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HARNESSING DIGITAL APPLICATIONS POTENTIAL FOR TRANSFORMING SCHOOL ADMINISTRATION: EVIDENCE FROM PUBLIC SECTOR SCHOOLS IN LAHORE, PUNJAB

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Abstract
Administering government schools is a challenging task, and public school administration has widely adopted ICT. This study investigates the benefits of ICT applications in transforming school administration. The purposive sampling technique was used to identify key respondents. The semi-structured interviews were conducted to collect data from public school heads in Lahore. This qualitative method helps to record personal experiences, perceived benefits, and associated challenges of ICT integration in public school administration. The findings of the study highlighted the advantages of using digital applications over traditional methods of record keeping, data sharing, enhancing transparency, and decision-making. However, effective use of ICT applications requires a reliable internet connection, infrastructure, availability of digital devices, and a strategic holistic policy framework. The use of digital applications depends on the availability of technical resources as well as supportive institutional policies. These findings are helpful for policymakers and administrators seeking improvement in school administration through digital-enabled applications.

1. INTRODUCTION

1.1 Background of the Study

The most indispensable aspect of human society is education. It has a pivotal role in shaping and transforming human civilizations. Education is essential for the economic, political, and social development of individuals and society at large. No individual is born educated, as it is not an innate skill; rather, it is acquired through a continuous process of learning at various levels with the interaction of different entities. Right education is essential for character building of individuals, and it teaches principles of morality, ethics, solicitation, and obligation (Lorenz et al., 2022; Saif et al., 2022). The School Education Department of the Punjab (SEDP) Government

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directly controls the largest network of public schools in Pakistan. It has 48,473 operational public schools, out of which there are 22,935 for boys and 25,538 schools for girls. The school network comprises 32,344 primary schools, 7,226 middle schools, 8,077 high schools, and 814 higher secondary schools. The total number of enrolled students in these 48,473 schools is 11,968,153, with 5,888,420 boys and 6,079,733 girls. This enrollment consists of 7,311,873 primary school students, 2,958,680 students in middle classes, and 1,561,114 in classes 9 and 10, whereas 136,486 students are in grades 11 and 12. The education department presently has 333,039 teachers for public sector schools in 48,473 schools. This is 74% of the total sanctioned posts for teachers in public schools. The majority of these teachers are highly qualified, as 204,640 teachers hold master's degrees, 40,468 have M.Phil degrees, and 752 are Ph.D. holders. The effective utilization of this highly qualified manpower is a challenge for the education department (Punjab Monitoring & Information Unit, 2024; Ahmad & Sharoon, 2025).

The government schools in Punjab are facing many issues, including lack of infrastructure, shortage of financial resources, and administrative issues. The government of Punjab has allocated RS. 811.8 billion in the budget of financial year 2025-2024, which includes RS. 611 billion non-development budget. This budget is a 21% increase as compared to previous years, but this is still not enough for 38000 government schools across Punjab. It is a challenging situation for the government to provide these amenities to government schools and to improve the condition of the school education sector. Under the umbrella of the Punjab Education Sector Reform Program (PESRP), the Government of the Punjab has taken many initiatives for infrastructure development and teachers' capacity development. The overall school system in Punjab is below international standards. The teachers need a specific set of skills to impart modern education. The infrastructure of government schools in Punjab is awful, and many basic facilities are absent. The primary focus of PESRP is to improve the government school system, teacher capacity development, and infrastructure development (Ramzan & Rafiq, 2025).

The depleting condition of school education requires government intervention and reforms beyond just increasing student enrollment. The other areas of concern are teacher development, improving curriculum, providing better infrastructure, and enhancing school administration using digital technologies (Pakistan Bureau of Statistics, 2023). The old-fashioned education system needs to be replaced with modern techniques and digital applications. The use of modern technology has potential to improve quality of education and administration of schools (Li et al.,2025; Munir et al., 2024; Abbas et al., 2025).

The adoption of ICT-based administrative systems in government educational institutions is growing, but present literature reveals several gaps that this study seeks to address. Most studies empirically investigated ICT's role predominantly in educational activities, focusing on learning, teaching activities, and students' and teachers' performance, whereas the use of ICT applications for school administrative aspects remains underexplored. The researchers have paid more attention to investigating ICT applications such as HRMIS and SIS from the policy perspective, with very limited attention on how head teachers are using these day-to-day for administrative functions in developing countries (Selwyn, 2023; Hussain et al., 2024).

1.2 Research objectives

The objectives of this research are to

- Study the use of ICT applications in public schools.
- Analyze the effectiveness of ICT applications for communication.
- Understand the use of digital applications in public schools for record management and decision making.

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- Identify perceived benefits of ICT adoptions for school's heads.

1.3 Research questions

1. How digital applications are being used in school administration?
2. How do digital applications support communication, record management, decision making and monitoring?
3. What are perceived administrative benefits of ICT adoption for school heads?

1.4 Research Significance

ICT is an emerging phenomenon across the world, including in developing nations, making it a challenging task for the government to incorporate these technologies into school education. These digital technologies have been discussed in literature extensively as helpful tools influencing learning in educational institutions (Mhlongo et al., 2023). The government of Punjab and administration of school education department (SED) is relying on digital platforms to improve school administration. All government schools are using these ICT platforms, with teachers and head teachers actively participating. It is quite essential to study the effectiveness and what difference these ICT-enabled tools have been able to make on the ground. In this way the results of this study are very useful for policymakers and researchers (Ahmad & Sheikh, 2022).

There is limited prior research available on the role of ICT tools for public sector school administration in Punjab. Further research is warranted to identify the effectiveness of ICT applications and challenges in implementing these technologies in public sector schools. This study will be helpful for policymakers and top administrators to understand the strengths and challenging aspects of ICT application in school education administration for further improvements.

2. Literature Review

2.1 Conceptualizing ICT in Education

Software tools and ICT applications are now integral parts of computer programs used to perform various tasks. In recent years, ICT applications have been used to improve the efficiency and effectiveness of the education system at all levels. These applications are used to perform numerous teaching and administrative functions. ICT applications are used for lecture delivery, presentations, word processing, and many other academic activities, similarly, these are also used to perform administrative functions, including record keeping, data sharing, budgeting, and human resource management in educational intuitions (Maiti & Priyaadharshini, 2024). Digital technology refers to electronic digital applications and equipment, including information and communication technology (ICT), which is used for information in the form of numeric code.

Digital platforms are now functional in various forms, improving administration of government institutions including public schools. In school, three major groups of administration have been identified by Simin, and they all use ICT applications for their respective administrative activities. According to Simin et al. (2013), these groups are administrative head, Administrative teacher and administrative staff.

2.2 Technological Advancement and Digital Transformation

The rapid pace of technological advancement is influencing all sectors globally, and it has proven its utility in all fields. This technological advancement has already revolutionized all fields, including the administration of government institutions. The education sector is now entirely changed as compared to the past because of ICT applications. There is consensus that the use of digital technologies, with their flexibility, access, and interactive features, has established connections among parents, the community, and school administration (Kaya-Kasikci et al. 2023; Lee et al., 2026). Since schools are nurseries, they

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must provide fully developed manpower to cope with technological challenges; therefore, they should make the necessary arrangements to adopt digital technologies and ICT applications in their administrative setup. The support from the school administration is pivotal for ICT adoption and collaboration among teachers, students, and the government (Wang & Zhao, 2023). Similarly, in Punjab government has also introduced many initiatives to adopt digital technologies in education sector at all levels.

A study of the related literature helps to identify contextual factors, causes, key actors, and strategies influencing the transformation of the school administration process by using modern ICT tools based on the paradigm model of Corbin and Strauss (2008). There are multiple factors suggested by scholars in literature which influence implementation of ICT applications in government schools including technological advancement around the globe, government policies, transparency, capacity and digital literacy of the head teachers, reducing administrative burdens, improving efficiency, and access to information and reducing administrative cost (Timotheou et al., 2023; Tungpantonget al., 2022).

2.3 Reducing Administrative Cost by Technological Integration

The government administration is known for bureaucratic delay and administrative costs in all matters. The traditional administrative system is rigid, rule-bound, and expensive. On the other hand, ICT applications are known for reducing costs and improving efficiency. This is the main incentive to introduce ICT applications in school administration without increasing the cost. Integration of digital applications in public schools improves the performance of school administration and saves precious public money (Timotheou et al ,. 2023).

2.4 Improving Transparency and Access to Information

The governments are adopting innovative tools such as digital platforms for greater transparency in government business. The idea is to make government operations transparent and allow stakeholders to participate in the governance process through digital platforms. Now parents, students and staff have better access to information, and administrators are more accountable to citizens as well. The British citizen gives top priority to transparency while rating government services. The use of social media has not only created ease for head teachers but also helps to ensure overall transparency in the administrative system (Krisna et al. 2025). The overwhelming evidence is available in the literature regarding ICT applications improving access to information. (Omanga, D.2021). According to Clarke and Margetts (2014), digitization has increased access to information and the size of information available to all stakeholders. The use digital technology is making it a lot easier for governments to provide citizens with access to information (Harvey, 2024).

2.5 Efficiency and Reduction of Administrative Burden

Digital technologies are playing a massive role in transforming the administrative activities of the educational institutions to support the educational process. The use of digital applications has brought radical changes in the education sector. The introduction of digital technologies has created a high-tech environment in education. The research scholars believe information and communication technology is necessary in the modern era for acquiring modern skills. The teachers and students need to learn modern skills for their professional development. The administration of educational institutions is now keen to introduce digital technologies to manage efficiently their administrative and teaching activities. The use of digital applications has significantly reduced their administrative burden,

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making it easier for the administration to manage routine administrative activities efficiently. The use of ICT has enabled administrators to quickly access data, assign daily duties to the staff, and maintain student attendance, teacher attendance, and communication within and outside institutions. The administrative record is now accessible to all stakeholders. The use of digital platforms is a great help for administrators in performing their duties. The analysis of the data is possible for quick decision-making as well. The literature indicates that digital tools can reduce paperwork and manual record-keeping, resulting in enhanced efficiency and less administrative burden on administrators (Sharlovych, et al., 2023; Al-Hussein et al., 2025).

2.6 Introduction of SIS and HRMIS in Punjab

The Human Resource Management Information System (HRMIS) and School Information Systems (SIS) were introduced in the Punjab province of Pakistan to modernize the administrative system in government institutions. The initiation of HRMIS was considered a milestone towards modernizing and streamlining the enhancement of the efficiency of the governance setup through using modern technology-based systems. This is a comprehensive system and a foundation for automation of various human resource management functions. It has the ability to effectively and efficiently manage employee data; it can be used for performance evaluation as well. The HRMIS has the capacity to help administration to adopt a data-driven approach in decision-making, bring transparency to their decisions, and improve efficiency and accountability (Munir, & Hamid, 2026).

3.Theoretical Framework

This study draws upon multiple theoretical perspectives to explain the adoption and use of ICT applications in government school administration. These theories help in understanding how digital applications (HRMIS & SIS) have been implemented in government school contexts.

3.1 Technology Acceptance Model

In 1989 Davis proposed the Technology Acceptance Model (TAM) to explain individuals' (users') acceptance of technology. He proposed two key constructs: first, perceived usefulness, and second, perceived ease of use (Schorr, 2023). In the context of the present study, TAM is very relevant to examine how head teachers perceived digital applications (HRMIS & SIS). If head teachers feel these applications are useful in managing school records and easy to operate or not. Conversely, the findings of this research reveal a non-user-friendly interface and lack of training reflect barriers reducing ease of use and acceptance. TAM gives a strong explanatory lens for understanding the need for capacity building in government schools through ICT initiatives.

3.2 Institutional Theory

This theory explains how organizational behavior is influenced by rules, norms, and pressure from the institutional environment. In this study, the use of digital applications (HRMIS & SIS) is a coercive pressure on head teachers from education authorities. It is mandatory for them to use these applications, not a voluntary behavior. This theory explains why digital applications are used for compliance and reporting instead of using the same for strategic decision-making. It also explains how institutional constraints hinder implementation and use of digital systems in government schools (Scott, 2017).

4. Research Methodology

4.1 Research Strategy

In-depth understanding of any emerging phenomenon is not possible with a rigid and structured research strategy (Creswell et al., 2023). A qualitative research strategy was recommended by Creswell & Poth in 2017 when “a complex and in-depth understanding of the issue is needed” or""to understand the context in which

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participants in a study address a problem is warranted" (p. 101). This study aims to answer research questions about transforming the administration of public sector schools by using ICT applications and to identify associated challenges. Every school has a different context and individuals with different mindsets and skills. The qualitative research strategy is adopted for this study because of the complex nature of the phenomena under investigation.

4.2 Research Approach and Research Design

The inductive research approach is a prominent aspect of qualitative inquiry. In this approach understanding emerges from the data rather than from the pre-existing theories. The researchers normally begin with specific observations, experiences, and data collected from interviews and then move towards generating themes, patterns, and conceptual understandings, unlike starting with predefined hypotheses or theories (Creswell & Poth, 2016). The researcher is open to unexpected insights and focuses on the data analysis. The researcher further allows the emergence of new research design. The existing literature is then used to contextualize findings after the emergence of themes rather than to impose a rigid framework in advance (Creswell & Creswell, 2017). The inductive approach is useful to study less researched phenomena. In this study induct8ive approach has been used to study each school separately in its local context for in-depth understanding of ICT use inductively.

This study employed a qualitative exploratory research design. This research design was used to examine the role of ICT applications in government school administration while focusing on its prospects, challenges, and opportunities. This design is appropriate when the phenomenon under investigation has not been well studied in the past and existing theories are very limited. It is particularly used to gain in-depth understandings of the participants in a local specific context (Creswell & Poth, 2016).

4.3 Interview-Based Qualitative Method

This study employed, an interview-based qualitative research method was used to explore the use of digital applications in government school administrations. The emphasis of this study was to identify prospects, challenges, and opportunities related to the use of ICT applications. Qualitative methods are most suitable for in-depth understanding of research participants' experiences, perceptions, and meanings they assign as compared to testing hypotheses (Creswell & Creswell, 2017). Interviews are the most common methods widely used in qualitative research for data collection. The semi-structured interviews give research participants freedom to express their views freely in their own words. The qualitative research allows the researcher to study any phenomena in natural settings and experiences of the participants. The interview method also provides an opportunity for the researcher to probe for deeper understanding of the research problem (Creswell & Poth, 2016).

4.4 Population and Sample

The population of this study comprises head teachers of public schools from Lahore. According to Creswell, "In qualitative research, a population is a group of individuals who have direct experience of the phenomena under consideration rather than a large group statistically representative." The purposive and criteria-based sampling technique was used to avoid including any irrelevant respondents in the study. Fifteen head teachers of government schools were selected from Lahore as key respondents (Creswell, 2018). The government school head teacher and IT focal persons in Lahore have been using digital applications and are in direct contact with ICT platforms. The head teachers have the mandate to use ICT applications given by provincial education authorities, and they are responsible for data entry, data record maintenance, and reporting through these ICT applications. Therefore, they are the most suitable individuals to provide first-hand information and insights into the prospects,

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challenges, and opportunities of integrating ICT in public school administration performing ICT-related tasks in Lahore City. The interviews were conducted till achieving saturation as suggested by scholars, and no new insights were recorded after 13 interviews, but to confirm the achievement of the saturation level, two further interviews were conducted. Repetition of answers confirms the saturation level, and further interviews were stopped to analyze the data (Hennink & Kaiser, 2022).

Data Analysis

5.1 Thematic Analysis

The data was analyzed using thematic analysis based on an inductive qualitative research approach. Thematic analysis has been used in many qualitative studies for identifying, analyzing, and reporting patterns that emerged in the textual data. The data was analyzed by following Braun and Clarke's (2006) recommended stages. The same stages were also suggested by Creswell (2014).

- At the first stage, all interview recordings and field notes were transcribed. To familiarize with data transcripts (textual data), they were read repeatedly. Field notes and reflections were also recorded carefully for preliminary insights.
- At the second stage, open coding was done by assigning labels to textual data. Open codes were assigned inductively rather than assigning predetermined codes. This process allowed the researcher to portray the participant's perspective to guide analysis; similar codes were grouped together into broader categories.
- In the third stage, similar categories were organized into emerging themes. The emerging themes reflect recurring patterns across participants' responses. These themes highlighted major aspects of ICT use in school administration, such as capacity challenges, infrastructural constraints, administrative efficiency, and perceived opportunities for improvement.
- Emerging themes were then reviewed to refine them to ensure that they clearly and accurately represent the data. The constant comparison method was used to compare similarities and differences across the responses of participants and enhance analytical rigor (Merriam & Tisdell, 2025).
- Finally, themes were interpreted keeping in view the research objectives and relevant literature. Thematic analysis was conducted inductively to ensure that findings were grounded in participants' lived experiences and aligned with the interpretive qualitative research paradigm (Creswell & Poth, 2018).

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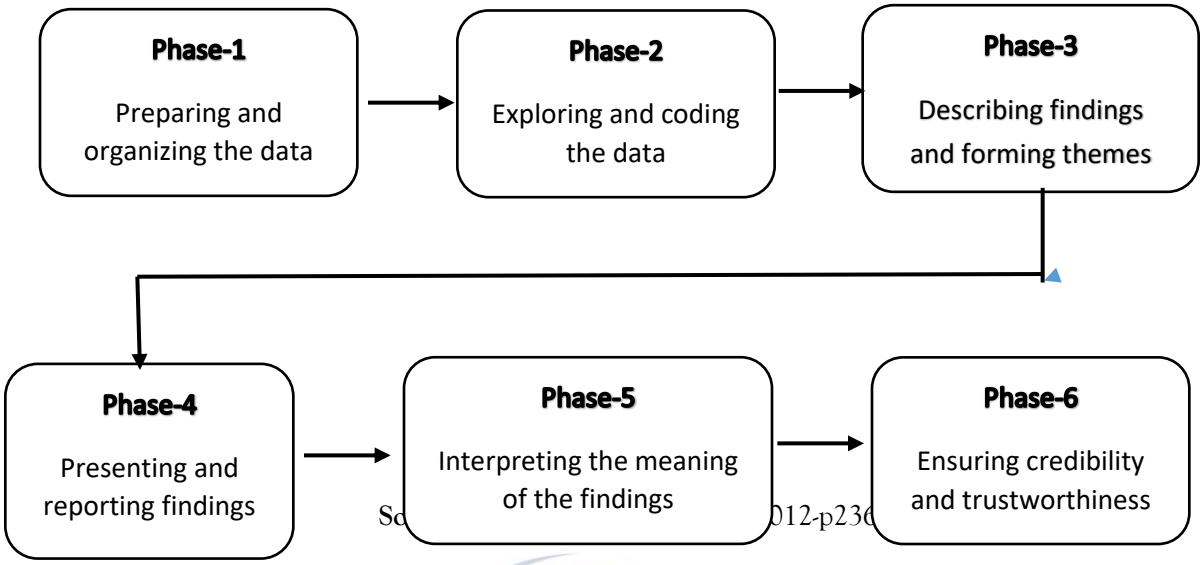


Figure No: 4 Phases of Qualitative Thematic Analysis

Theme 1: Current Status of ICT use in School Administration

The first theme that emerged from the data was Current Status of ICT use in School Administration. The government of Punjab has introduced SIS and HRMIS to get information from all government schools across the Punjab province. The SIS application is designed to get information related to students, teachers, and school infrastructure, whereas, government provides individual logins to all teachers on HRMIS. Heads of schools use these digital platforms to upload updated information about schools on a regular basis.

The data analysis reveals that government schools used ICT for administrative and reporting purposes. Head teachers reported HRMIS use for maintaining staff attendance records and leave management and SIS for student enrollment and attendance records. Use of ICT applications was ***compliance-driven*** and ***compulsory*** instead of strategically integrated into schools' administrative practices. These findings perfectly align with existing studies highlighting that ICT adoption in the government education sector often focuses on administrative efficiency rather than instructional leadership (Fullan, 2016; OECD. 2020). Head teachers shared that ICT applications are mandatory for fulfilling education department requirements with limited flexibility in usage. The ICT applications were centrally driven with no autonomy to heads at the school level, which suggests the adoption of technology was procedural, not strategic. This approach is a top-down approach to ensure data reporting and monitoring instead of innovation (Selwyn, 2016; Heeks, 2017). The use of digital applications is increasing in school administration, but it is limited to performing operational tasks with no capacity-building initiatives (OECD, 2020).

Excerpt

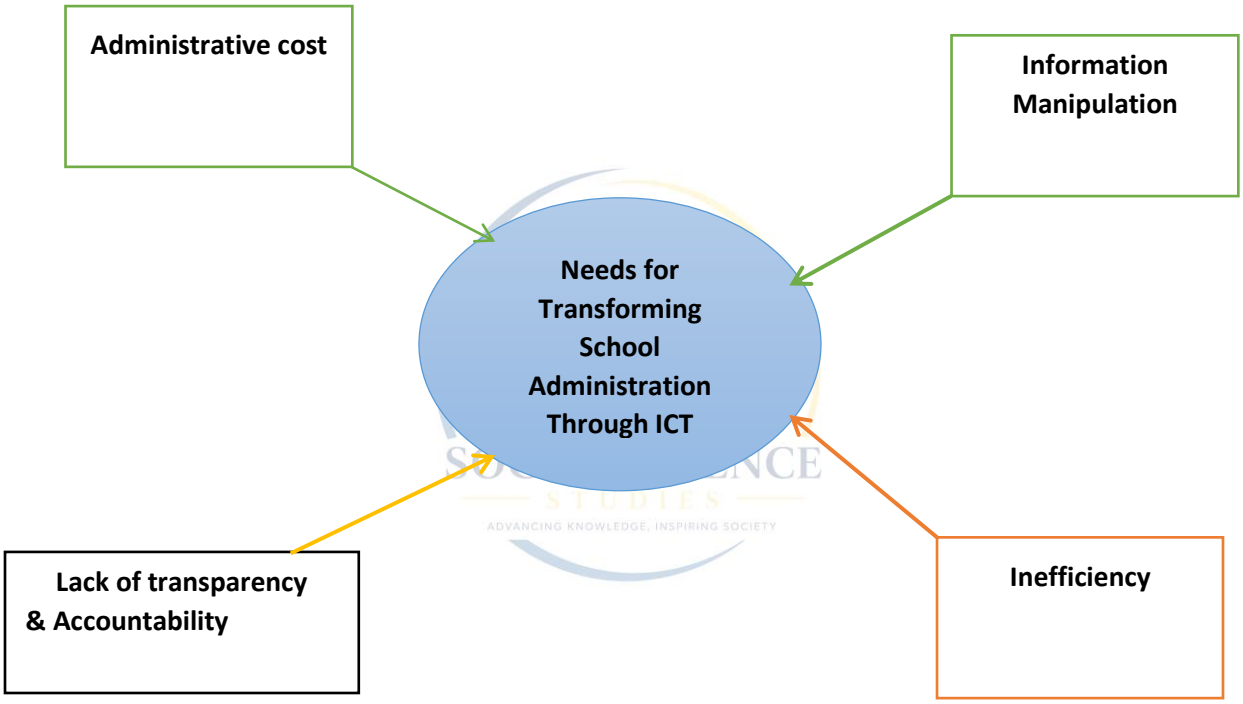
"We use HRMIS and SIS apps for sending and receiving data quickly instead of the traditional manual courier system, which takes a lot of time, and this is a centralized system of data and information sending and receiving. We can only provide specific information to education authorities as and when required by them."

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Theme 2: Perceived Prospects of Digital Applications

The government of Punjab was facing administrative issues with traditional management practices. The manual way of getting information from a large number of public schools was time-consuming and costly. The government authorities decided to implement the use of ICT applications for solving these problems and improving administration. In many studies the role of digital applications has been recognized for improving authenticity of information, efficiency, transparency, and reducing administrative costs for school management (Harini et al., 2024; Kuriyan et al., 2011).



Source: Authors own contribution

The second theme that emerged was the perceived prospects of digital tools, websites, and apps for performing administrative activities. The research participants acknowledged many positive prospects of digital applications. All head teachers believe that the authenticity of information is improved to a great extent because of these ICT tools. Online information is easily available to all stakeholders and can be verified at any time. The chances of intentionally providing wrong data are now minimized to a negligible level.

No administrative decision is possible without actual data and facts. All activities—admissions, examinations, student records, and financial records of accounts—are also available to relevant stakeholders. Integration of IT tools has improved the efficiency of the school administration to a great extent.

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Excerpt

"The entire school record is now online through these applications, like records of teaching and non-teaching staff, teacher's attendance, student's attendance, transfer and posting (e-transfer), and sanctioned post." (Participant 5)

The availability of online information, standardization of administrative processes, and merit-based e-transfer have improved the transparency of the administration and completely transformed government school administration.

Theme No.3 Improved Communication and Enhanced Accountability

Across all three levels, school heads reported significant improvement in data management, faster communication, and transparency. The ICT applications have reduced paperwork and improved the accuracy of school records. The literature supports such findings that use of ICT enhances accountability and efficiency of school administration (Selwyn, 2016; UNESCO, 2019). The participants believe a school needs-based system could improve the effectiveness of ICT applications and decision-making.

This perception of head teachers also aligns with literature suggesting digital governance applications potentially strengthen institutional accountability, efficiency, and transparency in the education system (Heeks, 2017; Fullan, 2016).

The government teacher now registers new admissions online on official portals. They are also using the Punjab Examination Commission (PEC) app for generating question papers for exams for students (class 1–class 4). The head teacher uses these apps for school budgeting. All information uploaded online is also verified by the Monitoring and Evaluation Assistant (MEA) upon their visit to the respective schools.

Excerpt

"There is no chance of manipulation, as no one can give the wrong information online. The government can easily cross-check and verify information. PMIU officers (MEAs,) when they visit, also they counter-check all record physically". (Participant 7)

The use of ICT applications is increasing, and government authorities are using these digital tools for multiple purposes. The anti-dengue app is one such platform mentioned by head teachers. A few years ago, dengue fever spread in Punjab. Now, the government monitors the clean environment in schools with an anti-dengue app.

Excerpt

"We are also using anti-dengue apps to upload pictures of school cleanliness on a daily basis, and the purpose is to provide reports about maintaining a clean environment in school, and the government monitors this to control the spread of dengue." (Participant 12).

Theme No.4 Improved operational efficiency and transparency

The participants also reported that the use of digital applications has increased the efficiency of head teachers in managing schools and collecting data, analyzing data, and providing the information to SED. The data is available to the majority of stakeholders, including teachers and educational departmental authorities. The source of the data is digital platforms providing access across the board. This access to information has improved the transparency significantly, as reported by many participants. The same aspect has also been highlighted in recent studies (Krisna et al., 2025; Pujihastuti et al., 2025).

Theme No.5 Improved Monitoring mechanisms

Better monitoring mechanisms are essentials for improving administration and strengthening control. It also ensures accountability in public schools (Eimuhi, & Obona, 2025). Effective monitoring enables administration to regularly assess the performance of teachers, attendance, and classroom teaching; therefore, the adoption of ICT technologies is providing great help for monitoring public schools in Lahore. Traditional monitoring practices often rely on periodic visits.

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The practices still continued in Punjab and Lahore as well, but these monitoring officers are taking help from digital tools and applications provided by SED. These digital platforms, as suggested by the head teacher, can help to monitor classroom activities and school management if these resources are provided to head teachers at school levels. They can be used for timetable making, resource allocation, and monitoring. The head teachers were of the opinion that these platforms and applications are useful for monitoring, but they have also added an administrative burden on head teachers.

The daily reporting and constant monitoring are affecting our freedom and educational activities of schools by increasing administrative burden on head teachers (Participant-9).

Theme Mo. 5 Evidence Based decisions making

Evidence-based decision-making is a systematic use of reliable data. The research findings and performance indicators to guide administrative decision-making help to enhance institutional performance. In public schools' administrative decisions regarding teachers' deployment, student enrolment staff allocation, infrastructure assessment, and academic planning are now gathered through digital applications (Derderet al., 2024). The education department authorities claim that they are taking data-driven decisions because of these digital applications. School administration has been using these ICT platforms to send teachers performance evaluation reports, which they refer to as annual confidential reports (ACRS). The building requirement data and staff requirement data and reports have been submitted to SED through these applications. Overall, these digital applications have enabled head teachers in public schools to provide authentic data to SED, which has been used for future planning and resource allocation to government schools across Punjab.

Key Findings and Recommendations

The study has resulted in the following very useful findings:

- ICT applications fare better than traditional modes of record-keeping and information sharing.
- The use of ICT applications has significantly improved data accuracy, transparency, and merit-based decision-making.

- **Strategic and Holistic ICT Policy for school Administration**

The policymaker has to develop strategic ICT policy beyond a compliance-driven centralized system, which will be useful for head teachers for decision-making and planning teaching and administrative activities of the school.

- **Provision of Technical Support**

The dedicated technical support team/focal persons, and uninterrupted internet connectivity are essentials at district level for helping head teacher in case of any technical issue.

- **Investment in infrastructure**

Fund allocation for ICT infrastructure and providing internet devices in schools can significantly improve implementation and usage of ICT tools.

Conclusion

The findings of this study significantly highlighted the role of ICT applications in public schools' administration. The digital application has increased data accuracy and monitoring of schools. It also helps to make quick decisions and faster communication with SED. The use of ICT-enabled platforms has demonstrated advantages over traditional record-keeping methods. This study also provided evidence that the use of digital applications has great potential to improve data accuracy, transparency, and evidence-based decision-making. The use of technology has improved communication between the school

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head, SED, and other relevant stakeholders. The limited features of ICT applications need to be improved to realize the full potential of such platforms. The head teachers should be given resources to use such technologies at the school's level for monitoring academic activities, improving class room teaching and overall school administration. The integration of ICT into school administrative functions is recommended by scholars and head teachers as well. The study emphasizes that holistic ICT policy is required to move beyond a centralized compliance-driven approach and empower school heads. The dedicated technical team should be there to facilitate the school's teachers and administration regarding any technical issue. In this way these technologies will also help to improve school administration and teaching quality other than information sharing with SED.

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