS tools were disappearing at an alarming rate creating a shortage, and that it was not clear where they were going. Coordinator 3 said that teachers did not seem to care if the tools were looked after or not after use as the tools were not returned. The PMS coordinators were clearly in agreement with the assessment of the ASMs that little or no attention was being paid to care for the tools.

⁴⁸ Questionnaire administered to teachers in October, 2019.

⁴⁹ In-depth interviews with ASMs held in October, 2019.

⁵⁰ In-depth interviews with PMS coordinators held in October, 2019.

When learners were asked if they took good care of PMS equipment, the responses to the questionnaire are shown in Table 5.14. Half of the respondents agreed that learners did take care of PMS tools.⁵¹

Table 5.14: Care of the tools by learners

QUESTION	RESPONSES		
Do you take good care of PMS tools?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	15	3	12

On the other hand, PMS prefects raised many problems regarding the way learners treated PMS tools.⁵² Prefect 1 noted that learners left the tools anyhow after the activity in most cases. Prefect 2 complained about the trouble prefects had in picking up the neglected tools. Prefect 3 mentioned that learners in many cases deliberately broke the tools so that they could not be used. Prefect 4 revealed that learners did not want to carry the tools to and from the storerooms as they expected the prefects to do it. Prefect 5 said that some of the tools were stolen by learners who exchanged them for items such as money, alcohol or cigarettes. Prefect 6 noted that tools were in bad shape mainly because the learners were not taking care of them. It is clear from the above that the PMS prefects did not think well of the attitude of learners to caring for tools.

FGDs also commented on the way learners were failing to take care of the tools.⁵³ Group1 said that the tools were in bad state. Group 2 noted that a lot of the equipment was broken

⁵¹ Questionnaire administered to learners in October, 2019.

⁵² In-depth interviews with PMS prefects held in October, 2019.

⁵³ FGDs carried out with grade twelve girls and boys in October, 2019.

within a short period of time due to uncaring handling. Group 3 mentioned that, in many cases, the breaking was deliberate to impede the progress of the programme. Group 4 noted that, for example, handles were missing from most brooms, slashers, rakes and hoes. Group5 explained that most of the equipment was not kept in the storeroom but in classes and offices so that it was very difficult to account for them. Group 6 mentioned that the smooth progress of the activity was hampered by trying to share the few tools available. The sharing that emerged from the FGDs had little of a positive nature to say about a caring attitude for tools on the part of learners.

Analysis

Despite the fact that teachers and learners claimed to care for PMS equipment, the opinions gathered from ASMs, PMS coordinators, PMS prefects and FGDs paint a very different picture, one that clearly indicates that neither the teachers nor the learners were in any way committed to caring for the tools.

5.3.5 Inspection of PMS activity

As can be seen in Table 5.15, most of the teachers interviewed responded positively to the question about the importance of carrying out inspection.⁵⁴

Table 5.15: Teachers carrying out inspection

QUESTION	RESPONSES		
Do teachers consider it important to carry out inspection?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	5	0	1

⁵⁴ Questionnaire administered to teachers in October, 2019.

ASMs, on the other hand, responded very differently.⁵⁵ According to Manager 1, teachers generally did not carry out inspection after PMS was done. Manager 2 estimated that the number of teachers who carried out inspection were very few. Manager 3 similarly remarked that few teachers were actually carrying out inspection.

PMS coordinators were also interviewed as to whether teachers carried out inspection.⁵⁶ Coordinator 1 said teachers rarely carried out inspection in the process of implementing PMS. Coordinator 2 said that it was prefects who sometimes carried out inspection and not teachers. Coordinator 3 said that the teachers would go round without a formal inspection instrument so that in many cases the results were not recorded or taken anywhere.

When learners were asked about whether they thought inspections should be carried out, Table 5.16 shows a stronger response in favour of inspection.⁵⁷

Table 5.16: Opinions of learners on carrying out inspection

QUESTION	RESPONSES		
Do you think inspection should be carried out?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	17	1	12

The views of the PMS prefects varied with respect to inspections and how often they were carried out.⁵⁸ According to prefect 1, sometimes they went round doing inspection haphazardly. Prefect 2 said that they rarely carried out inspection. Prefect 3 said it was not very common to carry out inspection as the focus was mostly just for the maintenance of the

⁵⁵ In-depth interviews with ASMs held in October, 2019.

⁵⁶ In-depth interviews with PMS coordinators held in October, 2019.

⁵⁷ Questionnaire administered to learners in October, 2019.

⁵⁸ In-depth interviews with PMS prefects held in October, 2019.

place. Prefect 4 noted that that it was almost unheard of for inspection to be done. Prefect 5 said that it was done once in a while but that there was usually no recording sheet and the results were not taken anywhere. According to Prefect 6, inspection was only done once in a while.

FGDs also discussed whether inspection was being carried out.⁵⁹ Group 1 noted that it was rarely carried out. Group 2 said that it was sometimes carried out although not in a formal manner. According to Group 3, it was poorly done as the results were rarely made known. Group 4 said it was only common when the whole school was called upon to carry out PMS around the classrooms. Group 5 thought that inspection was not seriously considered as there was generally no feedback. Group 6 felt that inspection needed to be revisited as it was a good procedure for ensuring a proper implementation of the PMS.

Analysis

Although most of the teachers responded that carrying out inspection was important, the ASMs and PMS coordinators maintained that teachers were not in fact doing it. Many learners considered that that inspection was necessary whereas the PMS prefects disagreed and even some learners felt that it was not being done seriously. Hence, although the teachers and learners pointed out that inspection was a very importance exercise in an effort to make sure that PMS was properly done, the behaviour of teachers and prefects showed that they did not consider it to be important enough to take it very seriously. Ifeoma (2012b) noted that the role of administrators was to make periodic inspection of facilities and Nhlapo (2009) equally observed that inspection was poorly done especially in terms of keeping records. Amanchukwu and Ololube (2015: 99) concluded that management rarely carried

⁵⁹FGDs carried out with grade twelve girls and boys in October, 2019.

out inspection and Stock (1991: 55) found that formal inspections were not often carried out in some schools, and that in others, such exercises were not particularly effective.

5.3.6 Sensitisation

Table 5.17 shows that all the six teachers considered sensitisation to be very important.⁶⁰

Table 5.17: Opinions of teachers on the importance of sensitisation

QUESTION	RESPONSES		
Do you consider sensitisation to be very important?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	6	0	0

When questioned if teachers were carrying out sensitisation, the ASMs were very negative.⁶¹

Manager 1 said that it was unheard of for teachers to go round sensitising the school community on the importance of carrying out PMS. Manager 2 noted that no teacher had ever produced any materials for dissemination among teachers and learners relating to the value of maintaining the school environment. Manager 3 similarly said that it was uncommon that a teacher creatively and willingly spearheaded a sensitisation movement in school although this could be done, for example, by forming a PMS club.

The PMS coordinator 1 said that teachers were not doing much sensitisation about the policy and that a lot more needed to be done in order to educate the school community about the whole idea behind PMS so that it would be taken more seriously. Coordinator 2, however, felt that a few teachers like those on duty, class teachers, and some dedicated PMS main committee members were directly and indirectly doing sensitisation by organising and

⁶⁰ Questionnaire administered to learners in October, 2019.

⁶¹ In-depth interviews with ASMs held in October, 2019.

supervising. Coordinator 3, on the other hand, said that no teachers ever committed themselves to sensitising others about the policy.⁶²

In the questionnaire administered to learners, all the thirty learners agreed that sensitisation was very important (see Table 5.18).⁶³

Table 5.18: Views of learners on whether sensitisation was important

QUESTION	RESPONSES		
Do you consider sensitisation about PMS to be very important?	<i>Agreed</i>	<i>Undecided</i>	<i>Disagreed</i>
	30	0	0

With regard to the actual practice of sensitisation regarding PMS by learners, however, PMS prefects were rather negative.⁶⁴ Prefect 1 thought that there was very little sensitisation by learners about PMS going on in the schools. Prefect 2 answered that as far as she could remember, there was no pupil who was ever sensitised about PMS. Prefect 3 said that the prefects themselves were doing very little to inform learners about doing the activity. Prefect 4 responded that if there was any talk about it among learners, it was mostly in the negative sense. Prefect 5 stated that most of the learners did not like PMS and that they were against the whole idea of sensitisation. Prefect 6 noted that learners only knew something about PMS through the activity itself, through the prefects, timetables and through some teachers to a little extent. Indeed, some of the learners did not even know what the initials PMS stood for.

⁶² In-depth interviews with PMS coordinators held in October, 2019.

⁶³ Questionnaire administered to learners in October, 2019.

⁶⁴ In-depth interviews with PMS prefects held in October, 2019.

The FGDs made some suggestions as to how the sensitisation of PMS might be promoted.⁶⁵ FGD 1 shared that learners could be sensitised during school assemblies just as they were with regard to other issues like HIV/AIDS, road safety, religious values, and academic topics. Group 2 suggested that a PMS club could help much in making learners aware of the importance and value of carrying out PMS. Group 3 mentioned that talks could be given about the topic at different fora in the school although this was not happening at present. Group 5 was of the view that learners would not be very willing to sensitise others as they themselves were not thinking very positively about it. Group 6 discussed that learners could sensitise on occasions like Independence Day, sports and youth days, fairs, debates and in everyday life although these opportunities were missed at present.

Analysis

While all teachers admitted that sensitisation needed to be done, ASMs and PMS coordinators commonly agreed that it was not being done. Learners were also in agreement that sensitisation was crucial. However, the PMS prefects and focus groups reckoned that they (learners) did not actualise this. Hence, it would appear that while teachers and learners acknowledged that sensitisation was very important, they were not doing much about it. Tembo (2018) significantly noted that poor maintenance could be blamed on lack of sensitisation.

5.4 Condition of school property and grounds

The assessment on the condition of the school property and surroundings was done using an observation checklist. The conditions considered in the study were assumed to be what teachers and learners could handle during PMS and which did not need the services of specialists such as builders,

⁶⁵FGDs carried out with grade twelve girls and grade twelve boys in October, 2019.

electricians and plumbers. As the problems seemed to have been part of the system for a long period of time, there was evidence of neglect and/or deferred maintenance. Table 5.19 shows the observations made on the conditions of school property and grounds in October, 2019. The observations were made using the categories of whether the items were satisfactory (**S**), not satisfactory (**NS**) or not applicable (**NA**).

5.4.1 School property

5.4.1.1 Graffiti

The absence of graffiti was not satisfactory in all three schools (see Figure 5.1). All the chairs, desks and tables had traces of graffiti, especially on the parts underneath them.

Table 5.19: Observation made on the condition of school property and grounds

ITEMS	CATEGORY	S	N/S	N/A
SCHOOL PROPERTY	• Absence of graffiti		√	
	• Overall cleanliness		√	
	• Condition of many windows		√	
	• Condition of furniture		√	
	• Condition of doors		√	
	• Floors		√	
	• Level of sanitation		√	
SCHOOL GROUNDS	• Sidewalks		√	
	• Drains and inlets		√	
	• Maintenance of lawns		√	
	• Care of plants		√	

	• Care of gardens and orchards		√	
	• Presence of litter		√	
	• Condition of bins		√	
	• Maintenance of pits		√	

Although the walls appeared to have been newly painted, there was graffiti on them also. Some writing instruments like nails, glass, pencils, markers, chalk, charcoal, pens, protractors and dividers from mathematical sets were used to inscribe the graffiti. Some of it seems to have been done for sheer damage or vandalism, to leave a mark of existence, show ownership as if it were personal property, and some merely as retribution on class monitors, prefects, teachers and administrators. The graffiti could easily have been removed



Figure 5.1: Exhibit of graffiti

Source: Field Data, October, 2019.

by regularly carrying out PMS. Tiles in the toilets could make it easy to remove the graffiti. The problems of graffiti were also pointed out by Ndlapo (2006; 2009) and Caro et al. (2016).

5.4.1.2 Dirt

Dirt was evident everywhere in the three schools. It seems to have been the result of chalk dusting, sticking papers, water stains, drink spills, and touch by dirty human hands, shoes and clothes. Insects such as spiders, termites and flies caused cobwebs, clay paths and dots respectively. In extreme cases, faeces were used to write on walls and doors of toilets. Dirt was also on most of the window sills and glass panes at the three schools (see Figure 5.2).



Figure 5.2: Presence of dirt

Source: Field Data, October, 2019.

Caro et al. (2016) and Likando (2017) also found that dirt was a problem in their studies on schools.

5.4.1.3 Windows

All the three schools had problems with windows. Some windows were easily moved by the wind because they were not tightening due to missing nuts and window fasteners. As a result, stones were placed on sills to try and block windows from making unnecessary and disturbing movements. Furthermore, it resulted in the presence of broken window panes in all the schools. In some cases, the broken window panes seem to have been the result of stones and other such objects thrown by learners. This supports the “broken window theory” which postulates that once something is left unattended to, people tend to further vandalize it. Broken window glass poses special problems during rains resulting in cold drafts as observed by Grafweg (2010). Nhlapo (2009) similarly noted problems with windows.

5.4.1.4 Furniture

In all the three schools, there was broken furniture in classrooms and outside lying idle or heaped up (see Figure 5.3). Some of the furniture only needed minor repairs. However, there were no workshops at the schools where teachers and learners could have broken objects repaired. Adeoye and Tayo (2012: 237) recognised that school furniture committees needed to be put in place to make sure that all furniture that was not in good condition was taken to warehouses for repair.

5.4.1.5 Doors



Figure 5.3: Broken furniture

Source: Field Data, October, 2019.

Numerous doors were not easily opening and closing and were making noise from ungreased hinges and were scraping the floor. In some cases, locks and handles were either damaged or missing. All of these problems were evident on the door of the classroom at one school where the FGDs was held. Problems with doors in schools were also observed by Wakeham (2003) and Nhlapo (2009).

5.4.1.6 Floors

Some classrooms were very difficult to clean because of the condition of the floors. For instance, the classroom at the school where one FGD was held was found at break time to have soil and waste papers. The floor did not seem to have been cared for in terms of

applying cobra or chlorophyll or mopping as there many potholes. Wakeham (2003), Nhlapo (2009), Adeoye and Tayo (2012), MESVTEE (2015) and the Office of Inspector General (2016) all acknowledged the need of regularly maintaining the good condition of floors.

5.4.1.7 Sanitation

There was a noticeable absence of notices reminding learners to use the toilets responsibly, e.g., to use toilet paper, to flush after use and to leave the toilet clean for others. Such notices could easily be put in place during PMS resulting in more hygienic conditions. The ablution blocks had an overpowering and unpleasant smell resulting from not applying smell neutralizing chemicals in the ablution blocks, and from the careless use of pans and cisterns. Furthermore, excrement was on the walls in some cases. Nhlapo (2009) and Srivastava (2013) also noted such problems with toilets in schools. Such conditions run the risk of resulting in the spread of diseases like cholera, diarrhoea, and dysentery. Some toilet pans were not in use due to poor maintenance, a finding that was also noted by NAOT (2017). Blocked water and leaking water pipes were also observed.

5.4.2 School grounds

5.4.2.1 Sidewalks

In the schools in question, the appearances of the sidewalks were not satisfactory as exposed rocks, sticks and other debris needed to be removed. The grounds needed resurfacing as there were signs of rough ground in all the three schools. Rock outcrops were present in all the roads leading into the schools. In general, it can be said on the basis of observation that none of the schools were carrying out extensive PMS on the sidewalks.

5.4.2.2 Drains and inlets

All the three schools observed had leaves and debris in water drains and inlets. This problem was especially common at the back of the classrooms. These could easily have been removed through the activity of PMS.

5.4.2.3 Lawns



Figure 5.4: Poor state of flower beds and lawns

Source: Field Data, October, 2019.

The way lawns were manicured was generally not satisfactory. They only appeared pleasing to the eye on the frontage of the schools and near the administration blocks whereas the backyards were neglected. Trespassing was taking place on the lawns in these schools. Some flower beds did not have flowers (see Figure 5.4). Tembo (2018) advocated for the care of lawns.

5.4.2.4 Plants

There was little evidence of the pruning of overgrown, dead or diseased branches on the frontage of the schools. The indigenous trees in the backyards were not very well cared for. Trees had a lot of cuts and exposed roots (see figure 5.5). Amanchukwu and Ololube (2015) commented on the need to take good care good care of plants.



Figure 5.5: Uncared for tree base

Source: Field Data, October, 2019.

5.4.2.5 Gardens and orchards

Gardens and orchards in the schools were clearly not well looked after. The orchards were composed mainly of mango and lemon trees. There was nothing to suggest that the trees were fed with manure or well-watered or that they were being pruned. At one school, nursery fruit trees were bought in numbers but ended up neglected at a back corner resulting

in their drying up. Only one school had a small vegetable garden behind a classroom block which appeared planted on infertile soils and was not manured.

5.4.2.6 Littering

Littering seemed to be commonplace in the schools as learners seemed to have the culture of throwing litter all over (see Figure 5.6). The litter was mostly comprised of plastics, paper wrappers and leaves as well as some leftover foodstuffs among others. These were scattered all over the place. Litter was visible everywhere. By break time, one classroom which hosted a FGD was heavily littered. Furthermore, learners at one school who sat on lawns as they waited to write the end of term exams left litter lying everywhere which was later picked up by general workers. The fact that general workers gathered the litter left by learners demonstrated how little responsibility learners felt for the situation they had caused. Stock (1991), Nhlapo (2009) and Nosiku, (2016) all found littering in schools to be a major problem.

5.4.2.7 Bins

Bins were filled to the brim and spilling point. However, it was difficult to ascertain if the bins were filled during the PMS exercise or not. Ndlapo (2006) and Nosiku (2016) identified bins as one of the items that needed regular attention.

5.4.2.8 Pits

The condition of pits as waste disposal areas was the least pleasing to look at in the three schools. They were located in the western direction of the school reasonably away from the classrooms. Garbage was seen all around the pits. It appeared the learners threw the litter outside the pits. One of the findings highlighted by Srivastava (2013) was the lack of a proper systematic waste disposal arrangement.



Figure 5.6: Litter on the backyard

Source: Field Data, October, 2019

5.5 Overall analysis of findings

In spite of the strong conviction that the government PMS policy was important, no specific school policies were in existence to help to implement the government policy. Although it was established that teachers and learners were very much aware of the existence of the PMS policy, and although they were agreeable to the fact that it was supposed to involve everyone, this did not take place in practice. Although teachers and learners viewed organisation to be crucial to the successful implementation of the activity, they were doing little or nothing to make it a reality. Furthermore, they did not act responsibly during PMS

activities despite their claim to the contrary. Whereas they claimed that they were taking care of the tools, it was established from the opinions of the ASMs, the PMS coordinators, the PMS prefects and the FGDs that this was not the case. Whereas they considered inspection during PMS activity to be important, their actions reflected the contrary. Whereas they considered sensitisation with regard to the PMS policy to be important, their actions betrayed their words.

Overall, teachers and learners in the three secondary day schools under consideration in this study behaved rather negatively towards the PMS policy despite their claims to the contrary. Whereas learners resented the imposition of manual work on them and found a variety of excuses for avoiding the work or doing as little as possible, they clearly had little interest or enthusiasm for the goal of keeping the school property and grounds in a good condition. They did not perceive it to have any value or worth other than as a perceived form of punishment.

From the perspective of the teachers, they seem to have considered PMS as a form of distraction from their main work of teaching and avoided as much as possible becoming involved in its implementation. Like the learners, they appear to have perceived little value or worth in carrying out PMS exercises other than as a means of acquiring some incentives in the form of monetary gain or social acclaim. When performed, it seems to have been perceived as a necessary duty rather than as a good thing for the school and its overall reputation. Teachers did not seem to take any pride in the appearance of the school and the upkeep of its property. Since it was government property, there seemed to be little interest in investing more time and energy in its development. Administering penalties for related offences in an effort to improve perceptions and attitudes did not succeed. By and large, the

perceptions and attitudes of teachers towards PMS were bad. In sum, then, the actions of teachers and learners were not matching with what they were saying.

Caring for school surroundings is very important not only for aesthetic appearance but also for the effect it has on the overall healthy atmosphere of the school environment. Taking care of lawns, trees, shrubs, plants and flowers can play an important part in expressing how the whole school is being managed.

In the case of school property, there was much to be desired in the actions of the three schools involved in this study. The same was true of the presence of graffiti, dirt, window problems, broken furniture, doors not properly functional and sanitation compromised. On school grounds, there was evidence of sidewalks not being safe, drains being blocked, lawns not fully maintained, plants poorly cared for, gardens and orchards neglected, and litter scattered, especially around pits.

As expected, the findings are not significantly different from those of other studies on schools. However, the issue that has not been explicitly investigated in other studies is why so little attention is being paid to caring for school property and grounds. There is clearly an evident lack of motivation involved. As pointed out in an earlier study by Lijimu (2012), teacher training colleges do not seem to focus on environmental ethics so that teachers are not sensitised to emphasise this in their teaching and may not even be aware of its importance. Environmental ethics does not just focus on the wider global environment but also on the perceptions and attitudes that people have towards non-human things such as property and natural surroundings. It raises the question of the value or worth that people attribute to the non-human environment and the resulting care that should emerge from this.

Whether it be utilitarian, inherent or intrinsic value, the notion of value is crucial for influencing the manner in which people perceive and treat the environment.

The next chapter, therefore, will apply value theory, environmental virtue theory and the ethics of care to the findings of the study.

CHAPTER SIX

ETHICAL EVALUATION

6.1 Introduction

The fourth objective of this study was to make an ethical valuation of the perceptions, attitudes and practices of teachers and learners towards PMS. The ethical theories involved are value theory, environmental virtue theory and care ethics. This chapter, then, applies these ethical theories in making an ethical evaluation of the perceptions, attitudes and practices of teachers and learners towards PMS.

6.2 Value Theory Approach

Value theory focuses on identifying the worth of things or the good of things. This can depend on one's perception of the good of a thing in-itself or on the perception of the one who is perceiving the thing. In the first case, we talk of the good-in-itself which means that the object has a value that does not depend on the person perceiving it. It is referred to as objective or "intrinsic value". For example, one can say that the sun has value-in-itself although the sun was in existence millions of years before there were any humans to perceive it. On the other hand, what is called "inherent value" refers to the value that a person perceives in a thing in such a way that the object being perceived and the act of perceiving cannot be separated. For example, a person can perceive the beauty of a rainbow or the beauty of a flower; that is subjective value. It is the value as perceived by the person or subject having the perception. In this case, some people might not in fact perceive any value in a rainbow or a flower. The third type of value refers to "utilitarian value" which refers to the value or worth of something only to the extent that it is of use to someone. For example, food has utilitarian value because it nourishes us. Otherwise, it may not be

considered to have any value. Note, however, that the three types of value mentioned above are not exclusive of one another. They may all be present in the perception of a person at the same time. For example, a person may acknowledge the intrinsic value of a rainbow even if he or she may not be observing it; the same person may have the personal experience of enjoying the inherent value of the rainbow; and the person may experience the healing effect of the rainbow in bringing a relaxation of stress or anxiety in one's condition.

School environments involving trees, grass and soil have intrinsic value or ends-in-themselves whether the teachers and learners perceived this or not. Some of such trees and soil may have been there even before teachers and learners went to these schools. In this way, they have intrinsic value in themselves and should be preserved and appreciated. Neglecting to water plants and lawns during PMS has not contributed to preserving and promoting their well-being and flourishing. Similarly, failure to prevent soil erosion by teachers and learners through PMS activities such as manuring, resurfacing, planting trees and grass has resulted in the loss of the intrinsic value of the soil. The point of intrinsic value is that harm can be done to elements of the natural environment irrespective of whether those harming it, or neglecting to preserve it, are aware of what is happening. Intrinsic value, however, does not only apply to living forms (biota) but also to non-living things (abiota) whether human-made or not, which are entitled to respect. This refers to school property, to buildings, to the structure of buildings and to tools. In other words, allowing them to deteriorate is a failure to acknowledge the value or worth which they have in-themselves. This is not a concept that many can easily understand but it underlies the concepts of inherent and utilitarian value which are more easily appreciated.

In the case of inherent value which people can more readily acknowledge, teachers and learners did not seem to be unduly concerned with the appearance of the deteriorating conditions within the school buildings with reference to graffiti, broken windows, the unhealthy condition of toilets, broken windows and the presence of unnecessary dirt. Similarly, teachers and learners did not show any appreciation of the beauty and aesthetic value of attractive scenery in the environment of the school grounds as demonstrated in trespassing, failing to care for lawns and flower beds, etc., and throwing litter anywhere. The lack of awareness of the importance of order and cleanliness both within the school and outside were indicative of a failure to appreciate inherent value. The appearance of a school and its environment does matter.

Utilitarian value is a value which people almost automatically acknowledge especially when the objects or tools they need are not working properly. This value is appreciated because its lack, or dis-value, fails to benefit its users.

Of course, all three kinds of value can be present at the same time depending on the level of perception of the one beholding the object in question. The point at issue is that the perception of the person observing makes a significant difference to the manner in which the object is treated. In this case, the extent to which teachers and learners perceive value in school property and grounds plays a significant part with respect to the attitude they have towards those things. Their attitudes will in turn have a significant effect on their actions or practices. This study has revealed that an appreciation of value is sadly lacking among both teachers and learners with respect to both school property and grounds. The only value that may in some way be recognised is the dis-value of tools or broken or deteriorating objects which do not benefit their users.

6.3 Environmental Virtue Theory Approach

Virtue theory has traditionally restricted itself to the development of habitual character traits in persons so that their actions would reflect their virtues. The focus then was on the promotion of a virtuous character so that the actions of such persons would normally and voluntarily be morally good actions. Environmental virtue ethics does not limit itself to behaving virtuously towards other people but also, and more especially, towards behaving virtuously towards the natural environment, whether biotic or abiotic. It further includes respect for human-made objects which emerge from the natural environment. This does not mean that a person, in this case a teacher or a learner, would have had to have taken a formal course in environmental ethics but rather whether from one's childhood days virtuous habits had been acquired in terms of respect for the environment. Acting virtuously would mean demonstrating what have been identified as environmental virtues such as wonder, care, responsibility, gratitude, sensitivity, respectfulness, appreciation and stewardship for one's actions regarding the environment. In the context of schools, the question then is: To what extent have both teachers and learners developed a habitual way of behaving towards the environment that would express an attitude of care for the property and grounds of the school in accordance with the PMS policy? Is there any evidence that such virtuous habits or attitudes have been acquired, or is there evidence of the lack of such virtuous attitudes among teachers and learners?

The study revealed that environmental virtue habits were sadly lacking in both teachers and learners in their behaviour towards the school environment. Their perceptions and attitudes towards the PMS policy were largely negative despite their verbal approval. The teachers sought incentives for such work instead of voluntarily doing it; and even the mention of

some form of penalisation did not succeed. In practice, to a significant extent, teachers were not adequately committed to the PMS policy. Learners similarly displayed an almost total lack of environmental virtues by their lack of interest or enthusiasm for the work involved. A practical example of lack of environmental virtue was shown where learners threw litter anyhow instead of putting it in designated places such as bins and rubbish pits. It should be noted that if teachers themselves lack environmental virtues, they are in no position to instil such virtues in learners. In addition to failing to actively promote the acquisition of such virtues, the power of their example is missing.

6.4 Ethics of Care Approach

As distinct from the more traditional and more universally abstract ethical theories such as utilitarianism and deontology, the ethics of care has developed with a more specific emphasis on the concrete individual case involving interpersonal relationships and emotions. While not restricted to women, the ethics of care has been more often identified with women rather than men. In the three schools under consideration in this study, it is perhaps significant that all the PMS coordinators were women. Although related to virtue ethics, care ethics differs from it in not focusing on the virtues that may be habitually present in the individual but rather on the particular situation that can involve a whole range of other features that can elicit an attitude of care in an individual. In environmental ethics, care ethics includes the relationship that a person can have with respect to some aspect of the environment such as, for example, a relationship of appreciation and wonder at the beauty of a flower or a tree that we discussed under inherent value. This is an aesthetic capacity that humans can develop in a habitual manner or express in a particular case as in care ethics. In

the context of schools, the question at issue is: Did teachers and learners relate in particular situations with care and responsibility to the non-human elements that they were faced with?

It is clear from the data analysis that the teachers and learners did not relate in a caring and responsible way with both the school property and the school surroundings. Their perceptions and attitudes towards the policy were expressions of an uncaring mentality. For example, the attitude that an incentive should be given revealed the lack of a care-maintenance mentality. Care ethics, of course, cannot easily be separated from value ethics as discussed earlier. School property and grounds were only considered of value to the extent that their upkeep and betterment would result in personal material benefits to themselves. Hence, they were not very much committed to the activity of carrying out PMS. Furthermore, there was inadequate attention paid to the organisational dimension of caring for school property and surroundings. Both teachers and learners failed to display a responsible attitude in carrying out maintenance work and their practices revealed an element of reluctance, if not animosity, to carrying out such work. They claimed to have been caring for PMS tools when the contrary was happening. Furthermore, school property and grounds was not being kept in a good condition and there was no follow up in the form of inspection despite the opposing claim. The lack of caring behaviour was also shown by the failure to sensitise about the importance of maintaining school property. In sum, an ethics of care was not a feature of the behaviour of both teachers and learners.

The most commonly appreciated type of value is that of utilitarian value, namely, the value of something to the extent that it is of benefit or use to oneself or to the school in general. However, even in this context, there was a clear lack of awareness of the extent to which promoting and actively protecting and preserving the well-being of the overall school

environment was of importance. This was not only with reference to the physical elements of the school building itself and the classrooms but also with reference to promoting a more conducive academic atmosphere as was intended by the PMS policy. For instance, classroom furniture was allowed to remain broken or in a weak state, tools were either not repaired or were lost, lawns, trees and flower beds were not properly maintained. In general, it can be said that even in terms of utilitarian value, teachers and learners were failing to make use of school property and grounds to maximise the healthy condition and academic environment of the school.

6.5 The absence of adequate ethical motivation

What emerges clearly from the ethical analysis made of the behaviour of the teachers and learners in the three schools under this study is that there was an absence of ethical motivation which would result in a change of behaviour. Behaviour does not necessarily change as a result of force or of financial or social benefits only. Such behaviour may be reluctantly carried out but without any sense of meaning or purpose in what is taking place. There clearly is a critical need for greater emphasis on the importance of value ethics, environmental virtue ethics, and an ethics of care.

Teachers perceive their role as mainly to teach; learners perceive their role as mainly one of learning. In both cases, taking care of school property and grounds is not perceived to fall under their responsibilities. Consequently, manual work under PMS is perceived as an extra that does not have any great significance. Whereas teachers may derive some limited motivation from monetary or social incentives, learners and PMS prefects perceive this activity as forced labour that should not be expected of them and which is only taking them away from time for learning.

What is missing is the kind of motivation that can only come from some form of ethics that goes beyond the accumulation of material benefits. Value ethics emphasises the importance of acknowledging the value of all things, whether intrinsic, inherent or instrumental, and in responding to that value in one's behaviour. An awareness of these values can support one another in motivating both teachers and learners to act towards property in an altruistic manner. Environmental virtue ethics emphasises that a person, teacher or learner, who has acquired environmental virtues will normally act in such a way as to demonstrate respect and care for property which belongs to another. Care ethics, which focuses on particular situations and on felt relationships with another, whether it is a person or a thing such as a non-human element, will emphasise perceiving the overall context of a concrete situation and act on the basis of showing care. Teachers have a primary role to play with respect to caring for property for they are the ones who can and should exercise influence by word and example on learners. Consequently, if teachers are not subjected to such ethical theories in teacher training colleges or in some other way, there is little hope that learners will be influenced to behave in an environmentally friendly way. Whereas the government PMS policy in itself contains important directives with regard to promoting the academic environment in schools, it does not ensure that it will be effectively and responsibly implemented unless supported by suitable ethical motivation. The literature on schools and school property focuses almost exclusively on the “external” results from lack of attention to caring for the property itself. Virtually no mention is made of the need for “inner” motivation on the part of teachers and learners. This does not mean that other forms of motivation such as punishments are ineffective but rather that they are not sufficient in themselves.

What is crucially important to note is that all the three ethical theories discussed have the goal of promoting the required motivation that can initially affect perceptions which in turn can result in desirable attitudes which in turn can lead to desired actions and practices.

CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

This chapter provides conclusions of the data findings and conclusions of the ethical evaluation followed by recommendations of the study.

7.2 Conclusion of data findings

The future development of a country along with its environmental concerns depends to a significant degree on the education given to learners and the influence of teachers on them. Hence, secondary school teachers are of crucial importance, not just in conveying information to learners but in helping them to think and act responsibly for themselves. This is the purpose of education, namely, "to draw out" from learners their own critical thinking on life issues with a view to responsible behaviour. Education is intended to develop character in learners so that they will behave in ways appropriate to caring for others as well as for themselves. Such caring is dependent on perceptions of value and habitual virtuous attitudes. Caring in the context of the school expresses itself in the manner in which both teachers and learners behave towards the property of the school itself and its surroundings. A well-kept and attractive environment plays a significant, though often an unnoticed and unappreciated role, in the formation of both teachers and learners. With particular reference to the school environment, caring for the property of school buildings and grounds plays an important part in the overall formation of the character of learners in the context of the school environment. In investigating the situation currently operating in three day secondary schools in Lusaka, this study concluded that the perceptions and attitudes of teachers and learners and their consequent actions were considerably lacking in caring for

school property and its surroundings. This became clear in the case of both teachers and learners who failed to act responsibly with respect to their involvement in PMS activities, the organisation of PMS programmes, the care of tools, the inspection of PMS activities, and the promotion of sensitisation programmes. Particularly noticeable was the lack of adequate ethical motivation towards the implementation of the government PMS policy directives.

7.3 Conclusion of ethical evaluation

A combination of three ethical theories which were applied to the data findings revealed the extent to which ethical motivation was almost totally absent in the perceptions and attitudes of both teachers and learners. The notion of value, which is so critical to appreciating the worth of things, was conspicuously lacking in the perception of teachers in particular. The result was that they were not in a position to convey an appreciation of values to learners if they did not have such an appreciation themselves whether with reference to intrinsic value (i.e., the value or worth of things-in-themselves), inherent value (i.e., the value of experiencing the beauty and order of a well-kept school), or utilitarian value (i.e., the value of the usefulness of property and grounds. Furthermore, the promotion of environmental virtues was not considered an important ingredient of the educational programme. Manual work was looked down upon and almost totally rejected as part of an academic environment. Additionally, failing to care for property and surroundings lessened the effectiveness of the schools in developing responsible character traits in both teachers and learners. An ethics of care, which would encourage both teachers and learners to look after property was missing in the manner in which property and surroundings were treated. In sum, teachers and learners did not seem to care much about the upkeep and appearance of their surroundings in maintaining them properly. The lack of an ethics of care is most likely the result of a failure

to appreciate value in material things which in turn is related to the absence of environmental virtues. Care of property does not only look to its present condition but keeps an eye on the possible long-term effects of not repairing or maintaining objects that show signs of deteriorating - hence, the importance of a PMS policy. Unfortunately, the motto that "prevention is better than cure" was not evident among teachers and learners.

The conclusion of this study with respect to the application of ethical theories to the findings is that the inner ethical motivation required for adequate care of property in teachers and learners is missing. Furthermore, without such motivation, the likelihood of successfully implementing the government PMS policy is critically reduced.

7.4 Recommendations

1. There is need for greater emphasis to be placed on character formation in education as is specified in the *Zambian document Education for All*. Such formation should not restrict itself to respect for humans only but also respect for the environment.
2. There is an urgent need for the teaching of environmental ethics in teacher training colleges, not just for an appreciation of the overall environment, but in a more particular sense of highlighting the need for greater respect and appreciation of material things and manual work in the context of school property and surroundings.
3. The spirit of the PMS policy directives needs to be more greatly emphasised in order to motivate action, rather than the more exclusive legal dimension which does not suffice to ensure the implementation of the policy. Attempting to enforce the policy by punitive measures will not succeed unless motivation is rooted in some appreciation of values.
4. Schools need to have their own clearly defined and circulated policy guidelines to highlight the features of the PMS policy and to explain their importance.

5. Future studies could investigate the extent to which private schools may be promoting the PMS policy in ways which government schools are not.

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Appendices

Appendix I: Preventive Maintenance Programmes in Schools (MGEEC)

Preventive maintenance is important in any educational institution because it prolongs the usable life of the infrastructure and provides for a conducive teaching and learning environment. The success of the system depends on the cooperation between the management of the institutions, teachers, learners, parents and the community. It is for this reason that each school should sensitise the local community to ensure their participation in the preventive maintenance system of the school.

Item	Requirements
Organisation of Preventive Maintenance programme (PMP)	<ol style="list-style-type: none"> 1. For effective teaching and learning in educational institutions, there should be a programme of preventive maintenance. 2. There should be a preventive maintenance committee. 3. There should be preventive maintenance sub-committees, dealing with such issues as: <ol style="list-style-type: none"> a) Fundraising; b) Cleaning and maintenance of institutional surroundings; c) Repair of furniture, equipment and other institutional property d) Waste management e) Buildings and toilets 4. Board members, PTA/AC/PCSC members and learners should be represented in the committees, with equitable representation between

	<p>male and female and should meet once a quarter.</p> <p>5. Learners should be involved in the cleaning of the school environment.</p> <p>6. Participation of Education Standards Officers from the district at least once a year is desirable.</p> <p>7. A PMP chart should be drawn up at class, group and learner levels.</p> <p>8. Each should have a PMP calendar.</p>
Orientation	<p>The school management should ensure that new Board members, PTA/AC/PCSC members, learners, teachers as well as the community are given PMP orientation once a year.</p>
Utilisation of workshops and other institutional facilities to support PMP	<p>1. Design and technology workshops should be used for undertaking repair works.</p> <p>2. Workshops, Home Economics and other institutional facilities should be used to fundraise in order to support PMP activities.</p> <p>3. Institutional facilities can be used by other institutions and the community to fundraise and contribute towards PMP activities.</p>
Security and safety	<p>1. Security and safety features, such as a wall fence and burglar bars to all rooms should be installed, except in classrooms and other specialised rooms that accommodate a large number of learners.</p> <p>2. Security guards should be put in place to guard against vandalism.</p> <p>3. There should be functional and adequate fire-fighting equipment.</p> <p>4. Regular drilling of teachers and learners in firefighting techniques</p>

	should be conducted.
Community involvement in PMP	<p>In order for the community to participate in PMP effectively, the following measures should be put in place:</p> <ol style="list-style-type: none"> 1. A member of the community should be on the PMP committee. 2. The community should be sensitised by the school management on the advantages of PMP during the Annual General Meeting. 3. The PMP committee should support the school in areas of finance, relevant technical skills, material donations and rehabilitation of machines, equipment, workshops, etc. 4. The community should be made aware of the guidelines concerning levying outsiders using school facilities. This is to enable schools meet their administrative costs. In this regard, advocacy can be achieved during PTA/AC/PCSC meetings and school open days.
Utilisation of other institutions in PM programmes	<p>It is important for Education Boards to promote cordial and productive working relationships with line ministries, non-governmental organisations and other stakeholders in order for PM programmes to succeed. The following activities could be organised:</p> <ol style="list-style-type: none"> 1. Sponsored awareness campaigns. 2. Donations of PMP materials. 3. Adoption of classrooms or surrounding areas, such as sports fields, gymnasias or swimming pools by external sports bodies or

	<p>private companies.</p> <p>4. Records of agreements with other institutions should be kept.</p>
Funding and fundraising for PM programmes	<p>1. There should be records kept of funding and its utilisation.</p> <p>2. PMP projects, such as making of desks for sale to other schools should be initiated by boards where capacity exists.</p>
Areas of emphasis in PMP activities	<p>Litter bins, rubbish pits and dust bins should be placed in strategic places to keep the school environment clean.</p> <p>Beautification of school surroundings and buildings should be emphasised to learners, teachers and the local community exemplified by:</p> <ul style="list-style-type: none"> a) Regular painting of all buildings; b) Removing cobwebs, graffiti, dirt and dust from buildings and school furniture; c) Taking steps to ensure immediate surroundings of the school are kept clean; for example, planting lawns and shrubs to reduce dust and create a pleasant environment; d) Ensuring that floors, chairs, desks and tables are mopped and dusted daily; e) Putting up a duty roster to indicate tasks to be undertaken by learners and teachers to ensure that learners do the above mentioned work; f) Involving all learners in PMP activities;

	g) Ensuring proper utilisation of water, electricity and toilets.
Evaluation of PM programmes	<p>Boards should ensure that the school management shows evidence of evaluation of PMP programmes through the availability of:</p> <ol style="list-style-type: none"> 1. Records of weekly evaluation of PMP programmes 2. Minutes of monthly PMP meetings. 3. Records of corrective measures being taken before and after inspection. 4. Records of annual reviews on the performance of schools in PMP

Source: MGEEC (2015: 86-88)

Appendix II: In-depth interview schedule for ASMs

1. What are your views on how teachers look at the PMS policy?
2. Give your opinion on whether schools need to have specific school PMS policies.
3. Do teachers usually expect an incentive for carrying out PMS?
4. Are teachers penalised for deliberately not participating in PMS activity?
5. How many teachers are involved in PMS committees?
6. Assess how teachers organise PMS programmes.
7. Do you consider teachers to be responsible regarding PMS?
8. Are teachers taking care of the PMS tools?
9. Do teachers consider it important to carry out inspection?
10. Are teachers carrying out sensitisation?

Appendix III: In-depth interview schedule for PMS coordinators

1. How familiar are you with the PMS policy?
2. In your opinion, how do teachers look at the PMS policy?
3. Has your school got a specific policy reflecting the government policy?
4. Should you be given an incentive for your work?
5. How easy would it be to administer a penalty on a teacher for PMS offences?
6. How many teachers are involved in the committees?
7. Which groups of teachers are least involved in organising programmes?
8. What is your opinion about the responsibility of teachers during PMS?
9. What problems are faced in relation to the way teachers failed to take care of the PMS tools?
10. Do teachers carry out inspection?
11. Are teachers doing much sensitisation about the policy?

Appendix IV: In-depth interview schedule for PMS prefects.

1. How aware are you of the policy?
2. How do learners look at the PMS policies?
3. Should you and other learners receive an incentive for carrying out the PMS policy?
4. Is it easy to administer penalties on learners for PMS related misbehaviour?
5. Assess how involved learners are?
6. Are learners well organised during PMS programmes?
7. Do you considered learners to be responsible regarding PMS activity?
8. What problems are faced regarding the way learners treated PMS tools?
9. Do you think inspection should be carried out and how often do prefects carry this out?
10. Is there some sensitisation being done by learners?

Appendix V: FGD schedule

1. Do learners like the PMS policy?
2. How do you look at people who administer penalties for PMS misbehaviour?
3. Which group of learners rarely participate?
4. Discuss various ways in which learners are disorganised during PMS work time.
5. Describe some of the ways learners demonstrate irresponsibility?
6. Comment on the way learners are failing to take care of the tools?
7. Is inspection carried out?
8. Make some suggestions as to how the sensitisation of PMS might be promoted.

Appendix VI: Questionnaire on what teachers say about PMS.

Indicated by ticking on boxes: “A” (agree), “U” (undecided) and “D” (disagree)

#	STATEMENT	ANSWERS		
		A	U	D
1.	Are you teachers aware of the PMS policy?			
2.	Should incentives be given to implement the PMS policy?			
3.	Should all teachers be involved in PMS committees?			
4.	Should teachers organise PMS programmes?			
5.	Do you consider yourself responsible regarding PMS?			
6.	Do you take good care of PMS tools?			
7.	Do teachers consider it important to carry out inspection?			
8.	Do you consider sensitisation to be very important?			

Appendix VII: Questionnaire on what learners say about PMS.

Indicated by ticking on boxes: “A” (agree), “U” (undecided) and “D” (disagree)

#	STATEMENT	ANSWERS		
		A	U	D
1.	Are you aware of the PMS policy?			
2.	Are incentives important for implementing the PMS policy?			
3.	Should all learners be involved in PMS?			
4.	Are you learners well organized during PMS programmes?			
5.	Do you consider yourself responsible regarding PMS?			
6.	Do you take good care of PMS tools?			
7.	Do you think inspection should be carried out?			
8.	Do you consider sensitisation about PMS to be very important?			

Appendix VIII: Observation checklist

The observations were made using the standards of satisfactory (**S**), not satisfactory (**NS**) or not applicable (**NA**).

ITEMS	CATEGORY	S	N/S	N/A
SCHOOL PROPERTY	• Absence of Graffiti			
	• Overall cleanliness			
	• Condition of many windows			
	• Condition of furniture			
	• Condition of doors			
	• Floors			
	• Level of sanitation			
SCHOOL GROUNDS	• Sidewalks			
	• Drains and inlets			
	• Maintenance of lawns			
	• Care of plants			
	• Care of gardens and orchards			
	• Absence of litter			
	• Condition of bins			

	<ul style="list-style-type: none">• Maintenance of pits			
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