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BEST PRACTICE MANAGEMENT CASE OF ICT UTILIZATION IN ST. MARK'S KIGARI TEACHER'S TRAINING COLLEGE-EMBU COUNTY, KENYA

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ABSTRACT

St. Mark's Kigari is a primary teacher training college in Embu county, Kenya, which is working towards achieving the technological advancements and more so putting in place the measures to ensure the use of technology to boost education outcomes and also improve on both the teaching staff and the non-teaching staff welfare. This has been done by creating awareness of the move to adopt the technology to ensure successful implementation and avoid conflicts, through signing of the performance contract (PC) with the government, which is a management tool. It clearly and well states the institutions yearly targets which are evaluated at the end of the contract to determine the level of achievements.

However having these measures in place, the implementation process is sluggish and clear strategies on who to flag it off still missing, the administration at times seem to have an assumption that as the hardware's are put in place it is an automated idea that the students, staff and non-teaching staff understand what is taking place on the ground. This study seeks to access the level of ICT use and adoption in best practice management in St. Mark's Kigari Primary Teachers Training College. The research will adopt a purposeful stratified research design and descriptive design to investigate on the use of ICT as a tool in best practice management strategy to ensure that all systems in the college are well set to avoid risks of failure which are ever present in any given set up. A total of 3 Heads Of Departments (HOD's) 3 Head of subjects, the principal or the deputy principal, officers from the procurement office (PO) and finance office will be used in data collection giving a total of 9 out of 22, questionnaires will be used as tools for the data collection. The data will be analyzed using tables. The findings of the research will be conducted to access the use of ICT as best practice in management and the findings will help in strategizing ways in which it can be improved to achieve better results and also be benchmarked with other TTC's in the country. The researcher will conclude by giving views on how best practice management can be adopted as a technological advancement in ensuring transparency, accountability and efficiency in management of Teacher Training Colleges and also calling upon researchers in education to be done and come up with more insights on improving management in TTC's which seems to have been given least concern.

KEYWORDS: *Information technology, Best Practice, Information and Communications Technology (ICT), Utilization, ICT Adoption.*

INTRODUCTION

Computers and their applications play a key role in modern information management; there is an evident growth on the use of information and communication technologies (ICT) in managing different entities in various organizations. It has been the cry of various governments to effectively embrace use of technology to resolve their unaccounted losses due to lack of transparency, poor output in organizations being mass failures in the national exams in education sector, this being associated with mismanagement in different education sectors. Use of ICT can address the issues of transparency, accountability and efficiency in teacher's training colleges if only its put into practice. This will enhance quality output and immediate feedback hence ensuring increased standards in management

Teacher Training Colleges (TTCs) in Kenya, are the only institutions with concentration of educational professionals. This is where the skills of teaching are effectively taught and practiced to give the trainee a real feeling of a professional teacher, this being the opposite of courses like bachelors of education offered in our universities with less interaction with the learners or the skills necessary. Currently there are about 25 public TTCs in Kenya therefore this means that out of the 47 counties in Kenya(MoE, Embu) all are not well represented for each to have a TTC, this meaning that the extent to which students willing to join this profession are not well informed of this career choosing other alternatives. If only emphasis is to be put on the development of teacher training colleges this would mean an automatic spreading of the Technology which is not only on ICT use but other areas like communication, agricultural and industrial development, this is because of the fact that trained teachers have an immediate interaction with the community during delivery.

Background of the Study

International best practice is the use technology as the driving force of the education process. Pedagogy and the role of the teacher are very vital. Critical success factors include that solutions must be tailored to the readiness of schools to adopt technology and must be designed with awareness of resource constraints, and requirements for successful handover. A holistic view is essential, and must incorporate multiple dimensions in creating solutions, include multiple role players, and cater to multiple levels within the education system. By introducing computer hardware and software without the backing up of professional manpower then failure is guaranteed. According to report at the 7th UNESCO ACED conference for Quality Teaching and Effective Management in Bangkok, Thailand (2001), Andrew Bolington of United Kingdom (UK) noted that it is important for an organization to come up with a model which is able to put stakeholders at the front of development. This idea should be borrowed in the

management of school set up, colleges or any other organization to create a link within different organs of the college. Management of students in TTC's is another vital entity because these are the main stakeholders without which the colleges would be meaningless. Concerning the issue of student management, Professor H.P. Dikshit (New Delhi ,India) in the same conference said they had come up with a strategy where by the community is involved in identifying qualified teachers from the community who are employed in the colleges and the government pays. The community is allowed to report any kind of indiscipline observed from the teachers, the students are also allowed to be day scholars hence ensuring a big number of students are attending teacher training this is due to limited boarding facilities. This idea is worth to be emulated because management is not about those in administration but it should be team work. According to survey of ICT in Africa, (Shafika Isaacs ,2007) in south Africa, introduction of ICT in education is not a one entity thing, it involves the education stakeholders including the policy makers, I practitioners, and innovators. Using ICT technology in education in South Africa was given emphasis as early as 1990's where ICT in education policy started around 1996,one of the strategies was on transformation of learning and teaching through the use of ICTs, particularly in the formal schools and Further Education and Training (FET) college sectors .However teacher training colleges have been greatly hit by mismanagement as cited by Paula Armstrong (2015) leading to fewer aspiring teachers.

Education in Rwanda through the Ministry of Education Kigali, the government has a well defined teacher development and Management policy (2007) which was supported by UNESCO through Korean Republic Funds in Trust (KFIT) project in ICT 2016-2018, this project aims at ensuring different themes are achieved including quality education in both pre – and in-service primary and secondary teachers. The TTC principals are also to be trained on the competence – based –approaches to ensure the assessment standards are maintained.

The Kenyan government has realized the impact of technological advancement on teacher education. The Ministry of Education in Kenya has put in place some digitalized measures of student management, for instance, in the primary school sector National Education Management Information System (NEMIS) aims at ensuring digital registration of all pupil's in primary schools and students in secondary schools by February of 2018. This initiative was focused on managing the inconsistencies of the education sector in Kenya with the hope of tracking the learners performance across their entire school life to achieve the above it means that all learning institutions must then be equipped with hardware n software this is have computers and network

access. To support this the government of Kenya set a budget of Ksh.29billion in the financial years 2013/2014, 2014/2015, 2016/2017 aiming at realization of Digital Learning Programme, this is according to Rural Electrification Authority (REA 2018), in addition to this all learning institutions were supposed to have a computer laboratory and the government has so far supplied computers to primary and secondary schools. TTC's are also expected to have equipped rooms with computers and have ICT lessons, the staff and non-teaching staff also have access to these classes for research or personal work hence ensuring exposure to technology.

Case study institution

St. Mark's Kigari TTC has a current student population of about 1000 students all boarding, there are 83 lecturers and 85 subordinate staff members. ICT integration has been practiced for the last several years which has gradually grown to have all subject departments having a laptop under the care of the HoD. All the matters as it pertains the curriculum activities are stored in the laptop. Currently all the administrative offices are linked with an internal networking system to have flow of information ,but with this giant step a lot has to be done to ensure that best practice management skills using technology are achieved. The student management system is available but faced by challenges like low turn over of the trained staff on the system and also attitude of the staff and students towards the technology.

1.1 Problem Statement

The introduction and inclusion of ICT policy framework in education in Kenya has made remarkable steps since the year 2013 with almost 90% of all the primary and secondary schools supplied with electricity, (REA 2018). Teacher Training course is expected to take a duration of two years, some colleges also have school based courses where students are allowed to have their contact hours with the lectures during holidays which are in April, August and December. Kenya just like any other country would wish to be in the global partnership by ensuring that technological advancements are achieved in the education sector, this was through the promulgation of a National ICT policy in 2006 with aim of improving the livelihoods of Kenyans by ensuring the availability of accessible, efficient, reliable and affordable ICT services, (Glen Frarrell 2007) .The Ministry of Education(MOE), having set plans through(KESSP) to have ICT infrastructure and provide personnel in order to implement the plans but the greatest challenge is that the teachers and administrators in PTTC's have rare chances to in-service seminars organized to equip them with the knowledge, skills and attitudes in integration of the ICT in Primary TTC's,(Wang'ang'a Gichuhi, 2012).

1.2 Objectives of the Study

- i. To find out the level of ICT use at St. Mark's Kigari Primary Teacher Training College.

- ii. To establish the areas of ICT usage for best practice management at St. Mark's Primary Teacher Training College.
- iii. To investigate the challenges faced in the implementation of best practices management.
- iv. To access the measures put in place for improvement and use of ICT for best practices.

1.2.1 Overall Objective

To access the level of ICT use at St. Mark's Primary Teacher's Training College.

1.3 Research Questions

- i. What is the level of ICT use in management in public primary Teacher Training colleges in Embu?
- ii. Which are the areas of ICT usage for best practice management in the primary teacher training colleges in Embu county?
- iii. Which are the challenges facing the implementation of best practice management?
- iv. Has the institution set up any measures to improve the use of ICT for best practice?

1.4 Hypothesis of the study

The use of ICT will improve best practice management of the primary teacher training colleges.

1.5 Scope of the study

This research will basically be based on the use and application of ICT and the implementation process to ensure best practice management in PTTC. Primary data will be collected using questionnaires hence the accuracy of the same will depend on the honesty of the respondents. The administration of the college will be also involved hence raising the question if they will be willing to assist in the research due to sensitivity of their offices. However the board members, students and the non-teaching staff will not be involved and this could lead to avoidance of important information which could have been useful. Bearing also in mind that best practice management should be practiced in all PTTC's the research is limited to only to one PTTC-St Mark's Kigari.

2.0 LITERATURE REVIEW

Literature related to best practice management in public primary training colleges will be discussed.

2.1 Introduction

ICT Computers and the Internet are integral parts of the education system, the beneficiaries include student learning, teacher development, school leadership, and management. Teachers may gain from using ICT in the areas of content, curriculum, instruction and assessment. In primary teacher training colleges, computers and the Internet can be used to increase teachers' basic skills and subject mastery, to provide access to resources that can later be used in classrooms, and to help teachers build

familiarity with specific instructional approaches. However, if teachers will not have access to computers after they are posted to schools, the cost of helping teachers acquire computer skills may outweigh the benefits of computer use during their pre-service education. In schools, computers and the Internet can serve as flexible resources to support Teacher Professional Development (TPD) and student learning.(Gaible, Edmond and Mary Burns.2005).

2.2 ICT AND COMPUTER USE IN MANAGEMENT

The use of ICT in management is not seen as a key enabler across all levels of the education system. I A Meyer et al. (2016) stated that ICT should not be made the focus but definition of how the policy should be used in best practice management and should be included in pedagogy. It is the duty of the top administration in St. Mark's Kigari to ensure that this is clear amongst the stakeholders.

2.3 INNOVATIVE APPROACHES AND PRACTICES IN USE

According to a study on best practice by mr.Arne Disch et.al (2008) It is very important to note that an approach can only be rated to be best practice if measurable results are in place, this means that its until the end point is attained. This team tried to consider what best practice could be and from some definitions, it is a” technique or methodology that through experience and research, has proven to reliably lead to desired results. In St .Mark’s Kigari PTTC several methodologies are already in place having the Performance Contract (PC) document in Place with set objectives to be achieved, for instance in the Administration Procedure Manual, strategic objective NO.5 To enhance performance by improving the management of the college human resource, and NO.6 Develop efficient ICT’s for effective delivery of all college activities, there is introduction of biometric clock in and out which has replaced the clock in an out register and also teachers are encouraged to use power point instead of books for teaching in class.

2.4.1 CHALLENGES IN IMPLEMENTATION OF BEST PRACTICE MANAGEMENT

A. Meyer et.al (2016) pointed out that ICT inclusion for best practice cannot succeed without holistic support from teachers, students and other stakeholders like the Board of Management (BOM) in this case. It is important to consider the support capacity as per the specific principles of selection of technology for ICT in education, Ostrowick (2016). In St. Mark’s Kigari PTTC the introduction of CCTV cameras and biometric attendance the year 2018 has been received by most the teachers’ with a negative attitude having a feeling that their privacy and too close monitoring respectively. The students too have reacted the same way to the Closed-circuit television (CCTV) cameras which have been placed in strategic areas and plans are in

process to have them along the streets of the classrooms and dormitories for security purposes.

2.4 IMPROVEMENT AND USE OF ICT FOR BEST PRACTICE

Each new development being implemented must have well laid plans for continuity through time frame. There are always gaps which emerge during the implementation process and these are addressed every time, it’s important to have room for improvement, review or change. St Mark’s Kigari having had existing software hardware but it’s important to obtain high end for both to have better operations. There is need to conduct more intensive internal trainings for human resource capacity development or even hire more competent staff. Having other PTTC’S considerations to do bench marking for best practices like ISO certified institutions is of great importance. Developments come along with costs, so it’s advisable for the institution to have budget allocations in each Financial Year (FY) to cater for such.

2.5 RESEARCH GAP

A lot of research has been done on use of ICT in teaching (pedagogy), learning and teacher development. The ministry of education Rwanda has a policy in Teacher Development and Management (2007), as per the findings of this report increase in the number of teachers in the schools although from the general orientations its noted that the government of Rwanda aspires to develop a knowledge –based and technology-led economy but emphasis is on the human resource development factor rather than management skills of the available personnel. According to Ostrowick (2016) Change management is not a key element of the introduction of ICT into teaching and learning. Where it is defined, it is interpreted as management of the adoption of ICTs into the classroom environment.

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology that will be used in the study. This includes the target population, research design, research instruments, sampling techniques, research instruments, validity and reliability of instrument, data analysis and data collection procedures.

3.2 Research Design

Descriptive survey and purposeful stratified design was employed to investigate the level of ICT use in St.Mark’s Kigari PTTC, Secondary data will be also used. This is the use of existing sources of information (Paul C.Cozyby, 2004) which include the statistical records in the Ministry of Education Embu county, the survey research design will involve selection of lecturers, heads of departments ,head of subjects and the top management in St.Mark’s Kigari Public Teachers Training College schools of Manyatta sub-county.

3.3 Target Population

Mcmillan and Schumacher, (2010) state that target population is a group of elements or cases, whether individuals, or objects, or events, that conform to specific criteria and to which the results of the research can be generalized. The target population in this research will be lecturers, Heads Of Departments, Heads Of Subjects, the top management and Quasi management.

3.4 Sampling and Sampling Techniques

A sample is a smaller group obtained from accessible population. In this study a sample was selected to be a representative of whole population with salient

TABLE 3.4.1

Table 3.4.1 shows the total number of sample population who participated in the filling of the questioners.

Departments/ officers	Languages Department	Mathematics Department	Education Department	Procurement office	Finance Department	Dean of Students
HOD	1	1	1			
HOS	1	1	1			
Procurement				1		
DOS						1
Finance					2	
Principal						

Source: research data

3.5 DATA COLLECTION

The instrument which will be used to collect data is only one, it will be self-administered questionnaires. The self-administered questionnaire as defined by Bernard, (2006) is a questionnaire that a respondent completes his/her own either on paper or any other writing material provided, by answering questions designed to obtain answers pertinent to research hypothesis. This instrument has been considered appropriate by the researcher since all respondents are expected to have sufficient literacy level to enable them read, understand and answer the questions accordingly.

The questioner will have two sections, section A will have the Biodata information with 9 items while section B will have 4 items related to the objectives of the study.

3.5. DATA ANALYSIS

The data analysis will be done by sorting, coding and processing the data (Borg &Gall ,1996) this was done by Ms Excel and the Statistical Package for Social Sciences (SPSS) version 12 renamed predictive analysis software (PASW) 2009. Both quantitative and qualitative approaches will be used. Quantitative approach will be done using descriptive survey and will be analyzed

characteristics. Also sampling refers to taking a portion of a population or universe as representative of that population or universe (Kerlinger, 2006). The sampling techniques are the methods employed in selecting a representation portion from each of the population relevant to the study. This research will engage the Administration, 3 Heads of Departments (HOD's) out of 7, 3 Heads of Subjects(HoS's) out of 12, 1 Dean out of the 2,1 personnel officer from finance department out of 2, and 1 officer from procurement department.

through content analysis basing on the respondents information on the questioners given.

4.0DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

Analysis of data and interpretation of the findings will be discussed in this chapter. The results will be grouped under major headings. The results are presented in both tables and figures showing mean, standard deviation of the scores and the correlation between the years. A descriptive analysis of the respondents will also be included and their recommendations considered in the final findings as it will be a true reflection of the actual results.

4.2 Demographic Information of Teachers

4.2.1: Teachers' Demographic Information:

This entire section involves the biographical information of the respondent which explains biographical information.

Gender

Table 4.2.1 shows the gender of the participants which is 55.6 % are male and 44.4 % are female the majority being male. Hence male dominate in leadership in the selected departments.

Table 4.2.1: GENDER

SEX	Frequency	Percent	Valid Percent	Cumulative Percent
Male	5	55.6	55.6	55.6
Female	4	44.4	44.4	44.4
Total	9	100.0	100.0	

Source: research findings

Table 4.2.2 shows age in years of the participants majority are between the age of 41-50 years and above 50 years represented by 44.4 % respectively. This gives an implication that most of the participants in leadership have served for a long time.

4.2.2 AGE

Years	Frequency	Age		
		%	Valid %	Cumulative %
Less than 30 yrs	0	0	0	100.0
31-40 yrs	1	11.1	11.1	11.1
41- 50yrs	4	44.4	44.4	44.4
Above 50 yrs	4	44.4	44.4	44.4
Total	9	100.0	100.0	

Source: Research findings

Table 4.2.3 shows that ICT use is 100% in the 9 participants department, this implies that technology is embraced in the college.

4.2.3 USE OF ICT

ICT USE				
Response	Frequency	percentage	Valid %	Cumulative %
Yes	9	100.0	100.0	100.0
No	0	0	0	0
Total	9	100.0	100.0	

Source Research findings

4.2.4 TRAINING IN ICT USE

Table 4.2.4 shows that 44.4 % have had ICT training through own initiative and also trained from all the options given respectively, those trained through insets are represented by 11.1% thus indicating a very low input by the institution.

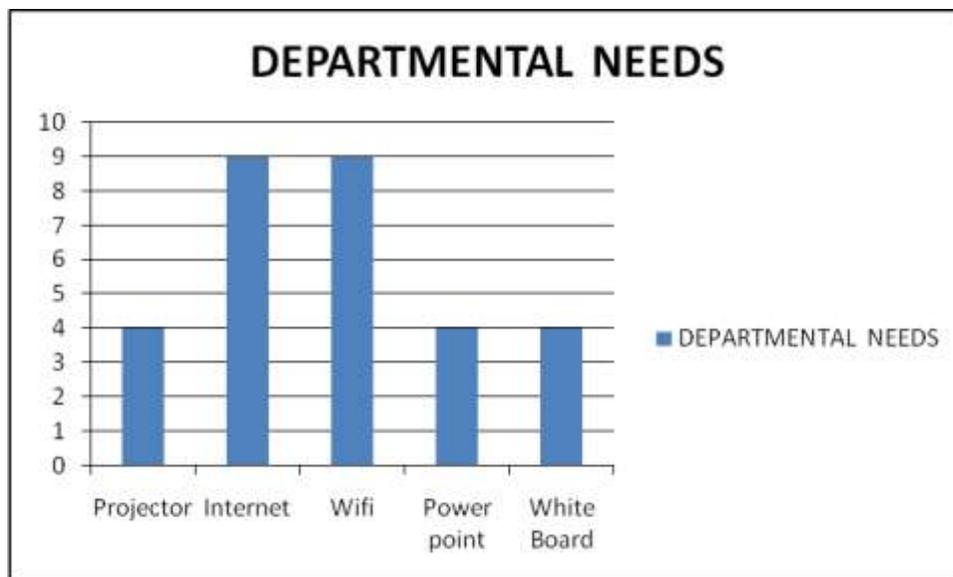
	Training in ICT			
	frequency	percent	Valid %	Cumulative %
Ministry of education	0	0	0	0
Individual initiative	4	44.4	44.4	44.4
Insets	1	11.1	11.1	11.1
More than one	4	44.4	44.4	44.4
Total	9	100.0	100.0	

Source : Research findings

SECTION B:

4.2.5 ICT tools used.

The chart below shows that there is need to have more ICT tools for use in the institution, especially the provision of internet and wi-fi



Source : Research findings

4.2.6 Strategies used to intergrate the use of ICT in management.

Most of the strategies which have been put in place include;

- a. Wi-fi
- b. Internet
- c. CCTV's
- d. Biometric clock in and out
- e. Performance contract strategies 2018/2020
- f. Desk top and laptops used in few departments
- g. Centralized data for students' information.

5.0 Discussion conculsion and recommendation

5.1 Introduction

This gives a brief summary and conclusions drawn from the research.

5.2 Aim of the study

This research was to determine the utilization of ICT in best practice management case study of St Mark's Kigari Primary Teacher Training College (PTTC). The research was conducted using questioners which were given to 9 respondents who were in Top and Middle administrative positions in the institution.

5.3 SUMMARY OF THE FINDINGS

From the findings of this research addressing objective one, the level of ICT use in St. Mark's Kigari PTTC is that in all the departments ICT tools are present ,an indication that they are used for different purposes in the respective departments. The aim of the study was to ascertain the use of ICT in best practice management and it can be seen that 100% of the personnel in administration there have the ICT tools but they generally don't use them for management.44% have indicated that these tools like the Laptop are used for storage of soft notes and use of projectors in actual teaching.

5.4 POLICY RECOMMENDATIONS

The Ministry of Education should try to ensure that the PTTC are clearly given support on how to have a full implementation of best practice management so as to achieve the national goals and also the global goals in use of ICT in management of education.

5.5 SUGGESTIONS FOR FURTHER RESEARCH

From a lot of observation made, various researches have been done on ICT use in the teaching and learning processes, but very little on management of the PTTC in Kenya using ICT. It is very important to incorporate this to curb mismanagement of public money, loosing of

students and teachers information (data) where a lot of paper work is used.

5.6 CONCLUSION OF THE RESEARCH

Best Practice management using ICT in the institution is being put in place especially having the St,Mark's Kigari Performance Contract document 2018/2020,The Strategic plan 2018-2022 which are both management tools and also by the Biometric clock in /out system to ensure punctuality and duty attendance by all staff ,the policy contract document being processed and the continuous improvement on the existing infrastructure to avoid wastage and delays is seen to bring a solution to some management challenges. A private firm has been contracted to ensure smooth communication using the Intercom systems hence consultations are being done effectively. Lastly the provision of Network with a private firm also is in place to ensure Wi-Fi is fully in use for both teachers and students .

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