ICTs' Role in Strengthening Administrative Management in Catholic Secondary Schools of South West Cameroon

Olayode Agnes Eponge, Sr. Prof. Nduku Elizabeth & Prof. Koros Peter

ICTs' Role in Strengthening Administrative Management in Catholic Secondary Schools of South West Cameroon

*[1]Olayode Agnes Eponge, [2]Sr. Prof. Nduku Elizabeth & [3]Prof. Koros Peter

[1]Masters Student, The Catholic University of Eastern Africa

[2] Associate professor, Faculty of Education, The Catholic University of Eastern Africa

[3] Associate professor, Faculty of Education, The Catholic University of Eastern Africa

*Email of the corresponding author: **agnesolayode@gmail.com**

Abstract

Information and Communication Technology use in schools has substantially influenced the efficiency and productivity of school administration. The study focused on how ICT strengthens administrative management in Catholic Secondary schools in the South West Region of Cameroon. The study employment convergent mixed method design and the target population was 22 schools, 22 principals, 22 school Bursars, 308 teachers, 1,440 students, and 756 parents are the number of CSS in the SWR of Cameroon A sample size of 264 comprising six principals, six school accountants, 60 teachers, 168 students, and 24 parents, was selected using stratified sampling, simple random sampling, purposive and snowball sampling. Data was collected using structured questionnaires. Delete a pilot test was conducted to validate the research tools and to test for reliability and validity tests. The study found out that ICT had dramatically facilitated communication, data recording and management, enhanced the quality of teaching and learning, supported curriculum planning, facilitated student assessments, facilitated budgeting, payroll preparation, and accounting processes in schools, and improved the accuracy and efficiency of financial tasks in schools. Despite this positive impact of ICT in schools, the study established challenges associated with the use of ICT that included; lack of ICT infrastructure, inadequate resources, lack of ICT policies, resistance to policies, electrical shortages, and lack of necessary skills and training to use ICT effectively. The study concludes that ICT improved administrative management in schools and recommended training programs for principals, teachers, school accountants, students, and parents on the use of ICT, improvement of infrastructure, increase of resources for ICT tools in schools, and enhanced utilization of ICT in teaching and learning.

Keywords: *ICT, Administrative Management, Efficiency, Catholic Secondary Schools, South West Cameroon*

https://doi.org/10.53819/81018102t4295

1.0 Introduction

Today, there is an increasing faith in the causal relationship between education and Information Communication Technology (ICT). Education is a socially designed process for achieving social skills and personal growth. "Education must enable students to understand the world around them and the talents within it so that they can become well-rounded individuals and active and caring citizens" (Robison, 2019). Therefore, ICT, which is at the heart of all activities in the world today, is inevitable in education, especially in school management. The use of ICT in educational institutions has become a global trend with the potential to improve management processes in schools IIEP-UNESCO (2024). According to the International Social Security Association (ISSA), "Robust and secure data combined with analytics and artificial intelligence (AI) is a powerful tool for scaling and strengthening systems, schemes, and services, demonstrating how ICT can improve the storage of information. According to UNESCO (2023), ICT promotes a collaborative and open learning environment by enabling real-time access to educational resources, grades, and progress reports. This allows administrators, teachers, students, and parents to effectively support students with timely access to relevant information (iDream Education, 2023). iDream Education (2023) emphasizes that digital platforms and learning management systems provide immediate feedback and transparent communication. Thus, improving engagement, teacher-child interaction, and online communication improves family-school partnerships, ultimately leading to more vital collaboration and better student outcomes (Hsu & Chen, 2023).

Data analytics in education promotes personalized learning, allowing teachers to adapt their teaching methods to students' needs. This allows us to evaluate and improve curriculum and teaching strategies and ensure they meet current societal standards. It also provides adequate information to assist in strategic planning and effective resource allocation to increase student achievement. In addition, monitoring key performance indicators through data analysis helps agencies assess progress, identify areas for improvement, and make reasonable adjustments to optimize operations (Classter, 2023). With the introduction of ICT, databases, student information systems, and learning and management systems have become standard tools school leaders use to store, organize, and retrieve data (Sheninger, 2021). ICT systems provide real-time updates, data visualization, and advanced reporting capabilities, enabling administrators to make data-driven decisions and effectively monitor student progress. It makes a massive difference in the running of a school when different heads of departments can do their jobs efficiently and confidently without any interruption. In such situations, conflicts or misunderstandings are less likely to occur.

Traditionally, manual and time-consuming tasks can now be automated, reducing the administrative burden on school staff. For example, you can optimize class times, manage the work of teachers and students, and coordinate resources using specially designed software applications. ICT can support the efficient management of financial transactions, including tax collection, payroll processing, and budgeting. These advances allow administrators to allocate time and resources more efficiently, focusing on strategic planning and educational leadership (Dzandu et al., 2021). Even without teachers, school administrators can check how many students are enrolled or check students' average weekly attendance. Similarly, you can check your institution's financial situation without an accountant's help. This ensures complete transparency and effective control of school activities. School management can integrate different parts of the school, allowing them to quickly make the right decisions, assign various responsibilities, and gather the necessary feedback.

Getting all the relevant data at the right time makes your work easier by streamlining processes and saving time. In most developing countries, most institutions have not yet adopted technology, and some are making slow progress in using ICT (Isaacs & Hollow, 2020). ICT is rapidly changing various aspects of our daily lives, including education. In recent years, more attention has been paid to integrating ICT into school management systems to increase efficiency, streamline processes, and improve overall educational performance (Harish & Mishra, 2022). The use of ICT in school management can fundamentally change traditional administrative practices and provide new opportunities for data management, communication, decision-making, and collaboration.

ICT has also transformed communication in educational institutions. Previously, communication between administrators, teachers, students, and parents often relied on physical contact, phone calls, and face-to-face meetings. These methods were time-consuming, ineffective, and limited in scope. Today, digital communication platforms such as email, messaging applications, and online portals have become the norm, allowing quick and easy communication between stakeholders (Smith, 2023). These technology channels allow administrators to effectively disseminate information, collaborate with teachers, and engage parents in their children's educational journey.

High schools in Brooklyn and Queens, Massachusetts, USA, use advanced student information systems such as Schoolytics, QuickSchools, iGradePlus, and SIS software to manage student data effectively. These systems simplify scheduling, registration, and attendance, help teachers identify learning gaps related to student performance and grades, and provide accurate, real-time information to teachers and administrators (Smith & Johnson, 2020). Learning management system platforms are widely used for course management, online learning, and student-teacher collaboration. These systems improve the delivery of educational content and promote communication between teachers and students (Brown & Davis, 2019).

A World Bank report titled "Kenya's Economic Renewal: Accelerating Kenya's Digital Economy," published by the World Bank Group in October 2019, noted that the use of mobile technologies for schools, parents, and parent-to-parent communication has increased in Kenya. Short messaging service (SMS) platforms and mobile applications can facilitate better collaboration between parents and teachers by quickly transmitting information such as exam schedules, attendance, and academic progress. As digital connectivity increases, schools in Kenya are increasingly using e-learning platforms. These platforms provide students with educational resources and allow teachers to create interactive and engaging lessons that foster a dynamic learning environment (Kiptoo & Mwangi, 2020).

ICT is also utilized in schools for financial management. Digital payment systems and accounting software help streamline financial processes, ensuring transparency and accountability in allocating and utilizing funds (Mutisya & Ng'ang'a, 2019). Cameroon has implemented ICT in the administration of exams, reducing manual processes and minimizing errors. Online registration, digital exam papers, and automated grading systems provide a more efficient and secure examination process (UNESCO, 2022). In response to global trends, Cameroon is increasingly embracing online learning platforms. These platforms enhance access to educational resources, especially in remote areas, and provide opportunities for collaborative learning (Fonkou & Tchouakeu, 2022). The industry organization representing the interests of mobile network operators worldwide, GSMA (2021), reports that ICT has been employed to improve administrative efficiency in Cameroon's schools.

Like their counterparts worldwide, Catholic secondary schools in the South West Region of Cameroon face the challenge of adapting to the rapidly evolving landscape of technology to improve their management functions. Embracing ICT in school management can significantly improve efficiency, communication, and effectiveness. Historically, Catholic schools have played a crucial role in providing quality education while instilling moral and ethical values in students. However, to uphold these principles, schools must also align with contemporary tools and methods that facilitate streamlined management processes (Martin, 2020). In the South West Region of Cameroon, these institutions have contributed to students' holistic development and improved the educational sector. However, the changing dynamics of the modern world necessitate re-evaluating traditional management practices within these schools (Smith & Brown, 2019).

The South West Region of Cameroon is characterized by its cultural diversity and socioeconomic challenges, which pose unique demands on educational institutions. Efficient and effective school management is essential for addressing these challenges and ensuring a conducive learning environment. This is where the use of ICT comes into play. The advent of ICT brings forth opportunities to streamline management processes, enhance communication, curriculum instruction, staff, and student discipline, and improve overall efficiency in Catholic secondary schools. Automation of tasks, digitization of records, and implementation of modern communication tools can significantly contribute to the smooth functioning of these institutions (Classter, 2024).

The Catholic secondary schools are run hierarchically, with the diocese bishop as the proprietor, who appoints a diocesan education secretary and the school manager (Principal). There is a vice-principal, school chaplain, discipline master, school counselor, heads of departments, teachers, school prefects, and class prefects. Each post of responsibility has its job description. The Parents Teacher Association (PTA) plays a vital role in the school's running. All these agents can be fully effective, efficient, and productive with the uptake of ICT in school management. It has also aided in ongoing remote and fresh creative learning, offering school management a fantastic boost (Chen, 2022). By establishing online connections with specialists and funders, the school manager may be able to expand the school's needs with little time, energy, and cost (Patel, 2022).

Furthermore, there is often a lack of comprehensive training and professional development programs that specifically address the integration of ICT into managerial practices. This lack of training hampers the ability of school managers to fully leverage the potential benefits of ICT in their daily tasks. The prevailing organizational culture, attitudes toward ICT, and leadership styles play crucial roles in shaping the adoption and implementation of ICT (Menon & Ghosh, 2019). The successful uptake of ICT in school management requires a comprehensive and strategic approach. It involves identifying the specific needs and challenges of the educational institution, selecting appropriate ICT solutions, providing adequate training and support to staff members, and addressing any potential barriers to adoption (Wong, 2023).

1.1 Statement of the Problem

School managers face many hurdles as they manage their jobs with difficulties. Catholic secondary schools in the South West Region have limited ICT tools and systems in their management practices that could help address these challenges. The Regional Delegation of Secondary Education, Parents, and Society is raising concerns about students' poor performance due to the insufficient utilization of technology, which impedes the efficiency and effectiveness of management processes. The reverse will be confirmed with ICT use.

The influence of ICT on administrative management was conducted in the United States by Fullan, 2022 investigating ICT integration in various administrative tasks. The data analysis findings revealed that using ICT in administrative management increased efficiency, improved communication, enhanced data accuracy, and streamlined administrative processes. In Uganda, the impact of ICT on administrative management was investigated by Lutalo, & Bisaso (2020). Results from data analysis show that using ICT in educational institutions significantly impacted managerial processes in the schools (Wemba, 2020). An appraisal of utilizing ICT in education management information systems (EMIS) and its effects on the management of Cameroon secondary schools was investigated. It was found that ICT facilities in EMIS significantly enhance effective school administrative management.

The height of the problem of this study is the trigger of the concern of the school's stakeholders, leading to problems encountered like loss of records, poor communication, Poor accountability, and poor instructional processes due to the manual recording of documents, poor internet services, and inadequate use of ICT tools. If ICT is not adequately used in these schools, they will not be engaged in international collaboration and will not share best practices. Students will not be exposed to diverse perspectives that enhance educational experiences in a globally connected environment. Thus, they will be disconnected entirely from global education. Therefore, the study focused on how ICT strengthens administrative management in Catholic Secondary schools in the South West Region of Cameroon.

1.2 Research Question

How does ICT impact the administrative operations in Catholic Secondary Schools in the South West Region of Cameroon?

2.1 Theoretical Framework

The study was informed by Diffusion of Innovations Theory and Luther Gulick's Administrative Principles Theory.

2.1.1 The Diffusion of Innovations Theory

Diffusion of Innovations Theory was developed by Rogers (1962). The theory states that innovation is communicated through specific channels over time among members of a social system. It categorizes adopters of innovations into five groups: Innovators, early adopters, early majority, late majority, and laggards. The Diffusion of Innovations Theory explains how new ideas, technologies, or practices are adopted and spread within a social system. Rogers states that adoption rates are influenced by the characteristics of the innovation, the people, and the social systems through which the innovation spreads (Rogers, 2003). Diffusion is communicating an innovation through a specific population over time. The idea of using ICT in school management can spread and communicate better using this theory. This theory emphasizes the role of communication, social networks, and perceived attributes of innovations in shaping the diffusion process. In the context of ICT use in school management, this theory helps us understand the different stages of adoption and the factors that influence it. The successful adoption and integration of ICT in school management have the potential to enhance efficiency, communication, and decision-making processes.

This theory has some disadvantages to this study, like Opposition to Change, where a few stakeholders might oppose implementing new ICT. The Diffusion of Innovations Theory recognizes that not everyone adopts innovations at the same rate. It can be challenging to overcome

resistance, especially when dealing with laggards and the late majority. Schools may be pressured to keep up with the quickly advancing ICT, and the diffusion process can take some time (Swan, 2023). Those anxious to see results right away may become frustrated and impatient. To mitigate the identified weaknesses in the Diffusion of Innovations Theory, targeted strategies were employed, such as involving stakeholders early in the decision-making process to reduce resistance. Tailored training and capacity-building programs were introduced to address the challenges of resource constraints.

In this context, innovations refer to new ICTs or tools that have the provide positive result to managerial processes. These innovations can include software applications, digital platforms, communication tools, and data management systems, which will be used for better staff and student management, better communication and improved collaboration, and effective data formation and security. "Innovations are the vehicles through which organizations, schools, and individuals can improve their managerial practices and achieve their goals" (Christensen, 2022).

2.1.2 Luther Gulick's Administrative Principles Theory

Luther Gulick's Administrative Principles Theory, often referred to as the "POSDCORB" theory, is a management framework created to delineate the fundamental functions of administration. Around the beginning of the 20th century, Henri Fayol created a set of 14 management principles. According to his theory, management consists of six tasks: forecasting, planning, organizing, commanding, coordinating, and managing. Gulick created his administrative concept in 1937 from Fayol's work using the acronym POSDCORB, which refers to Planning, Organization, Staffing, Directing, Coordinating, Reporting, and Budgeting (Ott & Parkes, 2019). This theory matches this study because POSDCORB can be effectively done with the use of ICT in the managerial processes of the school (Pragati, 2023). In collaboration with Lyndall Urwick, Gulick introduced this theory to conceptualize the activities inherent in organizational management.

To give an organized approach to the study of ICT adoption in school management, Gulick's administrative management Theory offers a systematic framework that corresponds with the fundamental components of staffing, planning, organizing, directing, coordinating, reporting, and budgeting. Creating a strategic vision, mission, and plan for improving the school management. Gulick's idea of giving administrative tasks a distinct direction is consistent with planning. His organizing principle strongly emphasizes the necessity of an orderly organization. ICT is guaranteed to be effortlessly incorporated into managerial procedures by a well-organized structure (Stillman, 2019). Staffing, the process of assigning the appropriate individuals to the appropriate positions, is crucial, especially when well-trained individuals possess the abilities needed to handle and maintain the use of ICT. Directing entails directing and overseeing staff members' actions to meet organizational goals, which is vital to improving school management through ICT.
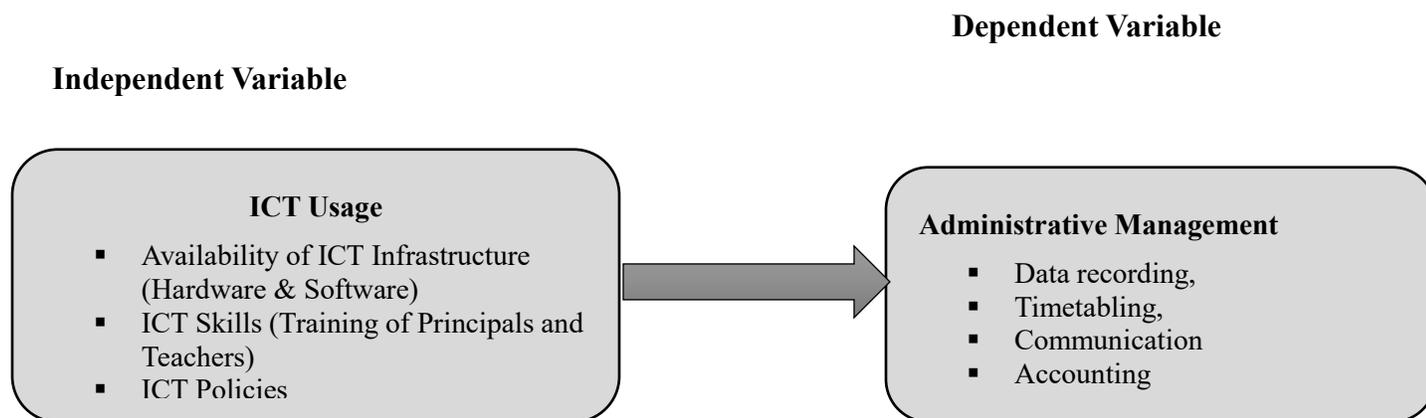
Some of the disadvantages of this theory for this study are that setting up and keeping up ICT infrastructure can be costly. Schools may find paying for the initial setup and continuing upkeep challenging, particularly those with tight budgets. Cyber security risks are increasing as schools depend more on digital technologies. Sensitive student or staff information can be accessed without authorization, emphasizing the significance of solid security procedures. The POSDCORB framework offers a systematic approach to comprehending administration functions within school management. School managers can effectively plan, organize, and coordinate activities to achieve desired outcomes by focusing on these seven key elements. POSDCORB is inevitable in the duties

of a school administrator. ICT plays a crucial role in school management in the modern educational landscape. Educational leaders may create comprehensive strategies to guarantee the successful integration of ICT and, in turn, improve the efficacy and efficiency of school managerial procedures by implementing these concepts. When using ICT is part of the planning process, it entails establishing objectives, pinpointing the precise managerial functions that ICT can enhance, and putting together an implementation schedule (Meier, 2022).

2.2 Conceptual Framework

The conceptual framework analyses several variables and contexts. It is used to indicate how the ideas relate and their relationship to the research study. It is illustrated in Figure 1.

Figure 1: Conceptual Framework

Dependent Variable

Independent Variable

ICT Usage
- Availability of ICT Infrastructure (Hardware & Software)
- ICT Skills (Training of Principals and Teachers)
- ICT Policies

Administrative Management
- Data recording,
- Timetabling,
- Communication
- Accounting

Source: Researcher (2024)

2.3 Literature Review

Szyszka and Kochanowicz (2022) research the Digitalisation of Schools from the Perspective of Teachers' Opinions and Experiences on the attitudes towards New Media and Support from Management of ICT Use in Education among teachers from Poland. They find out the main factors that influence digital teaching aids to enhance school management. A questionnaire was used for quantitative research. The instruments were administered to participants physically. Using only the quantitative design may have ignored or oversimplified the participants' meanings, emotions, motivations, and experiences. Findings revealed that teachers mostly employ interactive whiteboards and virtual systems (registers), while educational software and podcasts were utilized for foreign language learning. The study concluded that teachers predominantly use interactive whiteboards and virtual systems for administrative tasks, while educational software and podcasts are mainly employed for foreign language instruction. However, the exclusive use of a quantitative approach may have limited the exploration of teachers' deeper experiences and perceptions regarding the integration of ICT in education.

Zhang and Koshmanova (2020) conducted a comparative study of school principal experiences, recontextualizing best practices of American school principals using technology in China. This study investigated how principals in China and America improved educational quality. Reframing principals' experiences with technology innovation and communication was challenging for application in Chinese educational settings. The research aimed to understand how school administrators were trained to use technology in their schools. The goal was to improve school

principals' managerial skills by emphasizing qualitative methods. The findings indicated that school improvements created an encouraging atmosphere for student achievement and teacher training in both China and the USA. The study focused on China and the USA, where principals were trained in technology, innovation, and communication using qualitative data collection techniques, hence contextual gap. This study was conducted in the Catholic Schools of the Southwest Region of Cameroon using a mixed-design method to collect more in-depth information.

Chilufya (2022) conducted studies on Understanding the sources, application, and enhancement of ICT applications in managing selected secondary schools in the Lusaka district in Zambia. The study aimed to explore how the sources and application of ICT enhance management in secondary schools within the District of Lusaka. It sought to identify the specific ICT resources that school administrators have adopted for performing their daily responsibilities effectively. Data was collected using an exploratory mixed-method design. Results indicated that ICT was utilized and effectively incorporated into schools, especially for school administration functions. The primary uses of ICT were for planning, typing assessments, student record keeping, communication, and report writing. The study also found that adding more computers to the existing fleet of secondary school computers and giving staff members free WIFI contributed to improving ICT applications in secondary school management. The study concluded that enhancing ICT infrastructure and access is essential for further improving administrative operation efficiency.

Research Methodology

The study employed a cross-sectional research design meant to collect data from participants at a single point in time over a short period and allows the researcher to analyze and describe the characteristics, behaviours, or attitudes of the population under study (Menard, 2022). The target population of this study comprised 22 schools, 22 principals, 22 school Bursars, 308 teachers, 1,440 students, and 756 parents are the number of CSS in the SWR of Cameroon, the total number of principals, bursars, teachers, students, and parents sourced from the catholic education secretariats of the three dioceses in the southwest region. The study included principals, school accountants (bursar), teachers, students, and parents because these groups directly interact with and are affected by ICT in Catholic Secondary Schools. Principals and bursars provide administrative insights, teachers focus on instructional impacts, while students and parents experience the practical implications and benefits of ICT. Together, they offer a comprehensive perspective on ICT's role and challenges in school management. The study employed a combination of probability and non-probability sampling techniques. Simple random and stratified random sampling were used for probability sampling, while purposive and snowball sampling were applied for non-probability sampling. The secondary schools were categorized into four strata: mixed-day schools, mixed boarding schools, and single-gender schools (boys' and girls' schools). In the South West Region of Cameroon, there were 22 Catholic secondary schools, consisting of three girls' boarding schools, three boys' boarding schools, 11 mixed boarding schools, and five mixed day schools. The study sampled six schools, including one boys' boarding school, one girls' boarding school, two mixed-gender boarding schools, and two mixed-gender day schools.

A total of 60 teachers out of 308 from Catholic secondary schools in the region were selected for the study. Schools with larger staff numbers contributed more participants, with staff members randomly selected based on gender. Additionally, 168 students were chosen through simple random sampling, with 28 students from each school 4 from each class (Form One to Upper Sixth)

being randomly selected to participate in the study. This method was suitable because students were homogeneous. A total of 24 parents were sampled using the snowball. Snowball sampling is a non-probability sampling technique where existing study subjects recruit future subjects from their acquaintances. In this study, the researcher initially contacted a few parents and asked them to refer other parents who might be willing to participate. This process continued as referred parents suggested additional participants, eventually resulting in a total sample of 24 parents. By making use of existing networks, the researcher was able to gather a diverse set of parental perspectives for the study.

The researcher used a set of questionnaires. The questionnaires were organized on a Likert scale, open-ended and close-ended types of questions. The data collected from the questionnaires were reviewed, organized according to the research questions, and inputted into SPSS (Statistical Package for Social Sciences) version 20 for analysis. Descriptive statistics, such as percentages and frequencies, were utilized to summarize the data, while inferential statistics, specifically the Chi-square test, were employed to test the study's hypotheses. Quantitative data were analyzed using both descriptive and inferential statistical techniques. The researcher familiarized with the data collected, generated initial codes of the data collected, searched and placed the data in themes, reviewed the themes, defined the themes, and finally wrote a report on the data collected. Recommendations and conclusions were presented based on the results obtained from the research questions.

Findings and Discussion

The questionnaires were distributed to six principals, sixty teachers, six accountants, and one hundred and sixty-eight students in catholic secondary schools in the southwest region of Cameroon. Response rate results revealed that the questionnaires distributed to six principals, sixty teachers, six accountants, and one hundred and sixty-eight student participants were filled and collected, thus constituting a 100% return rate. A 100% return rate was considered appropriate in this study, allowing the data analysis to proceed.

The demographic results for principals revealed that the majority, 66.7%, were over 40 years old, while 33.3% were between 31 and 40 years. There was no significant difference in ICT usage between these age groups, suggesting that age did not play a major role in the adoption of ICT for school management. Gender distribution among principals was balanced, with an equal representation of male and female leaders (50% each), reflecting gender diversity in school leadership. In terms of education, most principals (66.7%) held a bachelor's degree, while 33.3% had a master's degree, indicating that higher education levels were common among school leaders. All principals had between 1 and 5 years of experience, which appeared to influence their ICT adoption in managing schools. Among teachers, the majority (45%) were aged between 25-35 years, with females making up 55% of the teaching workforce, indicating gender diversity in the teaching staff. Most teachers (71.7%) had a bachelor's degree, showcasing a well-educated teaching body. Additionally, 35% of teachers had less than 5 years of experience, while another 35% had over 15 years of experience, representing a blend of early-career and seasoned professionals. A significant number of teachers (68.3%) also held class teacher roles, which likely impacted their engagement with ICT in managing classrooms.

For school accountants, 50% were aged between 25-35 years, and all were female, highlighting gender representation in the accounting roles. Half of the accountants had only a high school education, while the rest had either HND certificates (33.3%) or a first degree (16.7%). Most

accountants had 6-10 years of experience, reflecting a moderate level of professional experience in their roles. Regarding students, the majority (38.7%) were over 17 years old, with 60.8% of the student population being female, indicating a higher female representation. A large proportion of students (41.1%) were in lower to upper sixth classes, and 54.8% had been attending the school for 1-3 years, providing valuable insights into how students of different age groups and class levels interacted with ICT for school-related activities.

Effect of ICT on Administrative Management

The study sought to determine the effect of ICT on administrative management in catholic secondary schools in the South West Region of Cameroon. Principals are school managers who spend long, quality time with teachers, students, and supporting staff. They are, therefore, aware of the effects of ICT on the administrative management of their schools and were hence asked to rate the effect of ICT on their school; teachers and school accountants were also asked to rate the effect of ICT on their schools. Findings from principals are presented in the following Tables 1.

Table 1

Principals' responses on Administrative Management

Effect of ICT on administrative management	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The ICT infrastructure in our school is up-to-date.	1(16.7%)	-	-	-	5(83.3%)
ICT resources are adequately used to support administrative tasks.	-	1(16.7%)	-	5(83.3%)	-
I am skilled in using all ICT tools	-	-	-	4(66.7%)	2(33.3%)
Our school effectively uses ICT tools for communication among staff members.	-	-	6(100%)	-	-
Our school effectively uses ICT tools for communication with students.	-	-	6(100%)	-	-
Our school effectively uses ICT tools for communication with parents	-	-	-	-	6(100%)
ICT plays a significant role in facilitating students' registration processes.	-	-	-	6(100%)	-
The use of ICT has facilitated data recording processes within our school administration.	-	-	-	6(100%)	-
ICT tools are used in Timetabling in my school.	-	-	-	6(100%)	-
ICT has improved the overall administrative management in your school.	-	-	-	1(16.7%)	5(83.3%)

Source: Field Data, 2024

The majority of the principals, 5 (83.3%), agreed that the ICT infrastructure in their schools is up-The findings indicate a strong consensus among the majority of principals regarding the effectiveness of ICT infrastructure and its contribution to school management. Most (83.3%) of the principals agreed that the ICT infrastructure in their schools is up-to-date, suggesting that most schools have made efforts to maintain and modernize their technological resources. However, the minority (16.7%) who disagreed may point to disparities in resource allocation or specific challenges faced by some schools in keeping their systems current. This indicates a potential area for further research, focusing on the barriers preventing some schools from upgrading their ICT infrastructure. The regular updating of ICT software, with most schools running Windows 7 or 8, underscores the importance placed on keeping systems functional and relevant for daily operations. While these versions are slightly outdated, their continued use indicates a practical approach to maintaining functionality within the constraints of available resources.

Regarding the utilization of ICT resources for administrative tasks, the majority of principals (83.3%) confirmed adequate usage, aligning with findings from similar studies where ICT has been instrumental in improving the efficiency of school operations such as communication, student record management, and report generation. This suggests that in most cases, schools are leveraging technology effectively to streamline administrative processes. However, the 16.7% who disagreed might be experiencing limitations in ICT integration, possibly due to insufficient training, outdated systems, or limited access to necessary tools. The data on principals' skills in using ICT tools reveals that while two-thirds (66.7%) feel confident in their abilities, a third (33.3%) expressed a lack of proficiency. This indicates a need for further training or support to ensure all school leaders can fully utilize available technology, maximizing its potential in school management.

All principals (100%) agreed on the significant role ICT has played in improving communication with parents and facilitating administrative functions such as student registration, data recording, and timetabling. This finding aligns with the growing recognition of ICT as a crucial element in enhancing communication and operational efficiency within educational institutions. Moreover, 83.3% of the principals agreed that ICT has significantly improved overall administrative management in their schools. This high percentage suggests that ICT integration is largely seen as beneficial, but the 16.7% of dissenting opinions may indicate ongoing challenges in fully implementing or accessing ICT tools across all schools. These findings are consistent with the assertions by Qaddumi & Qashmar (2021) that, there is less influence of ICT due to un-updated ICT infrastructure in schools. The positive response from principals and teachers that their schools' ICT infrastructure is up-to-date concurs with Bariu's (2020) findings that there has been up-to-date ICT infrastructure in schools for administrative purposes. However, there is a need for new ICT skills.

Findings from teachers are presented in the following Table 2.

Table 2

Teachers' responses on Administrative Management

Effect of ICT on administrative management	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The ICT infrastructure in our school is up-to-date.	2(3.3%)	-	25(41.7%)	2(3.3%)	31(51.7%)
ICT resources are adequately used to support administrative tasks.	9(15%)	20(33.3%)	16(26.7%)	10(16.7%)	5(8.3%)
I am skilled in using all ICT tools	2(3.3%)	4(6.7%)	2(3.3%)	31(51.7%)	21(35%)
Our school effectively uses ICT tools for communication among staff members.	2(3.3%)	3(5%)	13(21.7%)	27(45%)	15(25%)
Our school effectively uses ICT tools for communication with students.	-	6(10%)	16(26.7%)	23(38.3%)	15(25%)
Our school effectively uses ICT tools for communication with parents	-	13(21.7%)	11(18.3%)	27(45%)	9(15%)
ICT plays a significant role in facilitating students' registration processes.	2(3.3%)	10(16.7%)	9(15%)	28(46.7%)	9(15%)
The use of ICT has facilitated data recording processes within our school administration.	4(6.6%)	6(10%)	9(15%)	36(60%)	5(8.3%)
ICT tools are used in Timetabling in my school.	2(3.3%)	6(10%)	17(28.3%)	28(46.7)	7(11.7%)
ICT has improved the overall administrative management in your school.	2(3.3%)	10(16.7%)	15(25%)	18(30%)	15(25%)

Source: Field Data, 2024

Results in Table 2 depicts that majority (55%) agreed that the ICT infrastructure in their schools is up-to-date, indicating that over half of the teachers are satisfied with the technological systems in place. However, a good number who were undecided (41.7%) reflects uncertainty or lack of awareness about the state of ICT infrastructure, suggesting that not all teachers are directly engaged with or informed about these resources. The small minority (3.3%) who disagreed could point to disparities in access or the presence of outdated technology in certain areas. When assessing the adequate use of ICT for administrative tasks, the results indicate mixed opinions. Only 25% of teachers agreed that ICT resources are adequately utilized for these purposes, while 33.3% disagreed, and a considerable 41.7% were undecided. This suggests a significant gap in either the effective implementation of ICT in administrative tasks or a lack of clear communication about how these tools are being used. The high number of undecided responses implies that many teachers may not be directly involved in administrative functions or lack the knowledge to assess ICT's role in such tasks.

In terms of ICT skills, majority of teachers (86.7%) indicated they are skilled in using ICT tools, which shows a high level of digital literacy among the teaching staff. This is a positive indicator for the integration of technology in educational and administrative processes. The minority (6.7%) who disagreed may benefit from further training to ensure all teachers are comfortable using available ICT resources. Regarding communication, 70% of teachers agreed that ICT is effectively used for communication among staff, with 63.3% agreeing it was effective for communicating with students, and 60% stating it was effective for communicating with parents. These results indicates that ICT has positively influenced communication within the school environment, although there is still room for improvement, particularly in parent-teacher communication, where 40% of teachers did not fully agree on its effectiveness.

The use of ICT for facilitating student registration was agreed upon by 61.7% of teachers, while 16.7% disagreed, suggesting that most schools have successfully implemented ICT systems for this function, but some may still face challenges or limitations. Similarly, 68.3% of teachers agreed that ICT has greatly facilitated data recording, while 10% disagreed, indicating that ICT is generally perceived as beneficial for handling administrative data. Finally, when it comes to overall administrative management, 55% of teachers acknowledged that ICT has improved these processes, though a notable 20% disagreed, and 25% were neutral. This shows that while the majority see improvements in school administration due to ICT, a significant portion of teachers remains either unconvinced or indifferent, which points to inconsistencies in how ICT is implemented or communicated across different schools. These findings are consistent with Perifanou et al. (2021), who determined that teachers have not been using ICT resources adequately and need to learn ICT skills to help them in teaching and other administrative duties. Therefore, teachers must adequately use ICT resources to improve their administrative activities and be at the principal and accountant agreement level.

Findings from accountants are presented in the following Tables 3.

Table 3

School Accountants Responses on Administrative Management

Effect of ICT on administrative management	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The ICT infrastructure in our school is up-to-date.	3(50%)	-	1(16.7%)	2(33.3%)	-
ICT resources are adequately used to support administrative tasks.	-	1(16.7%)	1(16.7%)	4(66.7%)	-
I am skilled in using all ICT tools	2(33.3%)	1(16.7%)	-	3(50%)	-
Our school effectively uses ICT tools for communication among staff members.	3(50%)	1(16.7%)	1(16.7%)	-	1(16.7%)
Our school effectively uses ICT tools for communication with students.	-	-	-	1(16.7%)	5(83.3%)
Our school effectively uses ICT tools for communication with parents.	-	-	1(16.7%)	5(83.3%)	-
ICT plays a significant role in facilitating students' registration processes.	-	-	-	-	6(100%)
The use of ICT has facilitated data recording processes within our school administration.	-	-	-	1(16.7%)	5(83.3%)
ICT tools are used in Timetabling in my school.	-	1(16.7%)	-	-	5(83.3%)
ICT has improved the overall administrative management in your school.	-	-	1(16.7%)	-	5(83.3%)

Source: Field Data, 2024

The findings from the accountants' responses present a divided view regarding the state of ICT infrastructure in schools. Half of the accountants (50%) disagreed that the ICT infrastructure in their schools is up-to-date, suggesting that a significant portion of them find the technology inadequate or outdated. This reflects a need for potential upgrades or improvements in the technological systems supporting financial and administrative functions. Despite the concerns about infrastructure, the majority of accountants (66.7%) agreed that ICT resources are adequately used for administrative tasks. This indicates that, regardless of the state of the infrastructure, ICT tools are being effectively utilized to carry out administrative duties, such as financial management, planning, and reporting. When it comes to ICT skills, half of the accountants (50%) stated that they are skilled in using ICT tools. A notable finding is that more than half of the accountants (66.7%) indicated that ICT tools have not been effectively used for communication among staff, suggesting that internal communication systems may need improvement. However, a large majority (83.3%) agreed that ICT has improved communication with parents, highlighting that external communication, particularly between schools and parents, has greatly benefited from technological integration.

All accountants agreed that ICT had significantly facilitated student registration, as well as data recording and timetabling processes. This consensus suggests that ICT tools are highly effective in streamlining these specific administrative functions, providing substantial value in managing

student-related information. Finally, a strong majority (83.3%) of accountants agreed that ICT had improved overall administrative management in their schools. This shows that, despite some concerns over infrastructure and staff communication, most accountants recognize the significant role that ICT plays in enhancing the efficiency and effectiveness of school administration. These findings also agrees with Håkansson's (2019) findings that almost all principals and teachers have a high level of skills in using computers. Therefore, principals, teachers, and accountants have shown that they are aware of the effect of ICT on the administrative management of their schools. These findings on the effects of ICT use in administrative management concur with Turnbull et al. (2020) findings that ICT use has achieved school administrative management.

Findings from students are presented in the following Tables 4.

Table 4

Students Responses on Administrative Management

Response on the effect of ICT on administrative management	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
There is ICT infrastructure in our school used for administrative purposes	-	-	10(6%)	53(31.5%)	105(62.5%)
I am skilled in using all ICT tools	-	-	20(11.9%)	84(50%)	64(38.1%)
Our school effectively uses ICT tools for communication among staff members.	-	-	29(17.3%)	65(38.7%)	74(44%)
Our school effectively uses ICT tools for communication to students.	-	1(0.6%)	24(14.3%)	77(45.8%)	66(39.3%)
Our school effectively uses ICT tools for communication to parents	-	3(1.8%)	16(9.5%)	74(44%)	75(44.6%)
ICT systems are integrated into our school's management processes to enhance efficiency.	-	1(0.6%)	29(17.3%)	64(38.1%)	74(44%)
ICT plays a significant role in facilitating students' registration processes.	-	3(1.8%)	25(14.9%)	65(38.9%)	70(41.7%)
ICT plays a significant role in facilitating student enrolment processes.	1(0.6%)	6(3.6%)	47(28%)	55(32.7%)	50(29.8%)
ICT tools are used in Timetabling in my school.	4(2.4%)	-	23(13.7%)	68(40.5%)	74(44%)
I can retrieve my data record from the first day I was enrolled in this school till date.	-	1(0.6%)	14(8.3%)	78(46.4%)	75(44.6%)
ICT has facilitated better parent-school communication.	-	1(0.6%)	17(10.1%)	88(52.4%)	62(36.9%)

Source: Field Data, 2024

The findings from the students' responses reveal a strong consensus regarding the role of ICT in their schools. Majority of students (94%) indicated that ICT infrastructure is primarily used for administrative purposes, demonstrating that most students perceive ICT as a key component in school management processes. This suggests that the technology is well-integrated into administrative functions that affect their daily experiences. A large proportion of students (85.1%) agreed that ICT tools were effectively used for communication with them, reflecting that the systems in place for teacher-student communication are functioning efficiently. Additionally, 88.6% of students indicated that ICT had improved communication with their parents, highlighting the positive role that technology plays in keeping families informed about school activities and their children's progress. Regarding student registration, 80.4% of students agreed that ICT had significantly facilitated the process, which shows that the digital systems for registration are largely seen as efficient and user-friendly. The small percentage (2.4%) who disagreed may reflect isolated issues or exceptions, but overall, the majority view suggests smooth integration of ICT in this area.

Most students (91%) also agreed that ICT had greatly facilitated data recording and timetabling in their schools. This further underscores the importance of ICT in managing and organizing key administrative functions that impact students' academic experiences, from maintaining accurate records to scheduling. Most of the students recognize the significant impact of ICT on administrative processes, communication, and data management in their schools. This strong approval from students suggests that ICT plays a crucial role in enhancing both administrative efficiency and communication within the school community. The study findings are consistent with Etomes and Molua's (2019) findings that the use of ICT has dramatically improved the communication between all the different stakeholders in the Catholic secondary schools in the southwest region of Cameroon. Therefore, ICT tools have significantly impacted the administrative management of the school by easing communication among the school stakeholders. As stated in the Diffusion of Innovation Theory, communication plays a crucial role in the adoption process, and using ICT involves reaching out to various stakeholders and meeting their information requirements (Bates, 2019).

5.0 Conclusion

The findings underscore the impact of information and communication technology in Catholic secondary schools. Information and communication technology has significantly streamlined the administrative management process, as well as improved data management and communication among staff. However, there are still some challenges in using information and communication technology (ICT) to communicate with parents and facilitate student registration processes. Information and communication technology has supported curriculum planning, improved the quality of teaching and learning, and facilitated student assessments. Despite the gains from ICT use, teachers still underutilize it due to insufficient training. The use of ICT tools has improved the accuracy and efficiency of budgeting, accounting processes, and payroll preparations.

Recommendations

In view of the findings, the study recommends that principals prioritize enhancing ICT literacy among staff by organizing compulsory professional development programs focused on administrative ICT skills. Additionally, they should improve school ICT infrastructure by seeking funding from government bodies, NGOs, and private donors. Principals should also implement clear ICT policies for administration and teaching, addressing data management and communication, and engage stakeholders to mobilize resources for ICT projects. School

accountants are encouraged to adopt ICT tools for financial management, receive training in ICT-based accounting, and advocate for improved ICT infrastructure within their departments to ensure efficient and secure financial management processes. Collectively, these efforts will enhance administrative management across schools.

REFERENCES

Bariu, T. N. (2020). Status of ICT infrastructure used in teaching and learning in secondary schools in Meru County, Kenya. *European Journal of Interactive Multimedia and Education*, *1*(1), e02002. https://doi.org/10.30935/ejimed/8283

Bates, T. (2019). *Teaching in a Digital Age: Guidelines for Designing Teaching and Learning.* Tony Bates Associates Ltd.

Chen, L. (2022). The Impact of ICT on School Management: Enhancing Remote Learning and Creative Teaching. *Journal of Educational Technology & Society, 25*(1), 45-58.

Chilufya, M. M. (2022). *Understanding the sources, application, and enhancement of information communication and technology (ICT) application in the management of selected secondary schools in Lusaka district* (Doctoral dissertation, The University of Zambia).

Creswell, J. W. (2023). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (6th ed.).* SAGE Publications.

Etomes, S. E., & Molua, E. L. (2019). Strategies for Enhancing the Productivity of Secondary School Teachers in South West Region of Cameroon. *Journal of Education and Learning*, *8*(1), 109-119. https://doi.org/10.5539/jel.v8n1p109

Fullan, M., & Langworthy, M. (2019). *A Rich Seam: How New Pedagogies Find Deep Learning.* Pearson. London.

Håkansson Lindqvist, M. (2019). School leaders' practices for innovative use of digital technologies in schools. *British Journal of Educational Technology*, *50*(3), 1226-1240. https://doi.org/10.1111/bjet.12782

Isaacs, S., & Hollow, D. (2020). Challenges and opportunities for ICT in education in developing countries. *Educational Technology Research and Development, 68*(5), 2347-2362.Jacob, O. N.,

Len, K. E., Fokong, N. H., & Colette, S. (2022). Teacher Factors and Implementation of ICT Curriculum in Some Public Primary Schools in Mezam Division, North West Region of Cameroon. *American Journal of Online and Distance Learning, 4*(1), 1-19.

Lutalo, F., & Bisaso, S. M. (2020). Information communication technology integration in school systems and management of secondary schools in Nakawa Division, Uganda. *Islamic University Multidisciplinary Journal, 7*(4), 136-149.

Martin, P. (2020). Challenges and Opportunities in Catholic School Leadership. *Journal of Catholic Education, 73*(2), 123-136.

Moore, E. A., & Johnson, P. M. (2020). Integrating ICT in school administration and management: Challenges and prospects. *International Journal of Educational Management, 34*(4), 567-583.

Nsangong, K., & Nganji, J. (2022). *The Role of ICTs in Selected Secondary Schools in Fako Division, Cameroon. In Technology-Enabled Innovations in Education: Select Proceedings of CIIE 2020 (pp. 417-429). Singapore:* Springer Nature Singapore. https://doi.org/10.1007/978-981-19-3383-7_34

Ott, J. S., & Parkes, S. (2019). The Organizational Culture Perspective. London. Oxford University Press.

Patel, R. (2022). Utilizing Online Networks for School Resource Expansion: Strategies for School Managers. *Educational Leadership Quarterly, 45*(3), 278-291.

Perifanou, M. A., Economides, A., & Tzafilkou, K. (2021). Teachers' digital skills readiness during COVID-19 pandemic. *International Journal of Emerging Technologies in Learning (iJET)*. https://doi.org/10.3991/ijet.v16i08.21011

Qaddumi, H., Bartram, B., & Qashmar, A. L. (2021). Evaluating the impact of ICT on teaching and learning: A study of Palestinian students' and teachers' perceptions. *Education and information technologies*, *26*(2), 1865-1876. https://doi.org/10.1007/s10639-020-10339-5

Sheninger, E. (2021). *Disruptive Thinking in Our Classrooms: Preparing Learners for Their Future*. Corwin. Oaks, CA.

Smith, J., & Brown, A. (2019). Adapting Educational Management to the Changing World: Challenges and Opportunities. *Educational Leadership Review, 42*(3), 315-328.

Smith, J., & Johnson, A. (2020). The Impact of Information and Communication Technology on School Management: A Case Study in the United States. *Journal of Educational Technology Research, 10*(2), 123-136.

Szyszka, M., Tomczyk, Ł., & Kochanowicz, A. M. (2022). Digitalization of schools from the perspective of teachers' opinions and experiences: The frequency of ICT uses in education, attitudes towards new media, and support from management. *Sustainability, 14*(14), 8339. https://doi.org/10.3390/su14148339

Turnbull, D., Chugh, R., & Luck, J. (2020). Learning management systems, an overview. *Encyclopedia of education and information technologies*, 1052-1058. https://doi.org/10.1007/978-3-030-10576-1_248

UNESCO. (2020). *COVID-19: a global crisis for teaching and learning*.

UNESCO. IIEP-UNESCO. (2024). *ICT in education around the world: Trends, problems, and prospects.* International Institute for Educational Planning. Retrieved from https://www.iiep.unesco.org/en/ict-education

UNESCO. (2023). *Harnessing the Power of ICT in School Management.* UNESCO.

Wemba, V. (2020). An appraisal of the use of education management information system (EMIS) and its effects in the effective management of secondary schools in the west region of Cameroon. *International Journal of Education and Social Science Research, 3*(03), 203-224. https://doi.org/10.37500/IJESSR.2020.30316

Wong, L. (2023). ICT Implementation in Educational Management: A Comprehensive Framework. *International Journal of Educational Management, 37*(3), 321-336.

Yin, R. K. (2022). *Case study research and applications: Design and methods (6th ed.).* Sage Publications.