INFORMATION AND COMMUNICATION TECHNOLOGY ADOPTION IN THE MANAGEMENT OF SECONDARY SCHOOLS IN KAWEMPE DIVISION, KAMPALA DISTRICT

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DECLARATION

I, Dongo Frederick hereby declare that the work contained in this report is original and has never been submitted to any educational institution as a prerequisite for the award of a diploma or degree.

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APPROVAL

I certify that this dissertation entitled "INFORMATION AND COMMUNICATION TECHNOLOGY ADOPTION IN THE MANAGEMENT OF SECONDARY SCHOOLS IN KAWEMPE DIVISION, KAMPALA DISTRICT" has been submitted with my approval.

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ABSTRACT

This report is about a study that aimed at establishing the adoption of information and communication technology (ICT) in the management of secondary schools in Kawempe division, Kampala district. The study was guided by three objectives: examining the effect of ICT on the teachers' / headteachers' ability to coordinate school activities, the effect of ICT on the teachers' / headteachers' ability to plan school activities, and the effect of ICT on learning and student motivation in secondary schools in Kawempe Division, Kampala District.

The study used descriptive research survey design in which both qualitative and quantitative methods were employed. The study involved sixty respondents; five headteachers, thirty teachers and twenty five students who were purposely selected using systematic random sampling.
Data was collected mainly through the use of self-administered questionnaires and open-ended interview guides.

The questionnaires were filled by the teachers while the interview guides were administered to the students.
Documentary review of the impact of ICT on the management of secondary schools was also done to supplement the primary data.

The findings revealed that ICTs impact on the teachers' ability to plan and coordinate school activities and students' performance and confidence was enhanced as a result of application of ICT by the school administration. Many students reported that they felt more confidence in their abilities to handle the work they had to tackle. ICT helped with making work neater in communicating with parents at home and also getting information about troublesome topics that they did not understand in class. Others said that ICT improved the entertainment and sports/ games department. Many mentioned that they had access to digital satellite television facilities like Star times and DSTV digital televisions.

It was concluded that ICT impacts significantly on the teachers' ability to coordinate and plan for school activities and also on learning and student motivation.

The researcher recommends that government sets up budgetary allocation to have schools connected to the internet as this will improve on research and teaching / academic standards and that the public be sensitized about ICT applications and its importance in institutional management.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Information and communication technologies (ICTs) are technologies, which facilitate communication, processing and transmission of information by electronic means. ICTs embody a full range of old and new technologies such as radio, television, computers and internet, telephones – both fixed and mobile, fax, printers, scanners and the print media. As defined, ICTs are tools that can enable the participation of people in economic and civic life and help them to improve education. ICTs have an enormous potential for reaching populations to provide them with education and training, job opportunities, access to markets, information which is important for their economic activities and participation in political processes. Often some headteachers in schools do not access, utilize, or apply ICTs in their daily activities. This is primarily due to limited infrastructure and near total absence of ICT access points in those schools.

The Telecommunications Sector Policy of 1996, Uganda Communications Act of 1997 together with the duopoly comprising of Mobile Telephone Network (MTN), Zain, the Uganda Telecom Limited (UTL), Warid, I-telecom, Orange and lately Smile are all credited with establishing positive impact on the availability and affordability of telecommunications in Uganda (UCC, 2005, January).

"Throughout the world information and communications technologies are generating a new industrial revolution already as significant and far-reading as those of the past. It is a revolution based on information, itself the expression of human knowledge. Technological progress now enables us to process, store, retrieve and communicate information in whatever for it may taken unconstrained by distance, time and volume" (Bangemann et al., 1994).

In Uganda, the prospects of adoption of information communications technology (ICT) are tremendous. Its utilization in development programs is increasing. The information revolution is creating new opportunities to address societal problems and the implementation of policies supporting projects geared to poverty eradication and education development, disease control and human survival, environmental protection and nature conservation, decentralization and grassroots

empowerment. This is an achievement made possible for even rural communities through the telecentre facilities established in villages such as Nakaseke, Buwama, Nabweru though more are needed.

Computer networking has aptly been defined as the marriage of two or more previously separate technologies -- computers, communications and microelectronic resulting in a single entity with significant advantages. Networking in turn has made the internet possible, founded upon the Transmission Control Protocol / Internet Protocol (TCP/IP). These protocols support transparent interconnection of date stored in machines spread across networks around the world. Today, there are literally millions of computers connected to the internet, exchanging packets of date using TCP/IP. The Internet can be said to be the freest and most flexible form of communication that exists today. Contact can be made with anyone around the world who is connected. "The internet is so big and growing so fast that it cannot be ignored. Nevertheless, it has flaws, notably serious problems" (Bangemann et al., 1994)

Most importantly, the Internet is not really about computers; it is about people, communication and sharing information and knowledge. It is about overcoming physical boundaries to allow like minds meet. "Information is critical to the social and economic activities that comprise the development process. Telecommunication, as a means of sharing information, is not simply a connection between people, but a link in the chain of the development process itself: (Hudson 1995)

Adoption of ICT in Uganda has made remarkable improvement in embracing ICT but particularly the mobile telephone. Besides radio technology, telephony access is one that has penetrated the country much more than other forms of ICT, such as those involving traditional personal computer technology. Factors involved include the relatively lower costs of purchase. Installation and the skills required for use, specifically for mobile phone service (UCC, 2005 January).

1.2 Statement of the Problem

ICTs can serve as catalyst for economic and social development by improving access to information, increasing trade in commodities and services, reducing costs and achieving efficiency gains. The significance of ICT application in

enabling national development and poverty reduction strategies must be understood and operationalized to gain competitive edge in the geographical limitless arena.

Everywhere in the world, education is considered as one of the best way toward development. Education is part of priority areas as highlighted in the United Nations roadmap to achievement of Millennium Development Goals (MDGs). The United Nations through UNESCO has always supported and emphasized on education as a tool for social-economic, cultural and political developments in African countries. In Uganda, education is part of the strategic plan to reduce poverty. Despite the demonstration development benefits of technology, education is suffering of the insufficient and inefficient use of ICT in the educational system.

In Uganda, a large number of schools are yet to adopt ICTs and lack ICT facilities and the few ones that have, use them exclusively for school administration. Students have no access to these technologies in most schools. A few, those who have means and are more inquisitive, try to understand computer technologies for example on their own through private centers.

Needless to say, the answer is not to place technology in schools without programs to train stakeholders on how to effectively use them in their classes, as well as in administration. The issue is no longer to use or not use ICTs in education, but how to integrate them as tools of administration, disseminating knowledge and learning. ICT should be used as a lens to rethink development strategies, as a tool to support and improve diverse sectors such as administration, education, health, finance and marketing and as powerful means to empower the people, especially the poor. This calls for all stakeholders at all level to have a deep knowledge on media pedagogy.

This study is therefore aimed at examining the adoption of Information and communication technology in the management and administration of secondary schools in Kawempe Division Kampala District.

1.3 Purpose of the study

The study aimed at examining the adaptations to Information and Communication Technology on the management of secondary schools in Kawempe Division Kampala District

1.2 Objectives of the study

The objectives of the study are:

I. To examine the effect of ICT adoption on the teachers'/headteachers ability to coordinate school activities in Kawempe Division Kampala District:
II. Effect of ICT adoption on the teachers' / headteachers ability to plan school activities in Kawempe Division
III. Challenges faced in ICT adoption on learning and student motivation in secondary schools in Kawempe Division Kampala District.

1.3 Research Questions

The study was based on the following research questions:

I. Have schools in Kawempe Division Kampala district adopted ICT in the coordination of activities?
II. What effect have ICTs had on the planning ability of headteachers of schools in Kawempe Division, Kampala District?
III. What challenges have been faced by secondary schools in Kawempe Division Kampala district in adopting ICT?

1.6 Scope of the study

The study aimed at establishing the adaptation of information and communication Technology on school management and administration. Emphasis was put on examining the level of ICT adoption on the teachers'/headteachers ability to coordinate school activities, effect of ICT on the teachers'/headteachers ability to plan school activities and effect of ICT on learning and student motivation in secondary school in Kawempe Division Kampala district.

1.7 Significance of the study

The findings of this study are expected to be useful to different categories of people in several ways.

First, findings are hoped to provide wide knowledge to the public especially head teachers on what ought to be done so as to encourage and improve information and communications Technologies (ICTs) in schools

The study findings are also expected to be useful to the policy makers especially Government (ministry of Education) and the local authorities in the designing of practical guidelines that can lead to efficiency in implementing ICT programmes.

The findings are also hoped to contribute much to the existing knowledge that may be useful to the academicians who may wish to carryoput further studies on a related subject matters.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In this chapter, we review existing literature to the study. It is reviewed among the major themes of the study. In reviewing the literature, materials will be drawn from several sources for the researcher believing that any relevant literature irrespective of the place or time could still be substantial to form a basis for this study. And attempt is made to fill the research gap between the past writers/researchers and the present situation.

2.1 Level of ICT adoption in the coordination of school activities

Co-ordination involves deliberate efforts made to have the school staff work as a team. It involves the establishment of links of co-operation among individuals and unites of the school (Adair, 1985)

As Dat (1997) puts it, parents, teachers, local councils and so forth, all have stake in how things are taken care of but must be co-ordinate school management is possible if members are:

I. Aware of how and why they are what they are to the school
II. Know their roles and functions both as a group and individuals and
III. Understand how they relate with other organizations.

On this note, what remained a concern for this study was to find out whether head teachers have been affected by ICT to co-ordinate the various schools activities.

According to Dale and Michelon (1996), co-ordination is the process of integrating the activities of separate departments in order to pursue organizational goals effectively without co-ordination as Carole (1992) argues people would lose sight of their roles within the total organizational goals.

To Fredrick et al 91989), the extent of coordination depends on the nature of the tasks to be performed and the degree of interdependence of people in the various

units performing them. When these tasks require or can benefit from communication between units, then a high degree of coordination is best. When information exchange is less important, work may be completed more effectively with less interaction between units

A high degree of coordination is likely to be beneficial for work that in non-routine and unpredictable for work whose factors in the environment are changing and for work in which interdependence is high. In addition, organizations that set high performance objectives usually require a high level of co-ordination as the case may be in a school perspective where the departments need to co-ordinate if academic excellence is to be obtained. On the whole, how ICT has helped head teachers to effectively co-ordinate their schools is what this study aimed at finding out.

Co-ordination is a complement, ever a counterbalance, the division of work and job satisfaction (Chappell, 1993). Specialization tends to separate people in organizations, because jobs are by definition, separate identifiable collections of activities. Co-ordination involves bringing people back together to ensure that work relationship between people with different, but related jobs can contribute to organizational goals. In a school perspective, this needs coordinating teachers, each handling a different subject to pool their contribution towards better schools' academic performance

According to Hunt (1996) there are three basic co-ordination management techniques in an organization

i) Using basic management techniques: Relatively most co-ordination requirements can often be met through basic management techniques. One such mechanism is the organizations chain of command. By specifying relationships among members and units, the chain of command facilitates the flow of information. Another useful tool is a set of rules and procedures designed to let employees handle routine co-ordination tasks quickly and independently.

ii) Boundary spanning: when the number of contacts between departments increases dramatically, it may be best to create a liaison between the departments. Such liaison is said to fill a boundary-spanning role. Employees

understand the needs; responsibilities and concerns of both the departments and can help the departments communicate.

iii) Reducing the need for coordination: When the need for coordination is so great that the methods just discussed are ineffective, the best approach may be to reduce the need for tight coordination. Halcrow (1994) describes two ways to do this: creating a slack resource and creating independent units whose members can perform all the necessary aspects of a task themselves rather that relying on other departments.

It is not uncommon to find many establishments in Uganda, including educational institutions still keep records in files and tucked them away in filling cabinets where they accumulate dust. Many of these files are often eaten up by rodents and insects, thus rendering them irretrievable. A great deal of routine administrative work in government establishment is still done manually. The official administrative drudgery in government offices and education institutions can be better managed through ICT. Educational administrative function include a wide variety of activities such as educational governance, supervision, support services, infrastructure, finance, budgeting, accounting, personnel selection and training system monitoring and evaluation, facilities procurement and management, equipment maintenance, research and so on (Thomas, 1987).

In Most school, officials go through the laborious exercise of manually registering students, maintaining records of pupils performance, keeping inventory lists of supplies, doing cost accounting paying bills, printing records and drawing architectural designs. The huge man-hour spent o these exercises can be drastically reduced through ICT to enhance overall management procedure. Thomas (1987), said "computers bring great speed and accuracy to each of these tasks along with the convenience of storing large quantities of information on "small disks or tapes" (p.5)

2.2 ICT and ability to plan school activities

As Astonner et al (1996) put it, planning is a process of establishing goals and suitable course of action for achieving those goals. In a school context, as Musaaz (1982 puts it, planning involves logical and purposeful outlining the work to be performed, together with the methods to be used including time allotment (budgeting) for performance of work. It involves deciding in advance what would be done. It is a method of looking ahead to device a basis for course of future action.

The penetration of computers in the private and public sectors is fairly high. All Institutions have some levels of computerization and most of the large private sector organizations use ICT to support some of their activities. A number of schools and international agencies operating in Uganda are reasonably computerized.

Planning is not a single event, with clear beginning and end. It is an ongoing process that effects and adapts to changes in the environment surrounding each organization. One of the most important results of planning is strategy for the organization. In a school environment, as Farrant (1982) puts, the head teachers should be in position to foresee what out to uplift the school standards and design possible strategies to achieve this noble objective.
These include among others proper budgeting, time allocation to each activity and the resources to do such activities with. However, it is not known whether head teachers have utilized ICTs in the planning of school activities. Such is what this study intended to find out, focusing on Kawempe Division Kampala district as a case study

Penetration of Computers (PCs) for example has been recognized as an effective indicator of the extent of ICT in society. In Uganda the penetration is estimated to be less that 1PC per 1,000 of the population. Although the level of penetration of ICTs within the public service is reasonably high, the level of utilization of computers to support school activities and operations is still very low. In most cases computers are being used for basic tasks like word processing. Not many of these schools are utilizing their computer systems for high level value added applications like:

a) Management Information System (MIS)
b) Database management system
c) Personnel management system
d) Accounting and budgeting etc.

According to Staingraber (1988), Organizations are typically managed according to two types of plans: strategic and operation plans. Strategic plans are designed by high-ranking managers and define the broad goals for the organization. Operational goals on the other hand, contain details for carrying out or implementing those strategic plans in day-to-day activities.

This adequately finds support in the commonwealth secretariat (1987) in which it was pointed out that a head teacher, as a school manager should always make strategic plans so as to enable the staff members effect their implementation role as may be depicted in effecting curriculum innovation, academic excellence strategies and doing any other assigned work load within the confines of attaining school success.

To Campbell (1986), both the strategic and operational plans are devised and carried out in a hierarchical manner. At the top, it the mission statement, a broad goal based on managers' assumptions about the organisation's purpose, competences and place in the world. The mission statement is a relatively permanent part of an organization's- identity and can do much to unify and motivate members of the organization. It is important to note here that schools have different mission statement, but all pointing to academic excellence.

It is also imperative to note that the way a mission statement is articulated makes it a driving force for the actions people will take in a organization. In a school perspective, it the mission statement is academic excellence, all the activities taking place in the school should be tailored towards achieving that noble objective. Owing to this, therefore, this study aimed at finding out how ICT has impacted on head teachers planning ability relative to setting, working towards and achieving the schools' mission statement. This was done focusing on selected secondary schools in Kawempe Division as a case study.

2.3 Technology as Aids to Teaching and Student Motivation

The role of technology in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education policy (Rosen and Well, 1995; and Thierer 2000). Most experts in the field of education agreed that, when properly used, ICT hold great promise to improve teaching and learning in addition to shaping work force opportunities. Many studies have found positive effect associated with technology aid instruction (Burruit, 1994, and Fitzgerald and Warner, 1996). The importance of ICT is evident from educational perspective. Though the chalkboard, textbooks, radio and film have been used to educational purpose over the years, none has quite impacted on the educational process like the ICT. While Television and film impact only on the audiovisual faculties of users to computers is capable of activating the senses of sight, hearing and touch of the users. ICT has the capacity to provide higher interactive potential for uses to develop their individual, intellectual and creative ability.

The main purpose of ICT "consists just in the development of human mental resources, which allow people to both successfully apply the existing knowledge and produce new knowledge: (Shavinina, 2001, p70). The computer offers a problem based learning environment that helps the users to apply themselves in a creative manner and acquire rather than passive knowledge. Thomas (1987) and Shavinnia (1997) share the view that the computer as an educational technology provides productive teaching and learning in order to increase people's creative and intellectual resources especially in today's information society. Consequently, there is emphasis on the intensive use of ICT for teaching and learning in the developed world as a potent means of equipping students for successful and productive living in a technologically developed world (Thomas 1987).

The collective and rigid nature of learning and passive nature of learning associated with the use of radio, television and film do not contribute any innovative changes to traditional methods in the education system. Information and telecommunication technologies are being used in the developed world for instrumental functions. Today, computers perform a host of function in teaching and learning as many nation as are adding computer literacy, reading and writing literacy as skills students will need for succeeding in the technologically developed world (Thomas, 1987). At institutional level, computers are used by

pupils to learn reading, mathematics, social studies, art, music, simulation and health practices.

In educational multimedia application Shavinina (1997) asserted that today's contents are domain-specific products and that they dominate the world market. According to Shavinina (1997), domain-specific educational multimedia is directed to knowledge acquisition skills development in language, arts, history, physics, literature, biology and so on.

There is no doubt that ICT provides productive teaching and learning in order to increase people's creative and intellectual resources especially in today's information society. Through the simultaneous use of audio, text, multicolor images, graphic, notion, ICT gives ample and exceptional opportunities to students to develop capacities for high quality learning and to increase their ability to innovation

Extolling the importance of technology in the instructional process, Chapin and Messick (1992) and Imogie (1998) asserted that the role of technology in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education policy. To this extent, developed countries of Europe and America have made legislative provisions on the imperative use of technology in the instructional process (Brittain, 1988).

Consequently, there has been a staggering amount of research and publication related to the use of technology for educational purposes in these advanced industrialized nations. Today nearly everyone in these countries gains access to information and communication Technology (ICT) and the purchases of computers for school use in such countries as the United States of America has been increasing in such a pace that it is difficult to keep track of how many computer machines are now in American Schools (Harper 1987). A survey report by Becker (1986) on the instructional uses of computers in United States public and private schools suggested that over one million computers were in American elementary and secondary schools and that more than fifteen million students used them during 1985. The report also says that more than half a million teachers used computers for instructional purposes during the same period and half of American secondary schools owned at least 15 computers each. Considering the fast pace of ICT in the last 20 years in Europe and America, the figures reported by Becker

(1986) must have risen astronomically by now. According to Thomas (2003), the story in Britain is basically the same as that of the USA. This country has been able to keep such pace as a result of government funding through the local Education Authorities and the Education Reforms Act of 1988 that compelled the central government to make budgetary provision for education technology.

Although the developing countries including Uganda have become aware of the invaluable role of technology in effective teaching and learning, they have not been to make significant progress in improving education through this medium. In Africa, concerted efforts have been made by many governments including Uganda to initiate internet connectivity and technology training programmes. Such programmes are expected to link schools and libraries around the world to improve education; enhance cultural understanding; develop vital skills of creativity, problem-solving and independent thinking which the youth need for survival in the global setting. Aduwa and Ilyamu (2004) reported on the progress made in Uganda, Senegal and Nigeria to institutionalize educational technology. Efforts are gradually being made to provide educational technology. Efforts are gradually being made to provide educational institutions with computers and to encourage ICT as an integral component of the educational process so as to meet the demand and challenges of globalization. What remained this study's concern was to find out whether Head teachers are influenced by ICT in co-coordinating school employees and activities

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The chapter gives a description of the research design that was used, area of the study, population of the study, sample selection methods and the size, date collection methods, procedure and data analysis methods

3.1 Research design

The research design that was used was a cross-sectional survey design in which both qualitative and quantitative methods were used. The researcher used a cross sectional research design because it helps collect data from different categories on knowledgeable and pre-determined respondents and thus can lead to the generation of representative and reliable data. The quantitative methods were to investigate people's ideas and attitude about the effects of ICT on the management of secondary schools.

3.2 Areas of study

The study was carried out from Kawempe Division Kampala district in the central region of Uganda. This area was previously selected because it was the researcher's home area. This made it easy for him to collect data from the respondents because they did not doubt his identity. This therefore led to the generation of reliable data.

3.3 Population of the study

Five head teachers, corresponding to the number of schools, were purposely selected for the study. Thirty teachers were selected for the study using systematic random sampling. Twenty five students were selected using purposive sampling. In all, 60 respondents were involved in the study

3.4 Sample selection method size (Selection of respondents)

Five schools believed to have increased variety of ICT application in management and academic activities were selected for the study using random sampling.

3.5 Research Instrument.

The research instruments that were used were of three categories, self administered questionnaires, interviews guides and a review of the written documents

3.5.1 Questionnaire

The questionnaire consisted of both structured and un-structured questions. The questionnaire was self administered among the respondents. The study used a questionnaire because it allows respondents to give free and independent opinions for they are not affected by the researchers' presence. It also helps cover a large number of respondents in a relatively short time.

3.5.2 Interview

Interviews were conducted among the respondents using an interview guide, which was open ended (Appendix B). the study used interviews because they guarantee an immediate feed back and can help collect a wide range of information by using open ended questions

3.5.3 Written documents

The researcher made a review of the relevant written documents to the study, such included textbooks, and reports, magazines, newspapers and journals and school related records on ICT application. The Data gathered was vital in consolidating the responses elicited from questionnaires and interviews

3.6. Procedure

The researcher first obtained a letter of introduction from the Institute of Adult and Continuing Education Makerere University, which was presented to the respondents and school authorities seeking for permission to carry out the study. To avoid loss and misplacement of the questionnaire, the researcher ensured that the filled questionnaires were collected immediately.

3.7 DATA ANALYSIS

3.71 Quantitative Data Analysis

The responses of the subject were categorized in frequency counts, score tables with varying percentages calculated basing on the total number of observed frequencies. Interpretations and conclusions were made according to the number of scores on each item

3.7.2 Qualitative Data Analysis

Field notes were written and work edited at the end of each field work. To ensure accuracy in recording and consistency in information given by respondents, themes were identified and put in coding categories. A scheme of analysis was worked out following the coding categories, using questions and the most occurring ideas

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF DATA

4.0 Introduction

In this chapter, the study findings and interpretations are presented. This was done in accordance with the three objectives and research questions that guided the study.

The socio-economic characteristics of the respondents were also incorporated in the chapter to give a basis of analyzing the findings on other variables.

4.2 Respondents' socio-economic characteristics

Responses elicited on respondents' socio-economic characteristics under the four themes: age of respondents, level of education and duration spent in the teaching profession.

4.2.1 Age of respondents

Item 1, appendix A and appendix B respectively aimed at establishing the respondents' age as classified and presented in table **4.2.1**

Table 4.2.1: **Respondents' age distribution**

Response	Frequency	Percentage
a) Teachers		
24-30	10	33
31-37	12	40
38-44	04	13
45-51	02	07
52+	02	07
Total	**30**	**100**
b) Headteachers		
30-35	-	-
36-42	02	40
43-49	02	40
50-56	01	20
57+	-	-
Total	**05**	**100**
c) Students		
14-16	15	60
17-19	10	40
20-22	-	-
Total	**25**	**100**

The table above reveals that the majority of the teacher respondents (40%) were within the age group of 31-37 years, 33% between24-30, 13% between 38-44 years while 7% were aged between 45-51 years and 52 above respectively.

The majority of the head teacher respondents (40%) are aged between 36-42 years and 43-49 years respectively. Only 20% were aged between 50-56 years.

However 60% of the students were aged between 14-16 years, 40% between 17-19 years while no student was aged 20+ years.

Table 4.2.2: **Respondents' gender**

Response	Frequency	Percentage
a) Teachers		
Male	15	50
Female	15	50
Total	**30**	**100**
b) Headteachers		
Male	04	80
Female	01	20
Total	**05**	**100**
c) Students		
Male	15	60
Female	10	40
	-	-
Total	**25**	**100**

Table 4.2.2 shows that males responded most (60%) than females (40%), and male head teachers (80%) were more than females (20%). Equal proportion of teacher respondents were interviewed, both male and females forming 50% respectively.

4.2.3 Respondents' level of education

Item 3, section A in the questionnaires aimed at finding out the respondents' level of education. The responses elicited on this issue revealed that most of them (74%) hold degrees and a few (15%) are diploma holders while a diminutive proportion (11%) are masters' holders. This can be seen in **table 4.2.3**

Table 4.2.3: **Respondents' level of education**

Response	Frequency	Percentage
Masters	04	11
Degree	26	74
Diploma	05	15
Total	**35**	**100**

4.2.4 Duration spent in the teaching profession

Item 4 in section A of the teachers' and headteachers' questionnaire requested respondents to state the period they had spent in the teaching profession. The elicited responses on this issue were presented in table 4.2.4

Table 4.2.4: **Duration in the teaching profession**

Response	Frequency	Percentage
(a)head teacher		
Over 13 years	04	80
9-12years	01	20
5-9 years	-	
Total	**05**	**100**
(b)teachers		
Over 13 years	10	33
9-12years	05	17
5-9years	07	23
Below 5 years	08	27
Total	**30**	**100**

Table 4.2.4 shows that majority of the head teachers respondents (80%) had served as head teachers for more than 13 years while 20% had served for 9-12 years. Nobody had served for less than 9 years. For the case of teachers33% had served for 13 years, 17% for 9-12 years, 23% for 5-9 years and 27% had served for less than 5 years.

4.3 ICT and Ability to Co-ordinate School Activities

In a bid to generate data on this issue, several questions were passed before the respondents. First, the respondents were asked whether they knew anything about ICT (Information and Communications Technologies). All the responses showed that teachers and head teachers acknowledged that they knew something about ICT.

According to the study findings, there was a general understanding by respondents that ICT means the use of and application of computers. These responses led the researcher to first explain to respondent what ICT meant.

The respondents were further asked to state the ICT device that they were familiar with. Majority (100%) reported that they were familiar with radios; televisions, telephones and 10 out of 35 teachers interviewed reported that they• were familiar with computers. None of the respondents reported to be familiar with fax and telegram.

Table 4.3.1: **Whether ICT Has an Effect on Ability to Co-ordinate School activities**

Response	**Frequency**	**Percentage**
Yes	35	100
No	-	-
Total	**35**	**100**

The results from **Table 4.3.1** revealed that all the respondents were (100%) agreeing with the fact that ICT impacted on the coordination of their school activities.

Further the teachers were requested to state the different ways in which ICT had impacted on the coordination. The teachers cited out that ICT appliances were used for example computers in data storage; in research and printing of exams and other spreadsheets. Others reported that they used phones while communicating with colleagues from different schools and head teachers used telephones to communicate with officials from Ministry of Education. A teacher from Kawempe Muslim School commented that at home we also watch Television and listen to radios so as to get informed about the outside world".

Head teachers felt that following key elements of ICT use have impacted upon coordination of school activities. There has been impact on information flow and presentational software in enabling easy communication with the Ministry of Education, members of staff and support staff. This has led a study to a realisation that ICT has an impact on ability to coordinate school activities.

Item 8 on the teachers and head teachers' questionnaire was intended to find out from the respondents if they had agreed with the fact that ICT has a positive motivational impact on learning and teaching. Results were presented in the table below.

Table 4.3.2: **Impact of ICT on Learning and Motivation**

Response	**Frequency**	**percentage**
Yes	35	100
No	-	-
Total	**35**	**100**

Table 4.3.2 shows that all (100%) the teachers agreed with the view that ICT had an impact on student learning; The respondents were further asked to state the ways in which ICT impacts on student learning. Teachers reported that ICT has a positive motivation upon student's attitude towards schoolwork. The study indicated that teachers felt that IC Technologies such as internet, projectors and television help students to access information on their class work more for example in subjects like Geography, General knowledge (GP), Physics and History. Others reported that ICT helped students to take pride in their work and was helpful with assignments and homework.

A vast percentage of teachers who reported using visual and audio technologies during class lessons said that the use of these devise made the classroom environment more interesting.

One of the literature teachers reported that video and television technologies help improve student attainment and grasping of academic work. The role of target setting was reported by some teachers as being an important element in terms of shifts towards higher attainment levels.
For example, one teacher from Oxford School said, "The assessment role of ICY is a crucial element. All exam results are recorded in computers and spread sheets. Students are always trying to improve on their past grades, near the end of term and they are told exactly where they are. The majority try really hard, it's within their power to do something, it really works. Each member of staff will enter their data and students are able to see where they are in terms of progress".

Table 4.3.3: **Whether teachers were computer literate**

Response	**Frequency**	**Percentage**
Yes	10	29
No	25	71
Total	**35**	**100**

From Table 4.3.3 it is indicated that majority of the teachers respondents (71%) were computer illiterate and only 29% were computer literate.
Item 2 on the teachers and head teachers questionnaire aimed at establishing whether respondent's schools were connected to the Internet. The study revealed that 3 out of 5 schools visited were connected to the Internet. Those respondents who were connected to Internet were then requested to state how they used the Internet. Of the 15 teachers interviewed on this issue, 12 reported that they used the Internet to do research and look for academic material (data). The other remaining three said that they used the Internet to send mails and also chart with friends.

4.4 ICT and Ability to Plan School Activities

It was also one of the objectives to find out whether ICT had any impact on the teachers / head teachers' ability to plan school activities. In order to solicit data on this variable, several questions were passed to the respondents. First, as in item 13, section C of the teachers / head teachers questionnaire, the teachers / head teachers respondents were requested to rate their views on whether IC Technologies had an impact on planning school activities.
The elicited responses on this issue were presented in table 4.4.1

Table 4.4.1: **ICT Impact on planning school activities**

Response	**Frequency**	**Percentage**
Yes	32	92
No	03	08
Total	**35**	**100**

Results from table 4.4.1 indicate that 92% of the teachers agreed with the fact that ICT has an impact on ability to plan school activities and only 08% disagreed with the view.

The teachers were further asked to state how (CT had impacted on planning of school activities. All the responses elicited on this issue revealed that IC technologies had a significant positive impact on teacher's ability to plan for school. There was a general agreement that ICT tools and applications such as print magazines, books, computers and Internet provided teachers with

organisational and planning skills especially in financial management, curriculum development, as well as developing knowledge and skills that would help a teacher as a manager.

There was also a general agreement that the IC Technologies had helped head teachers gain constructive and innovative skills, action planning, providing activities and budgetary allocations. This led to a realisation that headteachers gained more planning related knowledge from Internet liable to bring about organizational efficiency.

As one head teacher summarised it, "Using ICT for teaching has definitely contributed towards raising standards because of multi-sensory approach, the different styles of teaching, and the different styles of learning. IT is allowing teachers to use tools that make their life easier for example teachers use photocopiers to have the subject materials printed and issued to students.

Table 4.4.2: **How Often Did Respondents Visit the Internet?**

Response	**Frequency**	**Percentage**
Every day	01	06
Once a week	10	67
Once a month	04	27
Never	-	-
Total	**15**	**100**

Table 4.4.2 shows that out of the 15 teachers whose schools were connected to the internet, majority 67% reported that they visited Internet once in a weak, 27% once a month and only 6% visited everyday.

Item 17 on the teachers / head teachers' questionnaire aimed at finding out whether teachers applied ICT for class purposes and lesson planning. All the respondents (100%) agreed that the read Newspapers and Print magazines to keep updated with current affairs, other said that they listen to news over the radio and also watched television. Some teachers said that computers helped them in planning material for class especially in the science subjects. The elicited responses on this issue were presented in table below.

Table 4.4.3: **Whether Teachers Used ICT in Lesson Planning**

Response	**Frequency**	**Percentage**
Yes	35	100
No	-	-
Total	**35**	**100**

From the above table it can be concluded that all the teacher (100%) used/applied ICTs during lessons.

4.5 ICT and Student Performance Motivation (ICT and Learning)

It was one of the major objectives of the study to find out whether ICT had an impact on student motivation or performance. To generate data on this variable, several questions were posed before the students. First, as item 1 section B on Appendix B, requested the respondents to state if they knew any thing about ICT (Information and Communication Technology). This question was based on the fact that many respondents had previously referred to ICT as the use and application of Computers in daily activities. A vast number of students however, said that ICT meant the application/usage of electronic tools in the management and flow of information. One of the students also referred to ICT as the mechanical repair of electronic appliance.

Furthermore, students were asked to state the ICT tools that they were familiar with. The responses revealed that all students were familiar with radios, Televisions, Telephones. However, when asked about their knowledge of computer, only S out of the 25 students interviewed were computer literate.

Item 5; section B of the interview guide aimed at finding out if students had computer-learning programs in their schools. The responses to this issue were presented in table 4.5.1

Table 4.5.1 Whether Student Had Computer Learning Programs

Response	**Frequency**	**Percentage**
Yes	15	60
No	10	40
Total	**25**	**100**

From table 4.51, it can be seen that majority 60% students had computer- learning programs in their schools. 40% reported not to have.

Item 6, section 8 of the Appendix B, requested respondents to state whether IC Technologies enhanced their confidence as students. Most students (15 out of 25) reported that they felt more confident when using (CT. Many said that they felt more confidence in their abilities to handle the work they had to tackle. Of the 25 students, 20 said that IT helped with making work neater, in communicating with parents at home and also getting information about controversial topics that they did not understand in class.
Others said that ICT improved the entertainment and sports/games department. Many mentioned that they had access to satellite TV (DSTV).

Item 7, Section B of the Appendix B, aimed at finding out whether students were allowed to carry radios at schools. According to the study findings, 80% of the students reported that they were allowed to carry radios at school and 20% were not. Item 8 focused on establishing how often students read newspapers. It was revealed that all the students interviewed read the Newspapers once a week. The responses were presented in table below.

Table 4.5.2: How Often Students Read the Newspaper

Response	**Frequency**	**Percentage**
Every day	-	-
Once a week	25	100
Once a month	-	-
Never	-	-
Total	**25**	**100**

Results from the table 4.5.2 indicate that all the students (100%) read papers once a week.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, we discuss the findings, a summary, conclusions and recommendations made. This is done in accordance with the three objectives and research questions that guided the study. Finally areas for further research are suggested.

5.2 Discussion

5.2.1 ICT and ability to Coordinate School Activities

The study revealed that ICT has an impact on the Head teachers ability to coordinate school activities. This can be seen from table 4.3.1 where all the teachers agreed with the fact hat ICT had influenced their school activities. This is in line with Thomas' findings (1987) who said that the official administrative drudgery in government offices and education institutions could be better managed through (CT. Educational administrative functions include a wide variety of activities such as educational governance, supervision, support services, infrastructure, finance, budgeting, accounting, personnel selection and training system monitoring and evaluation, facilities procurement and management, equipment maintenance, research and so on. Thomas (1987), said 'computers bring great speed and accuracy to each of these tasks, along with the convenience of storing large quantities of information on "small disks or tapes".

The study also revealed that IC Technologies such as Internet, projectors and television help students to access information on their class work more for example in subjects like Geography, General knowledge (GP), Physics and History. Others reported that ICT helped students to take pride in their work and that it was helpful on assignments and homework, It was further revealed that the application of visual and audio technologies during class lessons made the classroom environment more interesting. One of the literature teachers reported that video and television technologies helped improve student attainment and grasping of academic work. The findings conquer with Burruit's findings (1994)

where most experts in the field of education agreed that, when properly used, ICT hold great promise to improve teaching and learning in addition to shaping work force opportunities.

The above idea also supports Fitzgerald and Warner, 1996 findings who said that the importance of ICT is evident from the educational perspective. Though the chalkboards, textbooks, have been used for educational purpose over the years, none has quite impacted on the educational process like the ICT.

5.2.2 ICT and the ability to Plan School Activities: Research question II

The study revealed that IC technologies had a significant positive impact on teacher's ability to plan for school. There was a general agreement that ICT tools and applications such as print magazines, books, computers and Internet provided teachers with organizational and planning skills especially in financial management, curriculum development, as well as developing knowledge and skills that would help a teacher as a manager. The study is inline with Thierers', (2000) who asserted that most experts in the field of education agreed that, when properly used, ICT hold great promise to improve teaching and learning in addition to shaping work force opportunities. Many studies have found positive effect associated with technology aid instruction. The importance of ICT is evident from the educational perspective

There was also a general agreement that the IC Technologies had helped head teachers gain constructive and innovative skills, action planning, providing activities and budgetary allocations. This led to a realisation that headteachers gain, more planning related knowledge from Internet liable to bring about organisational efficiency.

As one head teacher summarised it, "Using ICT for teaching has definitely contributed towards raising standards because of the multi-sensory approach, the different styles of teaching, and the different styles of learning. IT is allowing teachers to use tools that make their life easier for example teachers use photocopiers to have the subject materials printed and issued to students. The findings concur with Shavininas' (1997) who said "There is no doubt that ICT provides productive teaching and learning in order to increase peoples creative and intellectual resources especially in today's information society. Through the simultaneous use of audio, text, multicolor images, graphics, notion, ICT gives ample and exceptional opportunities to students to develop capacities for high quality learning and to increase their ability to innovation.

5.2.3 ICT: An Aid to Student Performance Motivation

The study revealed that IC Technologies enhanced their confidence as students. Most students (15 out of 25) reported that they felt more confident when using ICT. Many said that they felt more confidence in their abilities to handle the work they had to tackle. Of the 25 students, 20 said that IT helped with making work neater, in communicating with parents at home and also getting information about controversial topics that they did not understand in class.
Others said that ICT improved the entertainment and sports/games department. Many mentioned that they had access to satellite TV (DSTV).
The study further revealed that ICT impacted upon motivation in terms of pupils' enhanced attitudes towards schoolwork.

Headteachers in these schools indicated that the reasons for shifts in student's attitudes were due to the impact of ICT upon quality of their work; the fact that the Internet and Television could offer them access to significant resources, that ICT could enable learning to be more inclusive and. could enable their own expectations to rise. This concurs with Shavinnia and Thomas' findings that said that (CT offers a problem-based learning environment that helps the users to apply themselves in a creative manner and acquire active rather than passive knowledge. Thomas (1987) and Shavinnia (1997) share the view that the (CT provides productive teaching and learning in order to increase people's creative and intellectual resources especially in today's information society. Consequently, there is emphasis on the intensive use of ICT for teaching and learning in the developed world as a potent means of equipping students for
successful and productive living in a technologically developed world.

5.3 Summary

In view of the study findings, it can be noted that IC Technologies impact on the Teachers/Headteachers ability to coordinate school activities.
The study findings revealed that teachers use ICT appliances for example computers in data storage, in research and printing of exams and other spreadsheets. Others reported that they used phones while communicating with colleagues from different schools and head teachers used telephones to communicate with officials from Ministry of Education.

The study also showed that IC Technologies impact on Teachers' / headteachers' ability for planning school activities. According to the findings, there was a general agreement that ICT tools and applications such as print magazines, books, computers and Internet provided teachers with organizational and planning skills especially in financial management, curriculum development, as well as developing knowledge and skills that would help a teacher as a manager.

There was also a general agreement that the IC Technologies had helped head teachers gain constructive and innovative skills, action planning, providing activities and budgetary allocations. As one head teacher summarised it, "using CT for teaching has definitely contributed towards raising standards because of multisensory approach, the different styles of teaching, and the different styles of learning. IT is allowing teachers to use tools that make their life easier for example teachers use photocopiers to have the subject materials printed and issued to students".

IC Technologies also enhances students' confidence in schoolwork. Most students (15 out of 25) reported that they felt more confident when using ICT. Many said that they felt more confidence in their abilities to handle the work they had to tackle. Of the 25 students, 20 said hat IT helped with making work neater, in communicating with parents at home and also getting information about controversial topics that they did not understand in class.

Others said that ICT improved the entertainment and sports / games department. Many mentioned that they had access to digital satellite televisions.

5.4 Conclusions

In view of the findings, the following conclusions can be made in accordance with the major themes of the study:

IC Technologies impact on the teachers / headteachers ability to coordinate and plan school activities. Therefore the researcher concluded that adoption of ICT impacts significantly on the Headteachers' ability to coordinate and plan for school activities.

ICT applications also impacted on learning and student motivation which made re researcher to conclude that ICT impacts greatly on student motivation.

5.5 Recommendations

First and foremost the study aimed at examining the adoption of Information and Communication Technology on the management of secondary schools in Kawempe Division Kampala District. The study revealed that a vast percentage of respondents did not exactly know what Information and Communication Technologies (ICT) means. Most of the respondents always referred to ICT as the use and application of computers and Internet. The study hereby recommends that the public be sensitized about ICT applications and its importance in institutional management.

It is also indicated that majority of teachers do not have access to Internet. It is recommended that Government sets up budgetary allocation to have schools connected to the Internet as this will improve on research and teaching capacity.

The study revealed that majority of students read Newspapers once a week. The research therefore recommends that school authorities provide students with newspapers in libraries so that they can stay informed about the global happenings.

5.6 Areas for Further Research

In view of the study findings, the following areas for further research were suggested:

I. A study can be done to find out the effect of ICT adoption on school management in different geographical locations other than Kawempe Division for comparative purposes.

II. A study can be done to find out the teachers' attitude towards Government emphasis on e learning in schools.

Ill. A study can be done to find out the challenges and possible policy alternatives that can help schools attain better ICT equipment.

REFERENCES

• Aduwa-Ogiegbaen, S.E., & Ilyamu, E.O.S (2005). Using Information and Communication technology in secondary schools.

• Association for Progressive Communications (APC), (2004). APC regional ICT policy advocacy workshop report. Accessed October 31, 2004 from *http://www.apc.org/events/Nairobi-july04/Nairobi. shtml*

• Council for the Economic Empowerment of Women in Africa (CEEWA)-Uganda, (2000). CEEWA-Uganda baseline survey report.

• Council for the Economic Empowerment of Women in Africa (CEEWA)-Uganda, (May, 2003), CEEWA-Uganda ICT project evaluation report.

• Council for the Economic Empowerment of Women in Africa (CEEWA)-Uganda, (December, 2003). Documentation of CEEWA-Uganda ICT project experiences, lessons, challenges and recommendations.

• Uganda Communications Commission (UCC), (2001). Rural Communications Development Fund (RCDF).

• Uganda Communications Commission (UCC), (January, 2005). Uganda Telecommunications Sector Policy Review Report, Draft 4.

• Uganda National Council for Science and Technology (UNCST), (2002). National Information Communication Technology Policy Framework.
http://www.dfes.gov.uk/research/data/uploadfiles/RR523new.pdf

APPENDIX A

Questionnaire for the topic: INFORMATION AND COMMUNICATION TECHNOLOGY ADOPTION IN THE MANAGEMET OF SECONDARY SCHOOLS IN KAWEMPE DIVISION KAMAPALA DISTRICT.

To be filled by teachers and headteachers

Dear Respondent,

You have been selected to participate in this study without prior knowledge of your existence.
The purpose of this study is purely academic
You are requested to tell the truth
The information you give will be treated with utmost confidence

You may respond by either filling in blank spaces provided or indicating with a tick where applicable.

SECTION A: BACKGROUND INFORMATION

1. Age
   .....
2. Sex
   .....
3. Education level
   .....
4. Duration in profession
   .....
5. Position
   .....

SECTION B: ABILITY TO COORDINATE SCHOOL ACTIVITIES

6. Do you know anything about ICT (Information and Communication Technology)?

.....

If yes, which ICT tool / applications are you familiar with?

.....

.....

.....

.....

7. Which is the most commonly used ICT tool in your school?

.....

.....

8. Do you own a phone?

.....

.....

9. Are you computer literate?

.....

.....

10. Does your school have a computer laboratory?

.....

.....

11. As a teacher, what do you use the internet for?

.....

.....

.....

12. Do you use ICTs in class lessons?

.....

.....

13. Do you agree with the view that ICT has a positive motivation impact on student learning?

.....

.....

If yes, explain

.....

.....

.....

.....

.....

.....

SECTION C: INFLUENCE OF ICT ADOPTION ON THE MANAGEMENT OF SCHOOL ACTIVITIES

14. Do you think thank ICTs have an impact on planning of school activities?

.....

.....

If yes, how?

.....

.....

.....

.....

.....

.....

15. Do you agree with the view that ICTs lead to effective planning of school activities?

.....

.....

16. How often do surf the Internet?

a) Every day
b) Once a week
c) Once a month
d) Never

17. Do you apply ICT in lesson planning and teaching?

.....

.....

SECTION D: CHALLENGES FACED IN ICT ADOPTION WHEN MANAGING SCHOOL ACTIVITIES

18. What challenges have you faced in the adoption of ICT in your school?
a) Poor power supply
b) Costly to purchase
c) Lack of skilled man power
d) Lack of accommodation facilities

APPENDIX B

INTERVIEW GUIDE FOR THE TOPIC: **THE INFLUENCE OF ICT ADOPTION ON LEARNING AND MANAGEMENT OF SCHOOLS**

To be filled by students

SECTION A: BACKGROUND INFORMATION

Kindly respond by placing a tick where appropriate

Age in years:

12-14		15-16		17+	

Gender:

Male		Female	

Class:

S1-S2		S3-S4		S5-S6	

SECTION B: ICT AND STUDENT MOTIVATION

1. Do you know anything about ICT?

Yes		No	

If yes, which ICT tools are you familiar with?

TV & radio		Computer	
Telephone		Photocopy	

3. Do you have a computer laboratory in your school?

Yes		No	

4. Do you use ICTs during class lessons?

Yes		No	

5. Do you have computer lessons in your school?

Yes		No	

6. Are you allowed to carry radios at school?

Yes		No	

7. Do you have video / television entertainment at school?

Yes		No	

8. Do you think that that the school computer laboratory is well facilitated?

Yes		No	

9 How often do you read new/dairy papers?

a) Everyday
b) One a week
c) Once a month

GLOSSARY OF ACRONYMS

CEEWA:	Council for Economic Empowerment of Women in Africa
ICT:	Information Communication Technologies
MDGs:	Millennium Development Goals
APC:	Association for Progressive Communications
UCC:	Uganda Communications Commission
RCDF:	Rural Communications Development Fund
DSTV:	Digital Satellite television
PCs:	Personal Computers
MIS:	Management Information System
RIP:	Rest in Peace
USA:	United States of America
UNCST:	Uganda National Council for Science and Technology
UTL:	Uganda Telecom Limited
MTN:	Mobile Telephone Network
TCP/IP:	Transmission Control Protocol/Internet Protocol