

**THE IMPACT OF TECHNOLOGY ON**

**SCHOOL ADMINISTRATION**

**BY**

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# ABSTRACT

The effective functioning of a school as an organization requires an effective administration. The effective management determines the success of a school as educational and teaching institution (van der Westhuizen 1991). Turozzi (2003) states that technology had the potential to be a valuable change agent in the modern education system. The technological resources can be integrated across administration (Stammen, 2003) The lack of technological support in a school hinders the fulfillment of numerous administrative functions. Effective management leads to quality teaching and (Eraut, 1989).

**This study looks at how technology impacts on school administration. The study links the development of administrative technological support with institution effectiveness. It also investigates the way these technological resources are used in schools for administrative purposes. The study concentrates on functional aspects of school administration, that is, how the information is stored and made available, and institution effectiveness.**

# DECLARATION

I **Dudu Thulisiwe** declare that this dissertation “The impact of Technology on school administration” is my own original work and that all sources that I used or quoted have been indicated and acknowledged by means of complete reference. Further more, this dissertation was not submitted to any other university.

Signed -----

Dudu Thulisiwe Msimang

# **ACKNOWLEDGEMENT**

I wish to acknowledge my gratitude to my supervisors Ben Nel, Reshma Sookrajh and Bheki Khoza for their patience in guiding me in order to complete this research.

# **DEDICATION**

I dedicate this research to my family, my husband Ndumiso Msimang for his spiritual support during my studies. My loving children Naledi and Mparama who are always my source of inspiration and to my friend Bhekiwe Ntuli who also contributed a lot to the completion of this research.

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## **CHAPTER ONE**

### **RESEARCH FOCUS**

#### **1.1 INTRODUCTION**

Every school should have the basic resources to operate effectively. The ideal is achieved when every school has sufficient classrooms, ablution facilities, laboratories, teaching and administrative equipments, libraries and others. It is acknowledged that this is a “dream” because most of the schools in South Africa are far from this dream. (Msweli et al.,2001). However, it is important that in the meantime, schools should be organized within the limited resources available (Msweli et al., 2001). A school can have sufficient resources but if those material resources are not used purposefully the school cannot achieve its goals.

The purpose of this study is to investigate the impact of technology on school administration. The researcher has used a case study of two secondary schools to provide insight into the type, quality and nature of technological materials being used in those schools in relation to the administration and the teaching activity itself.

## 1.2 RATIONALE FOR THE STUDY

The researcher has used the term “Ex-Department” to refer to the former racially-based departments of education under the apartheid system of schooling in South Africa. In KwaZulu-Natal education departments were created for different groups as follows: - House of Assemble (HOA) for whites, House of Delegates (HOD) for Indians, House of Representatives (HOR) for Coloureds and African children either attended school under Department of Education and Culture (DEC) in homelands or the Department of Education and Training (DET).

The researcher’s concern was that resources were not deployed according to the principle of equity in different ex-departments of education under apartheid. The White paper 1 (DoE, 1995) acknowledges the disparity that existed between ex-departments of education. The White Paper 1 (DoE, 1995: 17) states that it is a goal of the new department of education to transform the legacy of the apartheid past, but still, this problem of disparity in education has not yet been corrected. The government still faces the challenge of creating a system where all schools will be able to operate on equal level. There is no doubt that both principals and educators suffer from the lack of administrative technological support. As an educator, the researcher has realized that administrative responsibilities take up the bulk of the time and insufficient time is left for the primary responsibility of the profession such as educative interaction with learners, due to the lack of technological support in a school. The lack of technological support in a school means the shortage of modern material resources like computers, telephone, fax

machine, internet, photocopier and others which support and facilitate the execution of administrative activities. Principals in many schools have to fulfill numerous administrative functions which might be detrimental to their general managerial role.

Another reason for pursuing this study was to link the development of administrative technological support to broad school development planning based on institutional effectiveness. According to Msweli et al. (2001) school development planning is a process of innovation and change management in which the main goal is to improve the quality of teaching and learning. In other words, both administrative technological support and school development planning have common points of improving the quality of teaching and learning with an aim of achieving institution effectiveness. An effective school is a school with the shared vision of educators, learners and parents, which provide a purpose and a sense of direction. The climate of such a school is conducive to teaching and learning. The learning is the primary purpose of the school (Badenhorst and Lemmer, 1997). According to Potter and Powell (1992) school effectiveness refer to a school that is able to satisfy its external environment such as the demands of parents, students and the business community, in key areas of performance such as end product (examination results). The above mentioned characteristics of the effective school, however, only contribute to effectiveness and do not by themselves assure effectiveness. The personal characteristics of the principal and educators are also vital.

### 1.3 METHODOLOGY

This study focuses on schools located in the Pietermaritzburg Region of KwaZulu Natal, one of nine provinces in South Africa. The study focuses on two so called African (the school which is attended by Black learners only) high schools which I will refer to as School A and School B.

School A is a comprehensive school situated at Imbali in Pietermaritzburg. It is a former DET (Department of Education and Training) school. It was opened in 1983 for the disadvantaged community. Prior to 1983 there was a great shortage of skilled and semi-skilled labourers in industries. As a result, school A was made to produce learners who were in demand in industries. The subjects which were offered in School A were Wood Work, Metal welding, Motor Mechanic and Electrical Work. School A is a well resourced school. It has piped water and flush system toilets. The school is fenced by 1,8 metres electrified wire. The school has a biology laboratory and science laboratory. There is one library, one tuck-shop, six store rooms, and one big computer room with 25 computers. Each office has a computer and a telephone. For sports, there are two soccer and two net ball fields, a tennis court and a swimming pool. School A has a strong sporting identity, reflected in the framed awards in the reception area at the school. It has also a good reputation because of its good exam results.

School B is situated in a rural part of Pietermaritzburg. It is a former KwaZulu Department of Education and Culture (DEC) school. Initially, the aim of establishing

School B was to develop an agricultural school because most of the community members are subsistence farmers, the aim was to improve farming. Due to the lack of funds and qualified teachers for agriculture, the agricultural discipline was closed down. School B is suffering from extreme shortages in terms of resources and finances. There is no piped water. The toilets are using the pit system. School B has no laboratory whereas science and biology are offered. It has no library and one store room. There are three offices. There is one computer and no telephone. For sports, there is one soccer field and one netball field only. School B has bad Matric results every year, which ranges from 2 % to 15 %.

Research instruments include a questionnaire, an interview, and document analysis. The sample of the study is limited to the principal, deputy principal, 2 heads of department and 4 class educators because all post levels are to be represented.

#### 1.4 CRITICAL QUESTIONS

Specifically, the study addresses three critical questions:-

1. What are the technological resources used for administration in each of the two secondary schools?
2. How are **the technological resources utilized** for administration in these **different schools?**
3. How do these **technological resources impact on school administration?**

What follows is **table 1** and it shows data collection strategies and also explains the purpose for using the particular data collection strategy. The table states the number of respondents that are to be used during data collection and the type of research inquiry.

CRITICAL QUESTIONS	DATA COLLECTION STRATEGY	PURPOSE	RESPONDENTS	RESEARCH INQUIRY
1. What are technology resources used in each of the two secondary schools?	a) Observation Schedule b) Document analysis c) Questionnaire	a) To see the type of technological resources they have. b) Prospectus, magazines history of the school c) To determine the utilization and impact of technological resources	a) One teacher from management team. b) One teacher from management team. c) All teachers	a) Qualitative b) Qualitative c) Qualitative
2. How are technological resources utilized	Interview	To determine whether the teachers use the resources and how they use the resources and how they use resources for administrative activities.	a) 4 members management team b) 4 class teachers	Qualitative
3. How do technological resources impact on school administration?	Interview	To determine whether the technological resources have an impact on school administration	a) 4 members management team b) 4 class teachers	Qualitative

### 1.5 LIMITATION OF THE STUDY

The data is limited because the researcher has chosen only ex-Department of Education and culture schools and ex-Department of Education and training schools (schools which were formerly serving African students only during apartheid times). The study has not included the ex-House of Delegates schools and the ex-House of Representatives schools and others. The schools were also chosen on the basis of convenience, that is, with regard to accessibility and willingness of educators to co-operate.

## **1.5 CONCLUSION**

In this chapter the critical questions and the purpose of the study were outlined. It was necessary to provide a brief outline of the limitation of the study. In order to place this study within a broader research context on impact of technological resources on school administration, the next chapter will examine both national and international literature for this study.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 INTRODUCTION

The goal of this chapter is to present a critical review of the existing literature on the impact of technology on school administration. I have clarified relevant terminology.

Heinich (1999) is of the opinion that technology can be best integrated into instruction when viewed from the perspective of the educator rather than of the technologist. (Heinich et al., 1999) The researcher believes that the same thing can happen in school administration which might bring about technology solutions in terms of the day- to-day administrative challenges.

The literature has revealed that there have been many studies on the use of technology resources in schools, The literature has also revealed that technology resources can be used as teaching tools and learning tools, but it has said nothing about the use of technology in school administration, that is why I would like to pursue this study.

Administration refers to everything, which supports the execution of a task. Administration is more formal and regulative execution of a policy already formulated by higher authority, and is accompanied by procedure arrangements and their execution (van

Westhuizen, 1991: 36). According to Bush (1989), Taylor, Fayol and Webber contributed a lot to management theory. They are of the idea that administration is formal, structural and functional. It is formal in a sense that the members of the organization under strict orders and regulation have to execute policy already formulated by higher authorities (Bush, 1989). What is important here, is the realization of the goals of the institution, and individual is not important but taken as part of the organizational structure.

Administration is also structured because classical theorists such as Taylor, Fayol and Webber believe in hierarchical authority structure and a system of rules and regulations which means that there is a clear cut division of labour (Bush, 1989). In other words in administration there are those who allocate duties and there are also subordinates who are to carry out assignments. In this way administration is influenced by a bureaucratic model.

The researcher will concentrate on the functional aspect of the school administration. Van der Westhuizen (1991) divides administrative function into primary objective and secondary objective (van der Westhuizen, 1991: 449). That is, the primary objective of the administrative function, to store data and make information available, while the secondary objective is focused on achievement of institution effectiveness. Institution effectiveness means the success of a school, which is possible if the manager carries out management task of planning organizing, controlling and leading effectively (Van der Westhuizen, 1991: 136). The management tasks for managing work can be described as follows: -

- **Planning** – setting the goals and objectives to be achieved.
- **Organizing** – Specifying the appropriate ways and means to perform each task with an aim of achieving the goals set.
- **Leading** – Influencing others to engage in work behaviors to achieve the result desired.
- **Controlling** – overseeing the actual job performance and verifying that actual; quantity and quality of the result meet the expectations (Donnelly, 1995:9)

Van der Westhuizen (1991) warns that the success of a school will not be measured finally on how effectively various management tasks have been applied and executed, but on the “end products” which the school delivers every year- educated learners who are best equipped for their various vocations (Van der Westhuizen, 1991: 136). This suggests that poor school management results in poor quality. New technologies are considered by the researcher as the alternative management tools that can enhance effective school management. I think modern technology resources are the key factor in facilitating the performing administrative activities, which might lead to the achievement of school objectives.

## 2.2 CLARIFICATION OF TERMINOLOGY

### 2.2.1 Technology

Diversity of the field of Technology makes it difficult to construct a single description of what Technology is.

Govender (2002) and Potgieter (1998) describe technology as the application of scientific knowledge to practical tasks by ordered systems that involve people and organizations, living things and machines. Govender (2002) and Potgieter (1998) also describe technology as a disciplined process using scientific, human and material resources to meet human needs and wants by designing, making and evaluating products and processes. Definitions of technology by Govender (2002) and Potgieter (1998) fall into two distinct categories, that is, technology as process and technology as application of knowledge.

According to Govender (2002) technology is a process undertaken in all cultures (universal), which involves the systematic application of organized knowledge (synthesis) and tangibles (tools and materials) for the extension of human faculties that are restricted as a result of the evolutionary process. The above definition emphasizes that technological activity is historical. It has been going on for as long as human beings have existed. This definition also emphasizes that technological activity is not restricted to any society or culture.

My definition of the term technology is that, technology is extension of our abilities to change the world to suite us better.

### 2.2.2 Administration

There is a general confusion in making a distinction between “administration” and “management”. Administration comes from the Latin word “administratio” which can be translated into “administration” or management”, “guidance” or “control”. According to van der Westhuiszen (1991), the word administration could mean both management and control.

In America literature the term “educational administration.” also means both administration and management. In European literature (particularly England) a distinction is currently being made between “educational administration” and “educational management” (van der Westhuizen 1991: 33) Badenhorst (1997) is of the opinion that management, administration, and leadership are terms that are used to describe the work done by senior people in the school (the principal, the deputy principal, and the heads of department) – in order for teaching to take place. The terms **management and administration are often used interchangeably**. In Great Britain and South Africa the term **management is preferred**; in the United States, the term **administration is commonly used, though governance is preferred**. The term **governmance also features on White papers 1 and 2 on Education (DoE, 1995 & 1996)**.

Some authors concentrate on one aspect of management, such as decision making as if it encompasses the whole. The term “management” has specific connotation in private sector, “administration” in the public sector, and the term leadership has become fashionable. However, there are some debates about the term leadership, there are authors who state that the leaders are born and cannot be trained, while others have a view that a person can perform as a leader in certain circumstances but not in others. Because “leadership” has its own peculiar way of understanding the school management, I would prefer to use terms “management” and “administration” because this study tries to look at the school as a whole.

Adey, (1997) states that administration or “administrative work” involves daily office routine, bookkeeping and clerical work. Badenhorst (1993) states that the administrative function has to do with reporting in the widest sense of the word – bookkeeping statistics, cost, and management accounting, record keeping. These two definitions by Adey and Badenhorst show clearly that administration can also mean general office organization.

Davidoff and Lazarus (1997) state that administration refers to two aspects: - (a) the actual running of the school, (b) more particularly the administrative support of all activities of the school. A principal is often called an “administrator” because her or his primary task is to ensure that the school runs well. This role needs to be supported by various administrative tasks which require both material and human resources.

### **2.3 THE THEORITICAL FRAMEWORK**

The theory that is used in this research is systems theory. Systems theory was proposed in 1940's by the biologist Ludwig von Bertalanffy and furthered by Ross Ashby who first introduced it to the field of cybernetics and engineering (Heylighen, 2003). Systems theory views an organization as a group (systems) of interrelated parts (sub systems) with a single purpose. According to Heylighen real systems are open to, and interact with their environments. Systems are dynamic; they change, move and develop. Systems have input processes, outputs and outcomes with ongoing feedback among various parts. The systems are arranged in hierarchies and integrated to accomplish the overall goal of the overall system (McNamara, 2003).

Systems approach is based on the idea that an organization should be studied not merely as a formal arrangement of superiors and subordinates who just follow the same rules, but as a total system in which the environment, the formal arrangements, the social system and the technical systems are all constantly interacting (Silvius, 2003). In this view the organization is not a static arrangement of jobs that can be captured in an organization chart, but a pattern of inputs, process, outputs and outcomes with ongoing feedback among various parts. If such an organization is to survive it has to encourage the constant interactions between systems, and consider changes in internal and external environments when planning, organizing, leading and controlling.

According to van der Westhuizen (1991) computers play a fundamental role in systems theory. Computers are viewed as integral part of the continuous development process of the educational management. The systems theory assumes that with the assistance of computers it will be possible to plan and develop organizations as “total systems” (Govender, 1999). Moulder (1999:103) supports the use of computers in management of schools when he proposes that the educators cannot improve the quality of education, or quantity of education that is required in South Africa unless they turn to technology. EPU (2001), 43) reinforces this statement by emphasizing the quality of education, **but** warns that computer technology is not a substitute for educators and school managers. With or without computer technology, badly managed schools will remain so. It is only through careful and properly planned usage that computer technology can free time for more creative work, in this way quality education can be achieved.

Systems theory was adopted into the education system in the 1960's. The challenge of managing in a changing world has made the managers to use technology to perform and improve the managerial functions of planning ,organizing, leading **and controlling** organizations to provide the quality products and services that people of the modern world want (Gavender 1999). McNamara (2003) also states that organizations are facing tremendous changes and managers, are helped by this new way of looking at things, (systems theory).

Govender (1999:79) further points out that the systems approach was considered to be holistic to educational problems. Managers now look at one part in relation with other

parts of the organization. Eraunt (1989) emphasized the need to adopt the systems approach into a school management perspective. This meant the introduction of technology as an efficient educational management tool. Eraut (1989) believed that management in education plays an integral part towards quality education, and also believed that the adoption of systems theory in school management would bring about quality educational management. I think that systems theory can provide a philosophical basis for a school to act as a point of departure to facilitate a qualitative achievement of organizational functions.

For the manager to manage the institution, he/she should act on theory which will form the basis for determining how the work should be divided and coordinated. According to Donnelly (1995:6) there are three categories of theories, namely, the classical approach, the behavioral approach and the management science approach. The classical approach is for managing work and organization, the behavioural approach is for managing people and the management science approach is for managing production and operations. The contributions of the first two theories, namely, classical approach and behavioural approach towards management knowledge development were not sufficient to solve institution's problems, so, the philosophers decided to integrate the two ( classical and behavioural) by introducing the management science approach ( Donnelly, 1995:7). My opinion is that, the managers should opt for management science approach because this means that the manager is skilled with three fundamental tasks:-

- Managing work and organizations.
- Managing people.

- Managing production and operations

Such a manager will survive the challenges of a world that is globalizing, where there is demand and competition for better quality products, where the work force is becoming increasingly culturally diverse and the public insists upon ethical and socially responsible decisions (Donnelly, 1995:22). The systems theory belongs to the category of management science approach and I have chosen it to provide a point of departure for my study.

I have chosen the systems theory as my point of departure because it is aware of the challenge of managing the institutions in a changing world, where there is a demand for better quality products and services (Donnelly, 1995). Since there is an awareness of how change has affected management system, then the systems theory can devise the strategies that can help the managers to face the challenges of modern world. The use of technology in systems theory has influenced this study to explore the future possibilities for educational management change brought by technology.

In the analysis and synthesis of my study I used systems theory because it offers important insights into the working of an organization. The systems approach has helped in using the following points to form the framework of my discussion:-

The systems theory has helped to view the school as a whole and as a part of a larger environment, this makes one to raise the following questions:-

- Is the school open/close to its environment?
- If it is “open” is there any constant interaction between environment and the school
- Is the school aware of the changes or demands and needs made by its environment?
- Does the school consider the needs/demands of the environment in the formulation of the school’s goals? Does the school make any organizational change to accommodate the new inputs/demands from the environment in a meaningful way?
- Does the internal processing of inputs results in new quality outputs. Is there any constant monitoring or controlling to determine whether the results/outputs meet the expected goals?
- What does the school do to enhance the quality and quantity of the product? Since systems theory promotes the use of technology in solving production problem, this has influenced my study to advocate that, the use of technology in school management can lead to effective management which can improve the quality and quantity of education.

**My conclusion is that, the managers who use the systems theory as their point of departure and also use technology in performing the managerial functions of planning, organizing, leading and controlling organizations, can be able to face the challenges of a**

changing world in providing quality results and services that are needed by the people of the modern world.

#### **2.4 HOW ARE THESE TECHNOLOGICAL RESOURCES UTILISED IN DIFFERENT SCHOOLS**

Davidoff and Lazarus (1997) are of the opinion that the successful achievement of school goals is dependant on human and material resources that are well managed. A school with and effective administration can avoid conflict situations by making a fair distribution of resources. In a school there are different departments under the control of different heads of department, the principal must make sure that the technological resources are equally distributed among all departments. According to Davidoff and Lazarus (1997) where there is unfair distribution of resources, they refer to it as mismanagement of resources and which may hinder the realization of schools goals. Davidoff and Lazarus further state that the lack of adequate resources or the lack of equal access to resources can demoralize the educators (Davidoff and Lazarus, 1997: 113-114).

Communication is one of the integral parts of school administrative processes. According to Van der Westhuizen (1991) no management can take place without communication. **The manager should provide the necessary communication channels for formal and informal communication. In a changing school information is made known, collected and spread through technological resources like, siren, intercom, telephone, fax machine and internet. Effective communication is dependant on an efficient administrative system,**

which may lead to democratic participation in the utilization of technological resources (Davidoff and Lazarus, 1997: 114). To avoid demoralization on the part of human resources, job description is very important. Each (Principal, Deputy Principal, Head of department, secretary, Educator) should know exactly which role that she/he plays in school administration.

## **2.5 THE DUTIES OF ADMINISTRATIVE ROLE PLAYERS**

I think it is very important to mention duties performed by the principal, head of department, educator and secretary in school administration. If all parties know exactly what to expect of each other, if they agree on sharing duties, then the school will more likely run smoothly as an organization.

### **2.6.1 Principal**

White Paper 2 (DoE, 1996) has recognized the need for school managers to be trained. In White Paper 2 an entire chapter is devoted to – “building capacity for management and governance”, it is noted that systematic programmes are needed to develop leadership skills. Also the provincial departments of education were urged to “ensure that effective **in-service programmes on essential administrative process be put into place**” (DoE, 1996:25). **I concur with Squelch and Lemmer (1994) in their definition of a school manager. They point out numerous personal attributes that make up a good leader, such**

as self-confidence, flexibility, consistency, objectivity, a high level of motivation, good communication skills, the ability to make difficult decisions and problem solving skills.

According to Badenhorst (1995) the principal is the central figure in the school and there are many duties that he/she has to perform. Managerial duties of the principal are summarized as follows:

- to furnish reports to local office on professional and administrative staff when required, and academic and general records of the learners.
- to ensure all routine records (exam, tests, meetings, functions) are properly compiled and filed.
- monitor the attendance of learners
- to conduct and control internal and external examinations and other promotion procedures for learners.
- allocate duties and supervise the work of clerical assistants
- to control the school finance
- to make supervision of the work of educators, control of resources, admission and transfer.
- to ensure the flow of information among all stakeholders.

The principal may delegate some of the duties mentioned above. For effective administration the principal must place emphasis on four basic management tasks, namely, planning, organizing, guidance and control (van der Westhuizen, 1991: 448).

### 2.6.2 Head of Department

According to Buchel (1995) the head of department is an educator who is in charge of a particular area of the curriculum. He/she helps the principal with administrative work.

Among many duties of the head of the department he/she also does the following:-

- organizing the subjects for she/he is responsible
- holding regular meetings, keeping record of them (Department)
- moderate tasks (exams)
- control pupils' exercise books
- liaising between teachers and principal
- draw and manage departmental budget
- drawing up time tables (school, homework, exam, tests)
- keeping admissions and summary registers and controlling attendance registers
- keeping and controlling stock registers
- supervising the maintenance of buildings and grounds
- supervising school library and other equipment

### 2.6.3 Class educator

A class educator is an educator who is in charge of a class. The class educator also helps in administrative work. According to Badenhorst (1995) the duties of the class educator are as follows:-

- controlling, managing subject
- controlling, managing classroom
- monitor the attendance of pupils
- submission of monthly and quarterly tests

#### 2.6.4 Secretary

According to van der Westhuizen (1991) the secretary is responsible for general office administration. He/she does the following:-

- storage of documents, correspondence and registers
- finance control
- internal and external communication
- processing of marks
- completing of school reports and various forms
- compiling of class mark lists, mark statements for different grades, alphabetical lists, age lists and subject collection lists.

The administrative role players secretary, educator, head of department and principal are arranged in hierarchical order to perform different tasks which need to be integrated to accomplish the overall goal of the institution, if the school is viewed as a “whole”. The above mentioned duties are performed efficiently in terms of time, cost and person utilization by using modern technology such as computers (van der Westhuizen 1991:448). Computers are very important for effective administration.

## 2.7 RECORD KEEPING

To access information quickly and accurately, Badenhorst (1998) suggests the use of a computerised administration system. According to Badenhorst (1998) an administration package should meet the following requirements:-

### 2.7.1 Information regarding learners and parents

- (a) *Personal data* of pupils: name, admission number, address, date of birth, sex, religion, nationality.
- (b) *Data of pupils for organizational purposes*: class groups, subject packages, study directions, personal time tables, class timetables, bus routes, metric entries, extra mural activities.
- (c) *Academic data* of pupils: reports of marks, lists of achievements, merit lists, IQs
- (d) *Other data* of pupils: school fund, absentees, extra mural activities.
- (e) *Personal data of parents*: name, address, telephone numbers, marital status, occupation, interests, societies, number of managing body committees.

### 2.7.2 Staff

- (a) *Personal data*: Salary number, name, address, identity number, sex, qualifications, salary category, leave status, type of appointment, position filled,

merit awards, date of appointment, years service, relevant teacher societies, subject committees.

- (b) *Academic data*: Academic duties (standards and subjects offered), total number of teaching periods, subjects in which training was received, subject in which the staff member has experience, but no training, personal time table.
- (c) *Other data*: Administrative duties, cultural activities, sport activities, interests.

### 2.7.3 Other data

- (a) *Academic*: The database can also contain prescriptive data regarding the requirements for certain subjects. Data about subject types, periods per subject, examination requirements, syllabus aims, and a list of prescribed books.
- (b) *Media centre*: The inventory of available books, magazines, other media-aids, discussion of the media centre, inter loan systems, duty roster.
- (c) *Facilities*: Hiring out of facilities, equipment in rooms, and allocation of rooms.
- (d) *Extra mural activities*: Different types of sport, league determination, transport needs, performance data.
- (e) *Finance*: Budget data including capital budget, current expenses, school funds, and functions.
- (f) *General office administration*: Estimation of dates of meetings and names and address of different committees, standardized letters, notices and circulars, year programmes, deadlines, reports and the principal's diary.

This administration package must be user friendly and menu driven. Proper documentation and manuals for using the program. Any upgrading and improvement of the package must be given by the distributors. This package must have a good backup facility (Badenhorst, 1998). Badenhorst (1998) suggests that these administrative equipment (photocopier, duplicating machine, computers, telephone, fax machine, internet, intercom and siren) should be controlled by a team, which is composed of a system leader and other members of the management team. Administrative system should not be dependent on one person only but the leader will identify and train somebody who can take over the duties of the system leader in the case of absence, promotion of the leader.

## **2.8 RESOURCE MANAGEMENT**

Management of resources entails having an effective “stock taking” system that enables the management and administrative bodies to keep in touch with what is available in the school. This is important for the purposes of ensuring that the school is adequately resourced at any time, but also control possible theft (Davidoff and Lazarus, 1997). Security systems are also important since there is a high rate of crime in our society. Resources need to be maintained. There should be a regular check on all facilities and resources and ensure that they are kept in optimal working order. Maintenance of school facilities and other school resources is also an area in which learners, parents and other local community members can play a central role. This is the way of facilitating ownership of the school (Davidoff and Lazarus, 1997).

## **2.9 RESOURCES AND FINANCES**

Most schools in South Africa have suffered from extreme shortage in terms of resources and finances, and this has deeply affected the life of school and in some cases it had made almost impossible to pursue educational goals. The unfair distribution of resources within the education context is currently being addressed under the new dispensation in South Africa (post apartheid 1994) (Davidoff and Lazarus, 1997).

Schools are primarily dependent on the government for the provision of finances and other material resources. But it is not only the responsibility of the government to provide the necessary financial and material resources for schools. The private sector also needs to play a role. This includes the business sector which can play a central role in helping schools to develop the resources they need to achieve their goals. In other words, a partnership between the government, the business sector and parents is important. These resources need to be available only to school but they need to be appropriate to the school in terms of its vision and aims (Davidoff and Lazarus, 1997).

## **2.10 TECHNOLOGY AND SCHOOL ADMINISTRATION**

The reason for the entry of computers into schools was for administration purposes (Greenwood, 1993). The introduction of computers to school administration changed the

role of a principal from “school manager” to “business manager”, which consequently required a major change in personal skills. These computers add technological dimension to daily routines enabling the administrators to solve problems, acquire information, improve the way tasks are accomplished, and most important, save time by retrieving and replicating information needed for a specific task or report. The school managers need training in these technologies in order to create a working environment conducive to their workplace needs which can provide efficiency. (Stammen, 2003).

Common applications for the computer are word processor, database, spreadsheet, MS Publisher and telecommunication application software. A word processing program turns the computer into a typewriter or text editor. A database turns the computer into an electronic filing system for the efficient organization and retrieval of all kinds of information. An electronic spreadsheet turns the computer into an automated ledger for a broad range of financial forecasting and budgetary calculations.

MS Publisher applications contain various sorts of graphic utilities which provide tool box services to create presentations which use pictures or postscript illustration. A telecommunication program makes it possible for one computer to exchange data with another computer by using a device called a modem (modulate and demodulate). The most common use of computer-mediated telecommunication is the exchange of the text through telephone connections to bulletin board networks known as the internet (Stammen, 2003). The internet is an electronic communications network, which provides

vast, diverse and unique resources. The internet promotes educational excellence by facilitating resource sharing, innovation and communication.

Technology is a tool to enhance teaching and learning experiences, so, teachers and students should be encouraged to use technology on a regular basis. School should control access to new technologies like the internet, the guidelines and rules should be established for using internet. Incorporation of technology into administrative functions of the school can provide a standardization that simplifies tasks and is cost-effective.

Technology can be used in various important activities like:

- Record keeping
- Budgeting, purchasing and inventory
- Transportation, student enrolment, re-districting
- Scheduling and grading

Technology can also enhance communications both within a school system and outside school. The school must consider the advantages of using technology to:

- Communicate through electronic mail
- With people in the same building
- With people in different buildings within the school system
- With people in the community (parents, town offices and others)
- Confer with other administrators and educators in other towns, states and countries.

The school must also explore the possibilities of linking school offices through a WAN to centralize administrative functions (Kelley J, 2003).

## **2.11 CONCLUSION**

This chapter clarifies relevant terminology. Administration was described as everything which supports the execution of a task. Administration referred to as formal (prescriptive), structural (hierarchical) and functional. This study concentrates on the functional aspect of administration, that is, application of administrative functions with an aim of achieving institution effectiveness.

Technology was defined as a process using scientific knowledge or as application of scientific knowledge to meet human needs and wants. My definition of technology is that, it is the extension of our abilities to change the world to suite us better. I also believe that the use of technology in school administration would bring about quality school administration.

Administration, management and leadership are terms that are used to describe the work done by senior staff in the school in order for teaching to take place. In this study I prefer to use both administration and management interchangeably.

The theoretical framework on which this study is based is systems theory. I chose systems theory because it considers technological demands which are made by our

changing world. Systems theory makes use of technological innovations to solve problems with an aim of providing the quality products or services that people of modern world want. I believe that the introduction of these technological innovations in school administration can lead to effective school administration. I think the adoption of systems theory in school administration would bring about effective school administration which would ensure the best quality school results.

It is also stated that the lack of equal access to these technological resources can demoralize the educators, which may hinder the realization of school goals. To avoid this, there should be fair distribution of technological resources among all different school departments. It is also important that all parties know exactly the roles they play in school administration. It is duty of the principal to coordinate the activities of these different parties to ensure working towards realization of the same goals.

The computer is considered by many authors as the alternative management tool that can enhance effective school management. Badenhorst (1998) suggest that the use of computerized administration system saves time and improves the ways tasks are accomplished. The computer is used for record keeping, budgeting, purchasing, student enrolment and communication.

I think the appropriate use of technological resources in school administration can result to effective school administration, which can lead to best school quality results.

## **.CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

The purpose of this chapter is to explain and justify the design of my study. The research methodology chapter is a detailed account of what has happened in the process of data collection.

#### **3.2 DESCRIPTION OF THE SAMPLE**

The two secondary schools that are studied have different backgrounds that need to be described. School A is a comprehensive school, situated in an urban area of Pietermaritzburg. It is a former DET (Department of Education and Training) school and attended by black learners only. School B is situated in a rural part of Pietermaritzburg. It is a former KwaZulu Education and Culture school and also attended by blacks only. The difference was that School B was very much disadvantaged compared to School A especially when it came to material resources. The choice of conducting research in these two high schools (School A and School B) was based on accessibility.

### 3.3 DESCRIPTION OF INSTRUMENTS

The instruments, which were used for data collection were documentary analysis, interview and a survey questionnaire.

#### 3.3.1 Document analysis

Documents analysed were, namely, the school prospectus, the school magazines, the school newsletter and the school policy. School A had four documents (prospectus, school magazine, newsletter and school policy) while School B had the prospectus and the school policy only. The function of each document was analysed. I found out that the prospectus was for communicating with parents and describing the procedures of the school. The school magazine was for showing school photographs and achievements of the previous year while the newsletter was used for communicating with parent, educators and learners and also showing individual achievements and advertisements.

The school policy reflects culture of the school or overall climate of the school. The culture of the school comprises the values and norms of the school which are expressed in daily practice. The important element in the school policy is the broad **purpose** or **goal**, which answers the question of “where are we going”. The broad purpose/goal of the school is reflected in its vision, mission, aims and tasks. This aspect is influenced by external and internal forces (Davidoff and Lazarus, 1997). Both school policies for School A and School B were divided into three sections, which included a vision, a

mission statement, and a code of conduct for learners. The broad goal for School A was to produce learners that were marketable globally. In School B the broad goal was to develop the full potential of learners to become responsible and active members of society.

I also analysed the design layout and colours used in the documents to see whether the school is using the new technological resources in designing of school documents. The design layout and colours used in these documents were of high quality, which showed positive impact of technology because the schools were using technological resources at their disposal.

### **3.3.2 Interview**

There were three reasons for the inclusion of interviews as research instruments in this research. Firstly, the interview method of data collection, would provide meaningful information which would allow for evaluative introspection of the administrative functions of the school. Secondly, since the interviews were intended to gather information from the perspective of teachers (Principal, Deputy Principal, Head of Department, and Educator) such information would probably be given more honesty. Thirdly, the inclusion of the semi-structured interview was a means of providing triangulation of verification of the findings from the questionnaire survey.

Wiersma (1980) suggests that it is advisable for a researcher to use semi-structured interview if she/he knows what she/he wants to know, but still wants to leave some room for exploration as the interview proceeds. The schedule requires a bit of structure, but without requiring administration of questions as precisely as it would be done in a structured interview.

For this study the sample was drawn from each of the post levels (strata) in each of the two secondary schools. In a case where only one person occupied that post level. That person automatically became part of the sample.

In School A seven people were interviewed while in School B six people were interviewed. The sample for School A was as follows:

- 1 principal
- 2 Deputy principals
- 2 Heads of Department, randomly selected
- 2 class teachers, randomly selected

The sample for School B was as follows:

- 1 principal
- 1 Deputy principal
- 2 Heads of Department, randomly selected
- 2 class teachers, randomly selected

In School A and School B respondents (principal, deputy principal, and heads of department and educators) were asked the same questions. They were asked about the important role played by the school governing body with regard to provision of resources.

In School A besides school fees payment there was fundraising organized by the school governing body, and the money obtained was used to support the provision of school resources. In School B they depended only on school fees for resource provision.

They were asked whether they had partnership with a business sector. School A did not have any partnership with business sector but it was able to have a donation of fifty computers from Eskom. School B also has no partnership with business sector.

They were asked about the access to the material resources. In School A the head of departments are responsible for the maintenance of resources. Each department controlled its own resources and kept its own records. There were also funds allocated to each department for repairs. The head of the departments drew a time-table for each department for the use of resources by the teachers during school hours. In School B it was the deputy principal who was responsible for the management and maintenance of the resources.

In School B some of the teachers complained that only those who were friends of the deputy principal had access to technological resources.

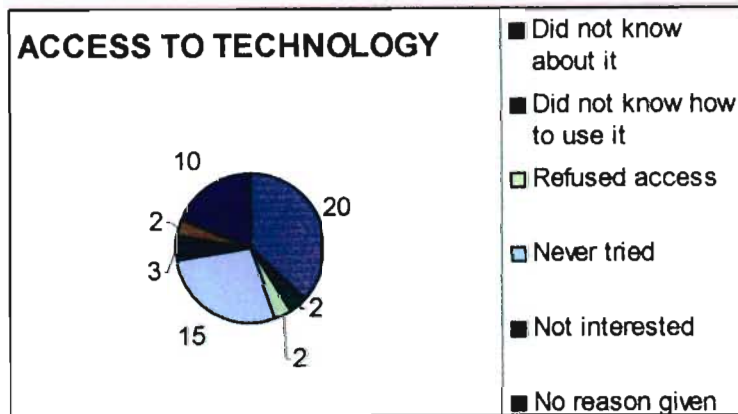


Figure 1: School B

This graph shows that most educators in School B were not using the technological resources in administration and also in teaching. When they were asked reasons for not using technological resources they responded differently (as it is written in above graph).

They were asked whether the school could rely on these technologies. School A said that the educators could not do without technological resources like a photocopier and computer in administrative and teaching activities.

When they were asked about improvements in administration brought about by technological resources, School A said that the processing of data was done quickly and information stored could be retrieved at any time.

They were asked whether educators were trained for using those technological resources. In School A teachers were trained for using technological resources. In School B teachers were not trained but the technological resources were used only by those who had knowledge of them.

They were asked whether these new technological resources could help learners in learning. In School A there was a common computer room where learners were allowed to type their assignments, use the internet in searching for information and also to use E-mails communicating with other schools. In School B students did not have access to technological resources and there was only one computer which was for office use only.

They were asked whether the security system was tight. In School A there was an alarm system in place, two security men, high fences and burglar proofs on windows and doors. In School B there was no burglar proofs, as a result the office had been burgled twice.

### 3.3.2 Questionnaire

According to Schumacher and McMillan (1993:238) the questionnaire is the most widely used technique for obtaining information from subjects. A questionnaire is relatively economical, has **standardized questions, can ensure anonymity, and questions can be written for specific purposes.** According to Birley and Moreland (1998:45) the **major disadvantages** of a questionnaire are that it often has a **poor response rate** and **much emphasis is on writing ability.** I took cognizance of the above mentioned disadvantages

when I chose my research instrument. Questionnaires can use statements or questions, but in all cases the subject is responding to something written.

The questionnaire was mailed to School A only because School B is where I am employed. In School B I gave questionnaires to 20 teachers, 10 teachers responded positively. In School A I mailed about 40 questionnaires and 23 teachers responded. I favoured the mailing of Questionnaires because it was likely to ensure the anonymity of respondents, since they were not required to identify themselves in the Questionnaire nor were they expected to personally submit their completed Questionnaires to the researcher, who would be able to identify them.

In the questionnaire statements were provided to which the respondents had to choose from the following:

- Strongly agree
- Agree
- Not sure
- Disagree
- Strongly disagree

### **3.4 Conclusion**

This chapter has described the research instruments (documentary analysis, interview and questionnaire) which were selected for this study. The sample used has also been described. The analysis of the findings is presented in the next chapter.

## CHAPTER 4

### ANALYSIS OF FINDINGS

#### 4.1 INTRODUCTION

In the previous chapter the methodology of the research study was presented. This chapter presents the analysis of the impact of technological resources on school administration.

#### 4.2 FINDINGS

##### 4.2.1 Interviews

The researcher conducted interviews with the following respondents:-

- Principal
- Deputy Principal
- Heads of Department
- Educators

According to van Westhuizen (1991) administration means everything which supports the execution of task and this execution of task cannot take place without the support of material and human resources.

The respondents were asked about their job description. The principal of school A said that he was both a principal and superintendent because the school was a boarding school. He was 100% administrator, because he did not teach any learning area. The principal of school B is also 100% administrator. School A has two deputy principals. The first one is an academic deputy principal, he controls all the administrative aspects of school curriculum. The second deputy principal is an administrator, he controls everything regarding school stock. Both deputy principals of school A educators and assistant superintendents. While the job description of deputy of School B is not clear, there is a communication breakdown between him and the principal. He does not even use his office, he stays in a storeroom with a group of friends who happen to be educators.

In both School A and School B the Heads of Departments are responsible for controlling and organizing of the subjects department. In both schools they are teaching 60-80%. In School A register class educators get information from the learners and submit it to relevant secretaries. Each educator has a pigeon hole where requests can be placed by staff and also completed requests are placed back into appropriate pigeon holes by secretaries. Since there is no secretary in School B all those duties that are supposed to be done by a secretary are done manually by class educators. Those duties are time consuming and insufficient time for teaching is left. According to Davidoff and Lazarus (1997) without the support of a secretary, effective management and administration of a school becomes almost impossible. It is not only management staff that need

administrative support. educators also need administrative support to fulfill their educational task adequately.

The next question asked was about the impact of technological resources on school administration. The principal of School A indicated that the technology had positively affected the school environment and the style of life of the educators. In his office he used a telephone, a computer, a fax machine, the internet and a photocopier, which he said he could not do without. The principal of School B was short of these new technologies and had one computer and a photocopier, which was out of order. The two deputy principals of School A said that they could not be able to control and manage their work without the help of new technological resources, like a computer, the internet and a telephone. The first deputy principal had one computer into which he fed monthly tests and quarterly examinations using Microsoft Access. The second deputy principal also had one computer into which he fed the information concerning school stock, using Microsoft Excel. The admission secretary registered students by using Coltech, it is a DOS based program. The Coltech also links the school with the Department of Education. The school used Microsoft Excel for finances and budgeting.

In School A each Head of Department in his/her department had teaching and administrative equipment like a video player, a television, an overhead projector, a telephone, the computers and a photocopier, for educators to use in administrative and teaching activities. In School B the Heads of Department had no control and access to technological resources. The educators of School A said that the new technological

resources had affected their teaching style to such an extent that they could not do without overhead projector, photocopier and computer. Most educators of School B had no access to the technological resources.

#### 4.2.2 Observation checklist

I went to School A and B to observe the resources they had. The resources each school had, are represented in the following different tables

RESOURCES	YES	NO	GOOD	POOR
School library	1		GOOD	
School hall	2		GOOD	
Store room	6		GOOD	
Staff room	2		GOOD	
Sport field	5		GOOD	
Separate office for principal	1		GOOD	
Separate office for secretary	4		GOOD	
Telephone	10		GOOD	
Fax machine	2		GOOD	
Type writer	4		GOOD	
Photocopier	2		GOOD	
Overhead projector	10		GOOD	
Film projector		-		
Radio	2		GOOD	
Television	2		GOOD	
Video machine	2		GOOD	
Electricity	YES		GOOD	
Piped water	YES		GOOD	
Science laboratory	2		GOOD	

Table 2: School A

The table 2 shows that School A is well resourced and most of the resources are in good condition. There is one library where students refer to for their assignments. All students

are occupied on sports day because there are five sports fields. There is a huge computer room. The students type their assignments on computer. They are also allowed to surf for information on the internet.

The educators in their teaching methods use technical tools like a computer, television, a video machine and an overhead projector. There are two laboratories where biology and science experiments are conducted.

Technologies like a telephone, a fax machine, the internet and the intercom have enhanced communication both within school system and outside school. The use of all these technological resources might contribute towards school effectiveness.

The table 3 shows that School B does not have a library and science laboratories which are very important towards improvements of school results. Most of the resources in the school are in a poor condition. School B is extremely poor to such an extent that it does not have most of the resources listed in table 3. There is a lack of communication since there is no telephone, no fax machine and no internet. There is a poor management and maintenance of technological resource, because a television, an overhead projector and photocopier are broken and they have been not repaired for a long time. On sport day most students play truancy, because there are only two sports field, many students do not take parting sports to the lack of sport facilities. It is very difficult for teachers to operate effectively under such situations.

Which of the following are found in the classroom?

	YES	NO
1. a usable chalkboard	YES	
2. chalk	YES	
3. a cupboard	YES	
4. a teacher table	YES	
5. a teacher chair	YES	
6. a wall chart	YES	
7. student desks	YES	

Table 4: School A

Table 4 shows that the classrooms of School A are well equipped. There are forty classrooms. Each has one usable chalkboard. There is one concrete cupboard where teachers put their marking and school books. Each classroom has a table and a chair. In

each class there are thirty five desks. On the walls there are educational posters and charts. All classrooms are conducive for teaching and learning.

Which of the following are found in the classroom?

	YES	NO
1. a usable chalkboard	YES	
2. chalk	YES	
3. a cupboard		NO
4. a teacher table		NO
5. a teacher chair		NO
6. a wall chart		NO
7. student desk	YES	

Table 5: School B

Table 5 shows that the classrooms of School B are poorly equipped. A teacher does not even have a chair and a table to work on. There are thirteen classrooms. They are in poor condition because windows are broken and walls are dirty. Students' desks are also broken. In each classroom there is no cupboard, no table and no chairs. The atmosphere which is created by such classrooms is not conducive for effective teaching and learning to take place.

#### 4.2.3 Questionnaire

In School A 40 questionnaire were mailed and about 23 responded. In School B questionnaires were given to 20 teachers and only 10 teachers responded positively. Out of 60 questionnaires only 33 were returned which makes 55%.

The following table (table 6) was used to represent the responses of the respondents. 79% disagree that maintenance of the resources should be done once a year. 100% agreed that maintenance of the resources should be done often. 73% agreed that students should have access to these modern resources. 80% agreed that parents also should have an access to these modern resources. 83% were not sure whether students and parents should play a role in maintenance of school resources. 82% strongly agreed that teachers should be trained for using the resources. 79% agreed that technological resources are efficient in terms of time, cost and person utilization.

TABLE 6

STATEMENT	Strongly Agree	Strongly Agree %	Agree	Agree %	Not sure	Not sure %	Disagree	Disagree %	Strongly Disagree	Strongly Disagree %	Total 33	Total 100%
1. Technological resources should be provided by the Dept. of Education.	14	41%	19	59%							33	100%
2. The SGB should play an important role in the provision of technological resources.	17	53%	16	47%							33	100%
3. The business sector can also help in the provision of the technological resources.	16	47%	17	53%							33	100%
4. Everyone should be responsible for the management of school resources.	9	27%	17	53%	7	20%					33	100%
5. There should be one person responsible for the management of school resources.							22	68%	11	32%	33	100%
6. Maintenance of these resources should be done once a year.	7	21%					26	79%			33	100%
7. Maintenance of these resources should be done often.			33	100%							33	100%
8. These modern technological resources should be made available to only few good, talented teachers							16	48%	17	52%	33	100%
9. These modern resources should be made available to all teachers	16	49%	17	51%							33	100%
10. Students should be denied access to these modern resources			5	15%			9	26%	19	59%	33	100%
11. Students should have access to these modern resources	9	27%	24	73%							33	100%
12. Parents should not have an access to these modern resources			7	20%	11	34%	10	32%	5	14%	33	100%
13. Parents should have an access to these modern resources			26	80%			7	20%			33	100%

	Strongly Agree	Strongly Agree	Agree	Agree	Not sure	Not sure	Disagree	Disagree	Strongly Disagree	Strongly Disagree	Total	Total
14. It depends on the principal who should be responsible for the maintenance of the school resources					16	48%	17	52%			33	100%
15. Responsibilities for the maintenance of resources need to be delegated to teachers who were democratically elected for this	11	32%			22	68%					33	100%
16. Maintenance of school resources is also an area in which students and parents can play a central role					27	83%	6	17%			33	100%
17. If we want to achieve our educational goals we have to ensure that resources needed are both available and appropriate to the needs of the people	10	29%	11	34%	12	37%					33	100%
18. All the departments in the school should be involved in the requisition and identification of needed resources.	28	85%	5	15%							33	100%
19. Sufficient technological support can contribute to effective administration, smooth running and effective teaching	9	27%	17	53%	7	20%					33	100%
20. New technological resources can bring about improvements in school administration	8	25%	18	55%	7	20%					33	100%
21. Teachers should be trained for using technological resources to encourage maximum utilisation of these resources	27	82%	6	18%							33	100%
22. These technological aids are sufficient and suitable for contributing towards school effectiveness	11	32%	16	47%	7	21%					33	100%
23. Technological aids are efficient in terms of time, cost and person utilisation			26	79%	7	21%					33	100%
24. Technological aids can help in children learning.	19	59%	14	41%							33	100%

#### 4.2.4 Document analysis

The design layout and column used in three schools documents were of high quality, which showed positive impact of technological resources used by schools.

#### 4.3 Conclusion

Management is a process whereby people in leading positions utilize human and other resources as efficiently as possible in order to provide certain products with an aim of fulfilling particular needs and achieving the stated goals of the organization (Hunter, 1994).

In my findings I discovered that the principal of school A stands a better chance of producing the desired products, achieving the goals of the school, because his school is well staffed. There are two deputy principals, five heads of departments, forty five educators and four secretaries. The principal of School delegates some of his duties to members of school team management (deputy principal, heads of departments). The first deputy principal controls all administrative aspects of the school curriculum.

The second deputy principal controls school stock. The five heads of departments are responsible for fields of curriculum. Even the class educators have few administrative duties to perform. The principal of School A also has the support of four secretaries who are responsible for general office administration. The task of the principal of School A is

just to utilize all the human resources at his disposal by organizing, guiding, coordinating and controlling them with an aim of achieving the school effectiveness (Badenhorst and Lemmer, 1997). While on the other hand, the principal of School B does not have rich human resource support. There is one deputy principal and his principal cannot delegate duties to him since there is communication break down between the two. There are three heads of department, only two are responding positively to the principal's orders, the other one is siding with the deputy principal. There is no secretary to give the principal the administrative support. It is difficult for School B to achieve the ultimate goal because the activities of the parties are not integrated and they are not working toward one direction, that is why they have poor school results.

The principal of School A can also make use of technological resources to provide desired result and to fulfill school goals since the school is well resourced. While the principal of School B, has not sufficient technological support to help him in the effective execution of the administrative activities. The recommendations and conclusion is presented in the next chapter.

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## CHAPTER 5

### RECCOMMONDATIONS AND CONCLUSION

#### 5.1 INTRODUCTION

In the previous chapter findings were analysed. In this chapter recommendations and conclusions are presented.

#### 5.2 RECCOMENDATIONS

##### 5.2.1 INTRODUCTION

The educational technology development process in historically disadvantaged schools should not be only the government's responsibility. All stakeholders such as the business sector, the school community and universities should take an active role. There is a need for strategic intervention programmes that can focus on short term and long term objectives for educational technology development in schools. If partnerships can be successfully forged in all structures, namely the government, private sector, community and university, educational technology can be successfully developed in the historically disadvantaged schools.

### 5.2.2. School A

The school should form partnership with business sectors which can help in the provision of tighter security to protect the existing resources, I suggest the security system like alarms and surveillance cameras.

### 5.2.3 School B

The principal should involve other human resources like the deputy principal, head of department, and level one educators in execution of administrative duties because each has a role to play. The principal alone cannot achieve the effective administration.

Each department at school should be involved in drawing budgets and in making requisitions of needed resources for the following year. The head of department knows the needed administrative and teaching equipments in his/her department.

Funds should be put aside for provision, maintenance and repairs of resources. Besides school fees payment, the school should fundraise and also form partnerships with business sectors, which can help in the provision of technological resources like a **telephone, a library, a laboratory.**

There should **be a team** in place **responsible** for **maintenance** and **management** of resources. **This team should keep records, invoices, receipts, to be submitted** to the

principal at the end of the year. This should ensure that all school members have an access to the material resources. The team should make sure that all members are trained for using those material resources to encourage maximum utilization of these resources.

The school should have tight security systems to make sure that material resources are safe. The school should have alarm systems. There should be burglar proofing on windows and doors.

The school should make use of government financial support (Norms and Standard Funding) to buy the administrative and teaching equipments. This financial support was established after 1998 with an aim of developing the disadvantaged schools.

The school should provide staff development in-service courses, especially for school team management, such as training in computer-assisted administrative programmes, technological communication and others.

#### **5.2.4 The Department of Education**

The KwaZulu-Natal department of Education and Culture should grant secretarial posts to all schools. The school cannot have effective administration without the help of the secretary.

The government should ensure that all schools are provided with basic infrastructure like piped water, flush toilet system.

The government should reinstate the privilege of security personnel posts in schools which was withdrawn a few years ago.

The KwaZulu-Natal Department of Education and Culture should introduce technology development programmes. The programmes should involve the following:-

- Provision of training programmes in new technologies without affecting the day to day schools' activities.
- Creation of special funding programmes for disadvantage public schools.
- Attracting business sector's interest in supporting the disadvantaged school technology development programmes.
- Encouraging the schools to have innovative partnerships with universities. Universities have to provide resource-rich programs of staff development based on new findings and on-going technology training for classroom teachers and school managers. The universities may provide programmes such as:-
  - computer literacy
  - training in Internet research
  - communications using new technologies
  - **training in computer assisted administrative programme**
  - **training in computer-assisted learning programmes**

### **5.2.5. The Community**

The parents' involvement in the school's technology development is very important. The advantage of this is that parents can perceive the project as if it belongs to them because they had inputs in its early stages of development. The involvement of the community can also prevent criminal activities such as theft and vandalism of machines. Parents work in various business companies and some have acquired valuable technology skills in those organizations. It can be of the school's benefit to bring their contribution in terms of attracting business interest to support disadvantage schools and cascading skills in school technology development projects.

### **5.2.6. The School governing body**

It is very important that before the technology development project can be implemented to involve all stakeholders (educators, parents, learners, business sector, universities/colleges) in the following process:-

- Identification of the needs for school technology development.
- Drawing up policy guidelines for technology development.
- Election of the committee which will ensure the implementation, monitoring and evaluation of the whole process of technology development.

The school governing body has powers to form positive partnerships with local businesses with an aim of supporting the school technology development plan.

The school governing body can also approach the local university to be used as a centre in which educators can receive training in technology.

The purchase of computers can be expensive if bought in small quantities. It is the duty of the school governing body to organize local consortia with other local schools to maximize the buying power (EPU, 2001:134). The advantages of buying as a consortia are the following:-

- a reasonable discount
- a technician who can specifically be available for the area
- hardware and software are standardized and effective sharing of technological resources across schools (EPU, 2001:134).

The members of school governing body should organize an expert to train them in fundraising skills which can also help towards technology development.

### **5.3 CONCLUSION**

Since the resources were not deployed according to the principle of equity in different ex-departments of education, this has led to different administrative opportunities for schools, like school A and B. School A is a well resourced school while school B is poorly resourced, that means technological resources have impacted differently on administration of these two schools.

It has been always an overarching goal of the new Department of Education to transform the legacy of the apartheid past by redressing the disparity that exists between education of South African nation. The process of transformation has been happening at a snail's pace, which is why we have still extremely disadvantage schools like School B. It is high time that the schools take as their challenge to bridge the gap and to bring about change. The schools are not faced by the challenge of bridging the gap caused by the historical disparity only, but there are also technological demands of the world in which we live, and it has become a national imperative to respond to these changes. Schools and communities are now compelled to engage in meaningful education reform. However, the schools can not do it alone. There is need of meaningful partnerships with universities and business sectors to help the schools in bridging the gap to high standard of achievement. All teachers and school managers should have access to ongoing professional development, based on the latest research findings and technology training.

Eraut (1989) emphasized the need to adopt the systems theory into school management perspectives. This also meant the introduction of technology innovations as an efficient educational management tool which would bring about quality management. The quality management would result in quality education to facilitate a qualitative achievement of **organizational goal**.

All technological resources are meant to extend our abilities to perform better in administration and teaching. However, no technological invention will replace an

educator, that is, human resources are also important. A school can have sufficient technological resources and human resources but if the school manager is unable to utilize efficiently those resources he/she can fail to achieve school effectiveness.

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# APPENDIX A

## Questionnaire

**Preface:** The purpose of this questionnaire is to find out:-

- How are the technological resources utilised in a school?

**Resources checklist:** telephone, fax machine, type writer, photocopier, computer player, video camera. The information you supply will be treated with absolute confidentiality and will be used only for research purpose.

Please respond to each of the following items by placing a cross which correctly reflects your opinion about utilization of the technological resources.

NOTE:-					
Strongly agree :SA					
Agree :A					
Not sure :NS					
Disagree :D					
Strongly disagree :SD					
	SA	A	NS	D	SD
1. Technological resources should be provided by the					
2. The SGB should play an important role in the provision of					
3. The business sector can also help in the provision of the					
4. Everyone should be responsible for the management of					
5. There should be one person responsible for the					
6. Maintenance of these resources should be done once a					
7. Maintenance of the resources should be done often.					
8. These modern technological resources should be made					

9. These modern resource should be made available to all					
10. Students should be denied access to these modern					
11. Students should have access to these modern resources					
12. Parents should not have an access to these modern					
13. Parents should have an access to these modern					
14. It depends on the principal who should be responsible for					
15. Responsibilities for the maintenance of resources					
16. Maintenance of school resources is also an area in which					
17. If we want to achieve our educational goals we have to					
18. All the departments in the school should be involved in the					
19. Sufficient technological support can contribute to effective					
20. New technological resources can bring about					
21. Teachers should be trained for using technological					
22. These technological aids are sufficient & suitable for					
23. Technological aids are efficient in terms of time , cost					
24. Technological aids can help in children learning.					

# APPENDIX B

## QUESTIONS FOR INTERVIEW

### How are these technological resources utilized in different schools?

Was the school provided with the necessary technological resources by the government .

- What important role played by SGB (parents) with regard to provision of resource (school fees , fundraising )
- The private sector (business sector )
- Is there any kind of partnership between the government , the business sector and parents in the development of the school resources?
- How are technological resources utilised in conducting the following administrative procedures:

Payment of school fees

Financial control

Keeping of personal data of pupils, teachers, and parents.

Keeping of data of pupils for organisational purposes.

Keeping of academic data of pupils.

Keeping of media centre data.

Keeping of extra mural activities data.

Keeping of general office administration data.

Keeping of records on maintenance, supervision and management of school resources.

Communication (internal and external).

### ***Resources management***

- Who is responsible for the management of school resources ?
- Is there any effective stock taking ?
- Who is responsible for identifying what resources school needs ?
- Is the adequately resourced – available not available.
- Are security systems tight ?
- Is there fairness in relation to the allocation of resources
- Is there anyone responsible for the maintenance of resources
- (regular check up on all facilities)
- Are all stock holders involved in maintenance of resources – students , parents , teachers - ownership . are these inadequate.
- Are these resources available to all teachers .
- How does one access these resources ?
- Are the resources fairly distributed ?
- Who takes care of the resources ?
- Do students have an access to these materials?
- Are the resources adequately maintained?
- Each department appropriate resource.
- Is there any mismanagement of resources whereby it has made it almost impossible to pursue educational goals .
- Do teachers value these materials .

## ***How do technological resources impact on school administration?***

1. What are improvements in administration brought about by technological resources.
2. Can school rely on these technologies for administrative activities.
3. Are the teachers trained for using these technological resources .
4. Are they user friendly .
5. Are the existing procedures , methods and technological aids sufficient and suitable for contributing towards school effectiveness?
6. Is modern technology efficient in terms of time, cost, person, and utilisation?
7. How did you feel using modern technological materials in your administrative work for the first time?
8. Do you also use them in your teaching methods?
9. Do you think these new technological resources can help children learn?  
What did they learn? How did they learn it?
10. Have you learnt anything new from using the new technological materials with your class?

# APPENDIX C

## Observation Checklist

1. What is the general condition of your school building?

1.1 The school needs complete rebuilding.	
1.2 Some classrooms need major repairs.	
1.3 Most or all classrooms need minor repairs.	
1.4 Some classrooms need minor repairs.	
1.5 In good condition.	

2. Which of the following does your school have and in what condition.

	YES	NO	GOOD	POOR
1. School library				
2. School hall				
3. Store room				
4. Staff room				
5. Sports field				
6. Separate office for principal				
7. Separate office for secretary				
8. Telephone				
9. Fax machine				
10. Type writer				
11. Photocopier				
12. Computer				
13. Overhead projector				
14. Film projector				
15. Radio				
16. Television				
17. Video machine				
18. Electricity				
19. Piped water				
20. Science laboratory				

Which of the following are found in the classroom?

	YES	NO
1. a usable chalkboard		
2. chalk		
3. a cupboard		
4. a teacher table		
5. a teacher chair		
6. a wall chart		
7. student desks		

Comment

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# APPENDIX D

## NEWSLETTER: SCHOOL A

<b>VOLLEYBALL</b>
The U16 and U17 teams participated in the Pietermaritzburg and Districts Volleyball Schools League finals held on Wednesday 18 March.
The U16 won 32 - 25 against Zibukezulu U16. The U17 team lost 24 - 37 against Zibukezulu U17.
Congratulation to both teams for playing extremely well.
B. Ndlovu
<b>TECHNICAL DRAWING NOTES</b>
Notes will be available to matriculants at a cost of R40. Please place the correct amount in an envelope clearly marked with your name and grade. These envelopes are to be handed to the relevant Technical Drawing teacher.
Mrs Mthembu

<b>SCHOOL FEES</b>
Our school is trying everything possible to offer the best education to your children. This may be possible only if you pay school fees. Parents are liable for school fees. According to the schools act the school is allowed to take legal action against parents to recover fees. Parents who have not paid full fees are requested to come to school. An arrangement can be negotiated with the school to pay fees in installments. Failure to this will mean that we shall refer these cases to our school lawyer, who will take legal steps to recover fees which will mean that you will have to pay legal fees.
Unfortunately we have to apply these measures to recover fees because this money has been budgeted for and we need to pay for our expenses.

<b>SCHOOL RE-ADMISSION AND FIRST ADMISSION OF LEARNERS.</b>
Please be informed that admissions and re-admissions will be done before the first day of school term 1 in 2004. Grade 8's will be registered on Tuesday 2 December 2003.
<b>SCHOOL GOVERNING BODY</b>
SGB members need to be elected this year. The election meeting will take place in September 2003. All parents of our learners must attend. The notice of the meeting will be sent to you.

# APPENDIX E

## SCHOOL POLICY: SCHOOL A

### OUR VISION

To provide quality education that will produce learners that are globally accepted and competent.

### OUR MISSION STATEMENT

We are committed to provide quality education to our clients to empower them to be competent and globally accepted.

The teaching and learning services promise:-

- To be fully committed and involved in process of education.
- To render quality curriculum and to meet the need of our clients as agreed by concerned stakeholders.
- To develop a school policy that will be functional and acceptable.
- Provision and maintenance of necessary physical resources.

### CODE OF CONDUCT FOR LEARNERS

#### I. Attendance:

- (a) Attendance is compulsory to all pupils i.e. classes and extramural activities.
- (b) Written notice of intention to leave school, for whatever reason, must be given at the end of the year.

(c) Absence must be supported by a doctor's certificate or a written explanation from parents.

(d) Punctuality is required at all times and by all means.

## 2. Behaviour and courtesy (good and mannerly behaviour)

### Forbidden Practices

(a) The use of bad or suggestive language whether orally or in writing.

(b) Possession and/or distribution of pornographic material of any description.

(c) Possession, use or distribution of tobacco products, alcohol or illegal substances (drugs).

(d) The possession of weapons.

(e) Bullying of or assaulting of another pupil or of a member of staff or behaviour which in any way endangers the physical, spiritual or mental well-being of another.

(f) Behaviour which interferes in any way with the opportunity for another pupil to learn or the teacher to teach.

(g) Misbehaving towards a member of staff.

(h) Theft (taking of another person's thing without permission)

(i) Damage to school property or the property of pupils, teachers or other members of the community.

(j) Absenteeism

(k) Failure to conform to the required standards of dress, grooming and cleanliness.

(l) Behaviour which in any way disgraces the good name of the school e.g. discourtesy to members of the public, misbehaviour on public transport.

(m) Involvement in criminal activities.

(n) SRC members and prefects to be given respect they deserve.

### **Appearance and uniform**

The prescribed uniform is to be worn at school and on school trips/visits and sports events.

### **Academic standards**

Assignments, homework and tests are compulsory to all students.

### **Meetings**

No meetings are to be held without the approval of the principal.

### **Punishment**

Punishment can take the form of one of the following alternatives or, if circumstances warrant it, a combination of two of the following alternatives:

1. verbal reprimand and warning
2. letters of concern
3. written imposition
4. in-class isolation
5. temporary suspension from class or school
6. withdrawal of privileges
7. warning letters
8. suspension from further attendance at the school (leading to expulsion)

9. any other form of punishment deemed appropriate and approved by the Headmaster.