

Challenges Encountered by Primary School Heads in the Utilisation of Information Communication Technology in Administering Schools in Bulawayo Metropolitan Province, Zimbabwe

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ABSTRACT

This study examined the challenges encountered by Primary School Heads in the utilisation of Information Communication Technology (ICT) in administering schools. The study explored the concept of Information Communication Technology as utilized by school heads in administering schools, the challenges they are encountering in the utilisation of ICT and the best ways to minimize these challenges. Focus was on Bulawayo Central Educational District in Bulawayo. A sample of seven primary school senior teachers, five deputy heads, three teacher in charge and five school head teachers were purposively selected for the study. The interpretive paradigm undergirded the adoption of the case study design, and phenomenological methodologies where the researchers used questionnaires, oral interviews, observations and document analysis to collect data. The data was qualitatively presented, analysed and discussed thematically according to the research questions. Findings of the study revealed that the majority of the administrators have a miasma understanding on how to utilize ICT in the administration of schools. Most significant conclusion of the study was that ICT was being utilized to a certain extent in schools but was being thwarted by lack of competences by school administrators and lack of relevant support from government. Finally the study recommends that if the suggested recommendations are considered, ICT will be utilized effectively and efficiently.

Keywords: Information Communication Technology; utilization; school administrators

INTRODUCTION

ICT is the driving force for effective school management. Hence school head's participation in utilising ICT in the administering of schools is crucial for any meaningful change to occur in the school as they have a vital role to play. Yauch & Steudel, (2003) aptly puts that it is difficult to imagine a school head that does not use ICT trying to convince teachers that it is important. Tomei, (2005) suggest that the transformational rate of change might find professionals outdated in their own profession. Technologies have brought remarkable changes in the 21st century and ICT is increasingly becoming central in our daily lives and in our education system up to the classroom level. In their research Lewin & Lockheed, (2015) highlighted that technology based education has become the vehicle to access quality education. Many authors argue that a school head plays a major role in the utilisation of ICT in a school Makhanu & Kamper, (in Laaria, 2013). According to Laaria, (2013) the successful utilisation of ICT in a school greatly depends on the

effectiveness of school heads to manage change.

The school head plays a vital role in directing and administering positive actions that facilitates adoption and use of ICTs in their schools. Conversely, despite emphasis on school heads utilising ICT in schools for effective administration, several studies establish that many heads are either not actively participating in using ICT or have no considerable knowledge that can aid them in administering it in schools (Laaria, 2013). School heads at primary level have numerous leadership roles, including management and organisation of school curriculum, motivation and management of human resources in school, control and management of school finances, maintenance and management of school facilities including ICT infrastructure. Furthermore, school heads are the chief accounting officers in their schools (Laaria, 2013). By using ICT tools, primary school heads can effectively influence their school performance through efficiently and effectively performing administrative functions bestowed on them. Today's heads are expected to have positive attitudes towards ICT and possess minimum skills that can help them cope with emerging technology changes.

In Africa, studies have been carried out on computer and ICT usage in pedagogical situations. Kiptalan, (2010) in his Kenyan research found out that while ICT continues to advance in Western and Asian countries, African countries still experience a lag in its implementation. This is seen as an instrument to widen the digital and knowledge divides. Africa faces many challenges associated with utilising ICT in education. Miima, (2013) also state the number of challenges that hindered utilisation of ICT in teaching in Kenya and these include: lack of time, lack of confidence, and lack of competence or limited knowledge on how to make full use, resistance to change of interest, lack of computer facilities and related software and lack of technical support. Oboegbulem & Ugwu, (2013) carried out studies to identify the function of ICT in school administration and the extent of its use by secondary school heads in the administration in south-eastern states of Nigeria. Their findings show that the use of ICT in school administration is a necessity and a worthwhile venture, especially in this era of globalisation. However, it can be argued that the uptake of ICTs in schools is very slow as school administrators are incompetent in handling such facilities for effective administration. Konyana & Konyana, (2013) conducted a research to examine factors affecting technology integration by secondary school heads in Chipinge and findings indicated that most of the rural schools that received computers from the Government were not prepared to start utilising them. While the computers were welcome, the school heads submitted that the computers were mostly lying idle due to a number of factors such as lack of computer laboratories and the school had to spend some money adjusting the rooms to accommodate the hardware.

The Zimbabwe National ICT Policy (2016) adopted in 2015 makes significance reference to the promotion of ICTs in education, including their pedagogical use in educational institutions. Isaacs, (2007) realizes that Zimbabwe's Vision 2020, which sought to change the country to be an information centered society, was only realistic if the education sector embraces ICT in its school curricula. Liew, (2007) proposes that one of the main factors that might hinder the utilisation of an ICT programme is administrators' resistance to the acceptance and use of this new technology in schools and this causes the loss of huge investments that have been made within. This is in line with Mselle, (2012) who argues that the use of ICT tools such as computers and internet in administering schools is still at its infancy stage in most developing countries including Zimbabwe. It became necessary therefore to explore the challenges encountered by school heads in utilising ICT in the administration of schools at primary school level in Bulawayo Central District of Bulawayo Metropolitan Province in Zimbabwe.

Statement of the problem

Notwithstanding the fact that ICT utilisation has been seen to enhance organisational effectiveness and efficiency, the human feature has been identified as the most important contributor to the success or failure of the full utilisation of ICTs (Wahdain & Ahmad, 2017). Ngwenya (2018) mentioned that in Zimbabwe, it has been observed that in the past ten years, the level of ICT usage in the education sector, particularly in the secondary and primary levels, is much lower compared to other countries in the region. The researchers' observation, reveals that there is low utilisation of ICTs in Bulawayo Metropolitan Province in administering schools. School activities take place both inside and outside the school but most heads rarely use ICTs. It is against this background that the researchers had to investigate on the challenges encountered by school heads in utilising ICT in the administration of schools at primary school level in Bulawayo Central District of Bulawayo Metropolitan Province in Zimbabwe.

Main aim of the study

The main aim was to find challenges encountered by school heads in utilising Information Communication Technology in the administration of schools in Bulawayo Metropolitan Province with specific reference to Bulawayo Central District.

Objectives

The research was guided by the following objectives, to;

- 4.1 Explain the concept of Information Communication Technology as utilized by school heads in administering schools in Bulawayo Central District Primary Schools.
- 4.2 Find out the challenges encountered by primary school heads in the utilisation of ICT in administering schools in Bulawayo Central District Primary Schools.
- 4.3 Examine ways to mitigate the challenges encountered by primary school heads in the utilisation of ICT in administering schools.

Main Research Question

What are the challenges encountered by primary school heads in the utilisation of Information Communication Technology in administering schools in Bulawayo Metropolitan Province with specific reference to Bulawayo Central District?

Research Sub-Questions

- I. What is your understanding of the concept of Information Communication Technology as used in administering primary schools?
- II. What are the challenges encountered by primary school heads in the utilisation of ICT in administering schools in Bulawayo Central District primary schools?
- III. How may the challenges encountered by primary school heads in the utilisation of ICT in administering schools in Bulawayo Central District be minimised?

Significance of the study

Theory, knowledge and literature

The study would contribute to knowledge base of available literature on challenges encountered by school heads in utilising ICT in the administering of primary schools in Zimbabwe and make suggestions and recommendations on possible and better ways of eradicating the challenges facing school heads in utilising ICT. The study would provide researchers with data and information that could be useful in future studies on ICT utilisation in administering of schools especially studies premised on the improvement of utilising ICT in primary schools. This would fill a void in the research base of ICT utilisation in administering schools due to the absence of published research on challenges encountered by primary schools heads in utilising ICT in school administration of primary schools in Zimbabwe.

Administrators

The researchers hopes that the perceptions, beliefs, concerns, feelings, inputs and views of the school heads will be considered by administrators in the improvement of the ICT utilisation in administering schools as they are the immediate drivers in ensuring that learning takes place. It also hopes to serve as a mirror in which administrators would reflect and evaluate their efforts in utilising ICT in the administration of schools. School heads in Bulawayo Metropolitan Province would benefit through the research findings to use appropriate methods, strategies and techniques in the utilisation of ICT in schools.

Policy Makers

The study aims to unpack challenges encountered by primary school heads in utilising ICT in school administration and provide policy makers and researchers with new knowledge and new perspectives that could be useful to consider in the future. It also hopes to contribute to the knowledge base of available literature of underlining issues in the utilisation of ICT in primary schools in Zimbabwe and world over. Attention to school authorities and policy makers to improve on the utilisation is expected to be drawn. The research anticipates paving way for policy makers to come up with more understandable and practical implementation mechanisms.

Researcher

The researchers hope to seek answers to the research questions so as to understand the issues and sharpening research skills.

Theoretical Framework

The study was anchored on the Diffusion of Innovations Theory. This theory was put forth by Rogers (1962) and seeks to explain the rate at which new information, communication technologies diffuse within cultures. The theory also explains why and how ICTs and new ideas are adopted in different cultures and societies. In the theory, diffusion is defined as the process through which ICTs or new ideas are communicated and accepted in administering of schools by school heads (Rogers, 2014).

Accepting how ICT diffuse in societies has been considered in numerous areas. Rogers, (2010) proposed the DOI theory, stating that ease of use, and the five attributes (relative advantage, compatibility, complexity,

trainability, and observability), as well as environmental factors, influence the individual’s technology acceptance.

Rogers (2003) described the innovation-decision process as an information-seeking and information-processing activity, where an individual is motivated to reduce uncertainty about the advantages and disadvantages of an innovation. For Rogers (2003), the innovation-decision process involves five steps: (1) knowledge, (2) persuasion, (3) decision, (4) implementation, and (5) confirmation. These stages typically follow each other in a time-ordered manner. This process is shown in Figure 1.1.

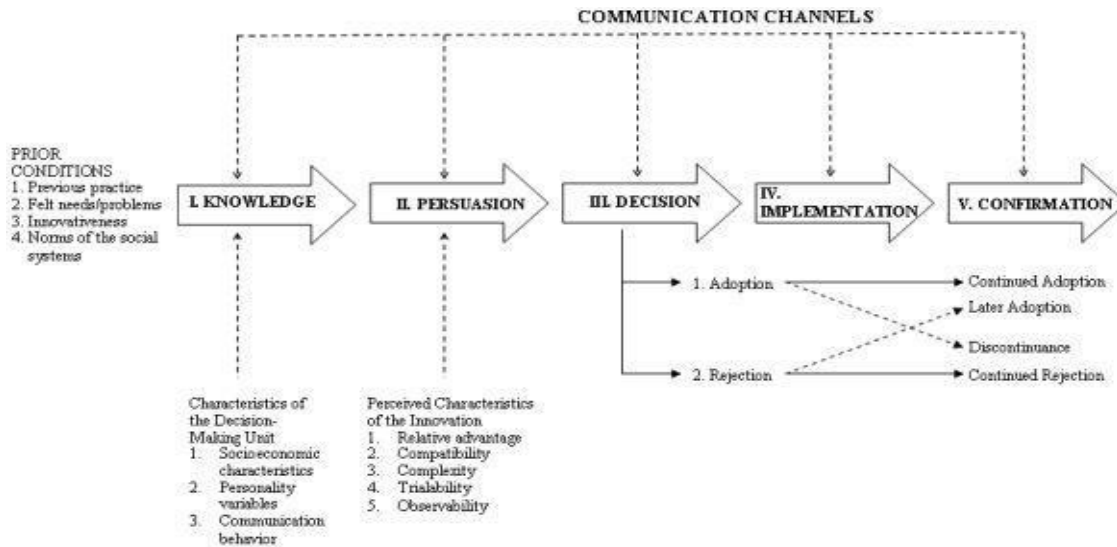


Figure 2.1. A Model of Five Stages in the Innovation-Decision Process (Source: *Diffusion of Innovations, Fifth Edition* by Everett M. Rogers. Copyright (c) 2003 by The Free Press. Reprinted with permission of the Free Press: A Division of Simon & Schuster.)

This study used the DOI Model since the other models include personal factors while no social factors were considered. The DOI Model includes the environmental factors that affect the adoption of a new technology. Hence, it was considered the best model for the study. The DOI theory, also known as Innovation Diffusion Theory (IDT) developed by Rogers, (2010), presents one of the oldest social science theories. The model enlightens on both population and social systems. According to Rogers, (2014) the idea of diffusion of innovations typically discusses the spread of philosophies from one civilization to another, or from a focus or institution within a society to other parts of that society. This study took ICT utilisation in the administration of schools by school heads as an innovation. ICT as an innovation has to diffuse throughout the administration of primary schools. In many cases, the school head has to implement and facilitate the smooth adoption and dissemination of the innovation.

METHODOLOGY

This research study adopted the Interpretivism paradigm so as to investigate the phenomenon under study. The perspective is concerned with understanding the world as it is from subjective experiences of individuals (Creswell, 2014). The paradigm allows researchers to investigate and prompt things that cannot be observed, researchers can probe an interviewee’s thoughts, values, prejudices, perceptions, views, feelings and perspectives (Wellington & Szczerbinski, 2007). Interpretivists tend to favour qualitative

research methods such as a case study; hence this research study adopted the case study as a research design. The primary purpose for choosing a case study is to explore the particularity of a single case, in this instance ICT utilisation by school heads.

Sample was drawn from a population of thirty deputy heads and thirty teachers in charge thirty school heads in the thirty schools of the District of Bulawayo Central in Bulawayo Metropolitan Province, Zimbabwe. The sample in this research study was taken from the five School Heads, five Deputy Heads and five Teachers in Charge who help in utilising ICT in the administration of schools taken from Bulawayo Central District in Bulawayo Metropolitan Province, Zimbabwe. These participants were selected since they are information rich as supervisors who oversee the utilisation of ICT in the administering of schools and take charge of making decisions at school level. Detailed data were gathered through open-ended questions that provided direct quotations from informants. For this study the researchers used the following data generating methods; semi-structured interview, observation, document analysis and open-ended questions.

FINDINGS AND DISCUSSIONS

Concept of I C T as used in administering primary schools

Participants revealed that they understood what the concept of ICT is. Most administrators gave a detailed account of what it is, they agreed that it is technology that is used to support and deliver instruction for effective quality education and overall development of learners, teachers and administrative staff. Some defined the term as tools used to manage school records. Another participant added that the concept of ICT is used to maintain information and communication and the day to day work easier. The participants' definitions were related with UNESCO, (2007)'s definition that ICT refers to forms of technology that are used to transmit, process, store, create, display, share or exchange information by electronic means. The responses indicated that all participants understood the phenomenon that they were being interviewed about.

Challenges encountered in the utilisation of ICT in administering schools

Participants lamented that there is lack of resources (ICT) tools; schools do not have the required gadgets to enable 100% compliance. They also mentioned that there is a performance gap. They gave an example of the use of hard copies in schools instead of electronic ones. This was also observed in the head's office which did not have any computer or ICT gadgets. One of the participants said effective ICT utilisation need adequate resources and competencies. There are no computers for the school office here; as a result even the school heads cannot afford one in their office, the office relies on ICT teachers who use about fifty computers to teach the whole school which has a population of about two thousand learners. Another challenge is that performance gap from both the administrators and subordinates resist change brought by technology that is most teachers still want to use hard copies of scheme cum plans yet it can be done through electronically. Most school administrators have the same challenge of performance gap. Some deputy heads claimed they do not have email addresses, which makes it difficult for them to receive teaching and learning materials from teachers electronically. All administrators interviewed in this study expressed their concern about the lack of ICT resources and proper infrastructure in their schools as their greatest stumbling block. Observations showed that the offices did not have ICT tools such as computers and printers that could help the administrator to utilise ICT through receiving, storing, collecting and communicating information for the school. This observation confirmed what the Administrators had said about lack of resources as a challenge to effective utilisation of ICT.

The responses and observations agreed with Fourie & Alt (2002) cited in Kinuthia, (2009) indicated that the cultural context of ICT adoption, language barriers, and attitudes toward ICT affect the rate at which it is adopted. Administrator who lamented on lack of financial resources confirms literature reviewed by Laaria, (2013) who reiterated that the greatest challenge faced by school heads when utilising ICT in their schools is balancing educational goals and economic realities. Implementation of ICT require large capital investments, therefore, school heads need to make prudent decisions about what models of ICT to be utilized well and maintaining economies of scale.

The utilisation of ICT by primary school heads is not optimal because of many challenges that they encounter. For instance school heads do not have computers in their offices and yet they are expected to embrace ICT in the administration of schools. From the findings only one school had a computer in the office of the head out of the five schools which participated in this research. The five school heads are experiencing the following challenges: lack of capacity in ICTs, technophobia, lack of ICT resources, expensive ICT tools, lack of finances and power outage. The problem is further exacerbated by the fact that most of the administrators lack capacity, the government is not assisting with needed resources, school heads are not receiving adequate training in ICT, power is not reliable and the economic challenges in the country seriously affect the utilisation of ICT. Confirming observation by Makhonu, (2010) who argues that other costs like duties and taxes levied on ICT products have made it impossible for poor schools in developing countries from implementing effective ICT. School heads and other administrators agreed that they experience some challenges in utilising ICT in the administration of schools. Some results were obtained from questionnaires and interviews. Administrators need to make prudent decisions about what models of ICT to be utilized well and maintaining economies of scale.

When asked if participants were able to utilize ICT in the administration of schools, they mentioned that they do not have the knowledge on how to use the computer but they learn some of the skills from their children at home. This affects them at work when they want to check schemes of work of teachers who will be having the documents on soft copy. School heads should be empowered with computer skills to make use of ICT in administering schools. Lack of knowledge is a contributing factor to ICT utilisation challenges. UNESCO, (2014) is of the view that ICT competencies are concerned with the ability to know when to apply or develop a particular skill in using an ICT resource. However, school head incompetence is one major challenge in embracing the ICT as a driver to do their administrative work. With the available resources, most school heads are not able and aware of how to use them for administering schools. This has caused school heads to assign a teacher with a bit of ICT knowledge to do administrative work in the school, which is an abnormal load for the teachers.

Financial constraints may be viewed as an obstacle to the successful utilisation of ICT in administering schools in primary schools. The administrators are faced with the challenge of providing finances that are required for utilizing ICT. Laaria, (2013) adds that more to this, is the licensing fees charged to education software. Nearly 90% of education software in use in Zimbabwe requires licensing and annual renewal fee at considerable high cost.

Mitigating the challenges encountered by school heads in utilising ICT.

Most participants concurred that the government through the relevant ministry should make effort to fund schools, so as to resource the schools in terms of ICT. Some participants lamented that Covid-19 come as a wakeup call and an eye opener to all school heads to acquire skills and knowledge on how to utilize ICT in administering schools. This is the time to do online classes. Hence the Government through the Ministry of

Education must make sure all school heads and teachers are computer literate and be a must do refresher courses and be staff developed every year. All school heads felt that schools need adequate ICTs, source funds through relevant stakeholders, schools to employ ICT technicians, in service training and use of solar systems in schools. Makhonu, (2010) says technical support is vital in maintaining confidence of school heads in reliability of access to ICT software and other equipment. Lack of technical support is likely to lead to school heads avoiding ICT in Zimbabwean schools, for concern of a technical fault occurring which they cannot rectify hence leading to administration work being unsuccessful. Electricity plays a critical role in the implementation and use of ICT in schools. It has been shown that electrical energy is intrinsically linked to environmental, economic and social dimensions of sustainable development of any country (Makhonu, 2010). With the absence of alternative power sources like solar energy, schools continue relying on electricity grid for sources of power and power cuts that are experienced in schools and Zimbabwe at large. This is a serious obstacle in ensuring the smooth utilisation of ICT by primary school heads. Hence the need of alternative power supply like the solar system.

CONCLUSION

According to the findings of this study, it can be concluded that most of the administrators lacked personal skills to utilise ICT in administering primary schools. This is as a result of lack of knowledge and obligatory training. Likewise on challenges facing administrators in utilising ICT, most administrators felt that they needed in-service training and were not knowledgeable on how to use and understand simple computers. Other challenges noted in the utilisation of ICT by administrators encompassed financial constraints, lack of resources and continuous shedding of power that is being experienced in schools. It was noted also that another challenge was negative attitude by administrators due to lack of confidence, technical support and self-efficacy which resulted to a negative bigger perception and a belief of being born before computers (BBC) has really impacted the administrators. On the type of support to be given to administrators for utilising ICT in the administration of schools, it was observed that it must be a must that school heads receive in-service training to ensure they have capacity to utilise ICT and to keep up with the demands of the 21st century. The government of Zimbabwe through Ministry of Primary and Secondary Education must ensure that the ICT policy that is in place clearly stipulate and guide administrators on how to utilise ICT instead of just encouraging them by a word of mouth without following what the policy say. The Internet should be available and affordable to schools and power outages to be minimised by giving each and every school a mandate to connect solar system in the school with the help of parents since they are said to be the ones running the schools to ensure its development takes place.

RECOMMENDATIONS

This study therefore recommends that;

1. School heads and all stakeholders must be capacitated by government in the utilisation of ICT in administering schools through routine workshops, and in-service training.
2. School heads must be supported by supplying enough materials, development of infrastructure by the help of School Development Committees (SDC).
3. Ministry of Primary and Secondary Education (MOPSE) should conduct ICT training sessions and workshops on advancement of administrators.

4. The Internet is vital for effective utilisation of ICT and therefore should be ubiquitous, that is available at schools at an affordable cost.
5. The administrators need to improve their ICT skills in order to reduce negative perceptions regarding ICT utilisation.
6. Schools should employ ICT technicians in order to infuse administrator's confidence as a mandate by the Ministry.

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