Information Technology Communication and School Administration

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Annotation. This paper assessed the impact of Information Technology Communication on school administration. Using secondary data collected from both print and online publications. The paper concluded that ICT has influence on school administration. Specifically, ICT influenced school administration-planning, supervision, curriculum development, plant management, decision making, students data management, academic calendar planning, school sport, school examination and school security, community relations, teachers job performance and students' academic performance. Based on this findings, the paper recommended that government should provide adequate funds for school administrators to enable them acquire adequate information communication technology.

Keywords: Information Technology Communication. School administration.

INTRODUCTION

Tapera and Kujeke (2019) defined information and communication technology as a type of technology that supports activities involving information, such as gathering, processing, storing and presenting data. In school setting, for example, ICT can be used to store information such as financial records and transactions and to teach. Khan, Khan, Din, Ismail, Khattak and Jan (2015) stated that ICT refers to technologies that provide access to information through communication devices which may include computers, scanners, printers and internet connection. Ufuophu and Ayobami (2012) noted that ICT includes internet, cable data transmission and computer equipment. Wanjiru (2013) maintained that technology is a term that includes any communication devices or application including cellular phones, television, radio, computers and network hardware and software. World Bank (2002) also viewed ICT resources as consisting of the hardware, software, networks, and media for collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services. ICT can be divided into two components, information and communication infrastructure (ICI) which refers to physical telecommunication systems and networks (cellular, broadcast, cable, satellite, postal) and the services that utilize those (Internet, voice, mail, radio and television) and information technology (IT) that refers to the hardware and software of information collection, storage, processing and presentation. In the context of this study, ICT resources mean the hardware devices and software packages utilized in the process of instructional delivery towards qualitative teaching and learning in business education programme.

According to Ashrafi and Murtaza (2008), modern technology includes products and services such as desktop, computers, laptop, hand-held devices, wired or wireless connectivity, business productivity software, data storage and security, network security and other related protocols. Salisu (2014) refers to ICT infrastructure as the hardware or equipment, software applications, and services associated with ICTs, including telecom networks. United Nations Educational, Scientific and Cultural Organization (2007) defined ICT as forms of technologies that are used to create, store, share, transmit, or exchange information. It defined the concept to include such technologies as radio, television, video, DVD, telephone and network hardware and software as well as services associated with these technologies such as video-conferencing and electronic mail. ICT is often used as an extended synonym for information technology (IT), but is usually a more general term that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), intelligent building management systems and audio-visual systems in modern information technology. ICT consists of all technical means used to handle information and aid communication, such as computer and network hardware, communication middleware and necessary software. In other words, ICT consists of IT, telephony, broadcast media, all types of audio and video processing and transmission and network based control and monitoring functions. Tinio (2003) defined ICTs as a diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information. These technologies include computers, the Internet, broadcasting technologies (radio and television) and telephony. Tinio explained that ICT is used to refer to the merging (convergence) of audio-visual and telephone networks with computer networks through a single cabling or link system. Ogunode, Okwelogu, & Olatunde-Aiyedun,(2021) Ogunode, Garba,.Ajape (2021); Ogunode, Babayo, Jegede, & Abubakar,(2020) noted that ICT is an educational resources that is application to school planning, school supervision, school plant management and school administration.

Akinwumi and Jayeoba (2004) defined school administration as the scientific organization of human and material resources and programs available for education and using them systematically and meticulously to achieve educational goals. School administration is the process by which principles, methods and practices of administration are applied in educational institutions to establish, maintain and develop such institutions in line with the goals of the institutions. School administration specifically deal with coordination of all activities and programme in the institutions towards realization of school goals. School administration is the use of school resources for the achievement of school objectives. .Hennessy, Harrison, and Wamakote, (2010) and Abara, L. N., Ogunode, N. J, & Olatunde-Aiyedun, T. G. (2022).submitted that the school administration is also tasked with the responsibility of overseeing student enrolment in the school, finance availability to sustain the daily school activities, educational resources availability to the school, as well as human labor to facilitate school administration. School administration has to monitor and record all the school activity details manually in the school books and records (Alexis, 2003). Okereke (2008) stated that school administration involves managing, administering the curriculum, teaching, pastoral care, discipline, assessment, evaluation, and examinations. He added as part of school administration: resource allocation, costing and forward planning, staff appraisal, relationship with the community, use of the practical skills necessary for surviving the policies of organization such as decision-making, negotiation, bargaining, communication, conflict handling, and running meetings. These functions are complex and to efficiently and effectively perform them requires the appropriate tools and resources.

Ogunode and Ahaotu, (2021); Ogunode, Ahaotu and Obi- (2021) stated that one of the major objectives of school administration is to integrate and coordinate all the physical and human resources efficiently towards a common goal. The physical resources mainly contribute to building equipment and instructional materials. The human resources that school administration deals with include; students, teachers, supervisors, administrators and parents. The additional elements comprise the various aspects of educational theory and practice including philosophy of education, objectives of education, curriculum, method of teaching, discipline, the role of the teacher, rules and regulations etc. These elements are "parts, made into the whole" and are components brought into a harmonious relationship. So the purpose of school administration is to fulfil different purposes which are known as the objectives.

The objectives of school administration according to Ogunode and Emmanuel (2020) include to: realize the goals of the educational institutions, coordinate the activities and programme of the schools, reduce educational wastage within the educational institution, effectively allocate the limited educational resource for the actualization of the school objective, coordinate the students extra-curriculum programme in the school, and enhance the professional development of teachers and the non-teaching staff. The major objective of school administration is to ensure that the various curriculum of‑educational institutions are implemented as planned. School administration ensures that all teaching and

non-teaching staff are well supervised to do their works effectively. School administration covers the following; school planning, organizing, controlling, coordinating and evaluating performance, decision making, curriculum development and planning, school plant management, students activities, teachers' programme, human capacity development, school-community relationship, academic calendar planning, extra-curriculum programme, school discipline programme, school sport, school examination and school security. School administration involves practical organization and arrangement of school work schedules in effective ways using administrative structures to implement school programme and realize the school objectives whereby posts are created and assigned for the optimal performance of the school. School administration include; decisions making, forecasting, school objectives, programming school activities, budgeting, establishing and interpreting policies, examination, sporting activities, prize-giving/ graduation ceremony, maintenance of school plants, time-tabling, distribution of functions to teachers, disciplinary procedure for both teachers and students, acquisition and distribution of instructional materials for the school among others.

Methodology

Secondary data were used in this study. This study is a review study. The secondary data were collected from online publications and print literatures. The study collected a total of 88 published papers. Content analysis and elimination method were used to reduce the literature collected for the study to a sizeable numbers that cover the subject matter and sub-topics. To get the options for agreement and disagreement on the reviewed literatures percentage statistics of above 50% were regarded accepted while below 50% was regarded as rejected to make decision in the paper. A total number of 53 literatures were finally used for the study.

Impact of ICT on School Administration

There are many investigations that has established the impact of ICT on school administration. Some of the scholars includes; Kukali, Kawasonga & Rabari (2018) looked at principals' leadership in ICT integration in Public Secondary Schools Management (PSSM) in Bungoma County, Kenya. Objective of the study was to assess the impact of principals' leadership in ICT integration in PSSM in Bungoma County. The study revealed high impact on effective registration of Kenya Certificate of Secondary Schools (KCSE) candidates and time management, moderate impact on improved communication with stakeholders, provision of easier environment in record preparation while majority rated enhanced financial accountability no impact.

Ogunshola, (2019), did a study that examined the principals' utilization of information and communication technology (ICT) resources in public and private senior secondary schools in Federal Capital Territory (FCT), Abuja, Nigeria. This study revealed that there was a significant difference between principals' utilization of ICT in public and private senior secondary schools in FCT because the principals in the private senior secondary schools utilized ICT resources more than the principals in the public senior secondary schools. The findings of this study have led the researcher to conclude that, the utilization of ICT resources could enhance effective management of public and private senior secondary schools in FCT.

Another study conducted by Chuktu, & Eton, (2020), examined principals' utilization of information communication and technology (ICT) and secondary school administrative effectiveness in Calabar South Local government area of Cross River State, Nigeria. The result revealed that principals' utilization of ICT for record keeping and principals' utilization of ICT for admission process significantly relate with secondary school administrative effectiveness in Cross River State of Nigeria.

Leo (2020), investigated the utilization of information communications technology (ICT) in the administration/ management of primary education in Enugu State, Nigeria. Following data analysis, findings reveal that ICT is utilized to a little extent in record keeping in primary schools in Enugu State. Also ICT is utilized to a little extent in teaching and learning as well as ensuring security in primary schools in Enugu state. Looking at this study, the similarities with the present study lies on methodology used and population while the differences is on the objectives.

Akinwumi, Babalola, & Alegbeleye, (2021), carried out a study that investigated information and communication technology use on effective administration of senior secondary schools, Lagos. The result of the study shows that ICT use has a significant positive influence on the effective administrations of public senior secondary schools in Lagos state. The study also found that the level of ICT use for administrative purposes in public senior secondary schools in Lagos State was moderate. The ICT devices highly utilized were photocopiers and mobile telephones. While printer, computer systems, social media, e-mails services, internet, and scanners were moderately utilized. However, ICT devices like projectors and smart boards were rarely utilized.

Ojonogecha, (2021), carried out a study that investigated School Administrators Perception and Readiness to use Information and Communication Technology (ICT) Facilities for Record Management in Secondary Schools in Niger State. The study revealed that there is no significant difference in the perception of public and private school administrators towards the use of ICT facilities for record management (t-value=0.149, p-value=0.881 as such p>0.05). Also, there is no significant difference in the readiness of school administrators in public and private secondary schools towards adopting ICT facilities for record management (t-value=0.104, p-value=0.917 as such p>0.05).

Chukwuaguzie, Shehu, & Oigoche, (2021), conducted a study that investigated the influence of information Communication Technology (ICT) Facilities on the administration/management of public secondary schools in Benue State of Nigeria. The findings revealed that e-mail have significant influence on communication and computer facilities have significant influence on keeping of records while overhead projector have significant influence on teaching and learning in public secondary schools management. The findings also revealed the overhead projectors have significant on teaching and learning in schools. Oyier, Odundo, Ganira and Wangui, (2015) said that the uses of ICT enables schools to achieve improvement. In addition to that, Hare (2007) argues that the use of ICT for effective management of secondary schools has led to increase in efficiency and optimal resource utilization. Selwood (2005) argues that the use of ICT in the management of educational institutions is very helpful to ensure management duties are well performed to the maximum.

With the diffusion of ICT innovations in educational institutions Njoku, (2006), which has radically changed how work is done, ICTs have offered tremendous possibilities in improving and developing administrators' professional capability. Nwosu in Atsu (2014) noted that the use of ICT facilities for record-keeping assisted the school administrator to meet the task of school management in the areas of curriculum and instruction, school community relationship and school business operations. But with the use of the computer, which could store up thousands of files in its memory, it only requires the utilization of ICT resources to boost administrative effectiveness.

Okon, Ekaette, and Ameh, (2015) did a study that investigated the relationship between information and communication technology (ICT) utilization and principals' administrative effectiveness in public secondary schools in Akwa Ibom State, Nigeria. The results of the analysis revealed a significant relationship between ICT usage in the communication process and record keeping, and principals' administrative effectiveness. It was recommended that government should reward ICT-compliant administrators in order to stimulate others in ICT usage for more effective administrative ends. Aduwa-Ogiegbaen and Iyam (2005) concluded that computers could help in facilitating management functions by replacing laborious paper work in the filing of school records accumulated over a long period of time. It can further facilitate budgeting and accounting on expenditure and correspondences by reducing so much paper work in schools.

The Study investigated administrators' perspective towards using ICT for effective school management. The results indicated that school administrators have a positive perspective towards the use of ICT tools in effective school management by solving the problem of poor communication in schools and achieving effective planning (Oyedem, 2015).

Abdul Razak & Zohora (2012) conducted a study to investigate the areas of ICT utilization among teachers and principals of Malaysian schools. Quantitative method was used in this study with a representative sample of 260 schoolteachers, teachers-supervisors and principals. The finding of the research demonstrates that 84% of the teachers were not aware of national ICT policy though it exists. Finding shows that most of the schools (80%) do not have ICT policy at the school level though the facilities and equipment of ICT ware available in most Malaysian schools.

Maki (2008) in a paper presented in Cyprus on ICT for administration and management of Cyprus secondary schools argues that the Cyprus Ministry of Education implemented a computer programme developed in Greece in order to manage information in secondary schools in relation to students and teacher's data. Schools in Cyprus use ICT for managerial purposes such as student management, (enrollment, absenteeism, grades, final exams), personnel management (absenteeism), human resource management and timetabling.

The school administration to monitor the enrolment of students in the school, availability of educational resources, human labour and availability of finance to sustain the daily activities of the school. Public schools in Kajiado also have various departments that used ICT for implementation of school programme to achieve high effectiveness (Laaria 2013).

Specifically, Lin et al (2011) discovered ICT usage enhanced personnel and financial management of the schools as well as improved record keeping of all aspects of the schools' activities in Malaysia. ICT deployment in secondary schools in Greece facilitate the general administrative transactions (Saiti and Prokopiadou 2009; Ogunode, Jeged, & Musa, 2020). ICT use increased school efficiency and reduced unnecessary bureaucracy in school administration (Angie and Ugwu, 2013), increased management productivity (Olayemi and Omotayo, 2012; Ogunode 2020), ICT made communication to be cheap, fast and reliable as well as enabled easier retrieval of information (Singh and Munianchi, 2012), enhanced accountability and reduced workloads in management of school accounts (Makwara, 2014; Dada, M. S., Ishaya, Ogunode,2021).

Also, ICT use improved curriculum supervision (Astu, 2014), ICT aid educational planning (Ogunode, Abubakar, Abashi, Ireogbu, Longdet 2021), ICT supported school administration (Wokocha, Babalola and Appah, 2017), ICT aided online printing of students' results, registration for external examinations such as Senior Secondary School Certificate and National Examinations Council (Edefiogho, 2005; Ogunode, Babayo Jegede & Abubakar 2021). ICT increased efficiency in record management, grading systems in schools and tracking students' academic progress (Okon, 2015). Information communication technology use enhances the administrative functions of school leaders and crucial to achieve effective administration of secondary schools in this century (Ogunshola and Abiodun 2017 and Oyedemi 2015). ICT improve curriculum implementation and school security (Dada, M. S., Olowonefa, & Ogunode, 2022), ICT support effective school plant management and ICT improve academic performance and teachers' job performance in schools (Ogunode, Adamu & Ajape 2021). Also, Uwadia (2009); Aslanargu, (2012) and Asogwa (2013) and Ogunode, Jeged, & Musa,(2020); Ogunode, Hammadu, Ahmed & Ojo, (2021); Ogunode, Abubakar, Abashi, IreogbuAb, & Longdeg (2021) concluded that ICT serves as a tool for increased productivity, school administration, school plant management, curriculum development and effective decision-making. ICT aid students' academic performance, teachers job performance and school managem,ent (Ojo, Mark, & Yemi, 2015; Okoro, & Ekpo, 2016; Ojonogecha, 2021).

Findings

The paper seeks to establish to impact of ICT on school administration. From the review papers, the study concluded that ICT has influence on school administration. Specifically, ICT influence school administration-planning, supervision, curriculum development, plant management, decision making, students data management, academic calendar planning, , school sport, school examination and school security, community relations, teachers job performance and students' academic performance. Based on this findings, the paper recommended that government should provide adequate funds for school administrators to enable them acquire adequate information communication technology.

Conclusion and Recommendations

The paper concluded that ICT has influence on school administration. Specifically, ICT influence school administration- school planning, school supervision, curriculum planning and development, plant management, decision making, students data management, academic calendar planning, , school sport, school examination and school security, community relations, teachers job performance and students' academic performance.

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