

## **E-leadership Practices of School Principals and the Barriers they face in Private School Sector of Lahore**

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### **Abstract**



*The aim of this qualitative study is to explore e-leadership practices of private school principals with an emphasis on how school principals incorporate digital technologies into their leadership practices. Further, the research is focused to investigate the challenges and barriers that school leaders face to implement the e-leadership practices. This exploratory study is based on constructivist paradigm. Data were acquired using semi-structured interviews with 10 private school principals selected purposively. The qualitative data was analyzed through thematic analysis. The findings revealed five major themes regarding e-leadership practices of private school principals. These themes include: technological integration, digital communication, professional growth, data-driven decision making, and collaboration and innovation. Technology integration and digital communication were found to considerably increase administrative efficiency and collaboration, but professional growth and new e-leadership practices were considered as critical for creating a dynamic educational environment. The findings further unveil that key obstacles/challenges in the implementation of e-leadership practices include poor infrastructure, digital literacy gaps, and opposition by the staff to change traditional practices into e-practices. Recommendations include enhancing technical infrastructure, expanding digital literacy training, fostering a collaborative culture, getting technology financing, and offering ongoing professional development may improve the e-leadership practices in private school sector.*

**Keywords:** E-Leadership Practices and Barriers, Private Schools, Digital Transformation, Technology Integration, Digital Communication.

### **Introduction**

E-leadership is an emerging paradigm in educational leadership that uses digital technology to improve and revolutionize leadership practices. Electronic communication, digital technologies, and online platforms are used to successfully lead, manage, and influence educational organizations (Avolio, Kahai, & Dodge, 2000). E-leadership includes a variety of tasks such as virtual team management, digital decision-making, online professional development, and the incorporation of technology into teaching and learning processes. The use of digital technology by principals to impact organizational operations is known as e-leadership, and it has become more and more popular in Pakistani private schools. By emphasizing the perspectives of educators and school administrators in navigating the digital realm, this article seeks to investigate the subtleties of e-leadership practices via a qualitative lens.

E-leadership is especially important in education, as technology is being used for instructional delivery, administrative activities, and stakeholder involvement. The digital age has brought about substantial changes in how educational principals work, necessitating their proficiency in using technology to support communication, cooperation, and creativity inside their institutions (Jameson, 2013). This trend is seen in the increasing use of Learning Management Systems (LMS), virtual classrooms, and digital assessment tools, all of which require good E-leadership to enable successful deployment and usage.

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Leadership and the study of this miracle have its roots in the beginning of progress. Biblical patriarchs, Greek heroes, and Egyptian rulers all approached leadership in similar ways. Despite the variety of definitions of leadership, there are enough commonalities between them to conclude that it entails an attempt to convince and the ability to provide satisfaction. For than two centuries, individuals have studied labor, the workplace, pioneers, administrators, leadership styles, and a variety of other characteristics. According to Stone and Patterson (2023), the hierarchical focal point of leadership has steadily changed over the past 200 years. According to Oh and Chua (2018), e-leadership is a distinct activity viewpoint that encourages innovators to build association centers around ICT-mediated routes with virtual social events that fade over time. However, as the pioneer's eye contact with him decreases owing to his engagement in activity preparations, he must adjust his position, vision, and techniques.

The foundation's leadership frameworks are also influenced, notably in terms of monitoring, advancement, and sorting (Gurr, 2004). Electronic ICT has influenced everyone's mobility in any educational organization. It has also mediated mainly insignificant habit behaviors and requirements. The key's activities have shifted from a narrow focus on association to an unquestionably broad scope that encourages students to participate, expresses the goal of structure, and enables and supports authority actions to uncover improvement and continuous educational advancement in the school. One of the responsibilities of school principals is to incorporate ICT in classrooms. In order to support the whole system, a school principal's obligations now include incorporating ICT into education and other school competencies (Tondeur et al., 2008). Education has been greatly influenced by the rise of E-leadership, which is defined by the use of digital technology into leadership practices. In Pakistani private schools, where technology use is changing quickly, it is critical to comprehend the subtleties of E-leadership. The context for examining E-leadership activities in this particular school setting is established by this introduction.

Pakistan's private schools are going through a digital revolution as a result of developments in instructional technology and the rising need for creative methods of instruction. As a branch of educational leadership, e-leadership includes a range of digital skills and tactics that school administrators use to successfully manage this changing environment (Makhdum et al., 2022). Pakistan's private schools are going digital, with an increasing focus on using technology into the administrative, instructional, and learning processes. School administrators are finding that E-leadership techniques like data-driven decision-making, digital collaboration and online communication are crucial for navigating the intricacies of the educational environment.

Private sector educational institutions are described as those that are not publicly financed, overseen, or regulated. These mix several classification groupings, including Deeni Madaris (Muslim's Religious Institutions), minimal effort, high cost, non-advantage, and others. Individuals, trusts, non-governmental organizations, and WFAQs are among the institutions that establish and operate private educational foundations. This includes both registered and unregistered groups. Practically speaking, each region and a portion of the merging divisions, including Islamabad Capital Territory, are responsible for registering students and fulfilling their administrative needs at private educational institutions. Ordinance no. II for the Promotion and Regulation of Punjab Private Educational Institutions took effect in 1984. A similar statute was implemented by the Sindh and NWFP administrations. Private educational organizations are critical to Pakistan's educational growth. The massive burden of teaching, preparing, and improving the capacities of the country's 200 million residents is usually too great for the government to handle alone (Ahmad et al., 2014).

According to Hughes, McLeod, Dikkers, Brahier, and Whiteside (2005), technical leadership is on the increase in the incredibly diversified area of educational leadership. Administrators who understand the benefits and difficulties of data and communication innovation are critical for schools seeking to succeed in the digital era. Many academics and educational organizations believe that effective leadership is critical to the success of school transformation via innovation. Principals' technical leadership is also linked to teachers' incorporation of new teaching approaches into their curricula (Håkansson Lindqvist & Pettersson, 2019).

Because strong technology leadership is required for the effective implementation of innovation, principals must display strong technology leadership in projects to improve education and prepare students for the information age (Chang et al., 2008). As previously said, technological leadership and computerized innovation are becoming increasingly important. Administrators who

want to promote school reform should have technical leadership skills and a clear goal of increasing students' capacities. Instead, the aforementioned states that in order to improve the systematic execution of numerous operations, principals must create, manage, monitor, and apply innovation to a variety of organizational tasks. According to Aquino et al. (2021), this method places information technology leadership in the context of educational structural leadership.

Hughes et al. (2005) emphasized how innovation's production and use has given educational transformation a new start. An analysis of prior creative change programs in various countries suggests that innovative administration has only recently emerged as a fundamental technique for improving educational quality and student achievement. In the United States, for example, several state education departments have built cutting-edge institutions of authority that use instructional assignments to improve teachers' mechanical seeming talents. This program is driven by the desire to improve both students' and instructors' teaching abilities (Dounay & Christie, 2008). Previous studies on e-leadership have demonstrated how it may improve student achievements, foster creativity, and increase organizational performance. Nonetheless, the paucity of scholarly works explicitly discussing e-leadership within Pakistani private schools suggests a lack of comprehension of the distinct obstacles and prospects encountered by educational administrators in this area.

A variety of theoretical frameworks, empirical investigations, and conceptual models that clarify the function of digital technology in leadership practices are included in the literature on e-leadership. From the corpus of literature now in publication, a number of important concerns about educational leadership and private schools become apparent. The integration of information technology with conventional leadership theories is emphasized in the frameworks for understanding e-leadership that have been presented by academics like Avolio, Kahai, and Dodge (2000). E-leadership has been associated with transformational leadership in particular, indicating the potential of digital technologies to support motivation, sharing of vision, and organizational change (Bass & Riggio, 2006). The body of research on integrating technology into education highlights how crucial strong leadership is to maximizing the use of digital resources for better teaching and learning results (Hew & Brush, 2007). E-leadership is seen as a catalyst for innovation and pedagogical reform, allowing teachers to engage students through individualized and interactive learning experiences (Taopan et al., 2020).

The digital divide between students and educators is one of the issues raised in the literature, especially in areas that are socioeconomically poor (Warschauer, 2003; Selwyn, 2003). Access, equity, and digital literacy are concerns that e-leadership programs need to tackle in order to guarantee that all parties involved gain from technology-enabled educational opportunities. Navigating organizational change processes, such as opposition to technology advancements, is a necessary part of e-leadership (Gibson & Nolan, 2002). In order to reduce resistance and advance digital fluency among team members, effective E-leadership tactics require cultivating a culture of cooperation, communication, and ongoing learning (Hertel et al., 2005).

Various competences and skills are identified in the literature as necessary for effective e-leadership. These include fluency in digital communication, data-driven decision-making, strategic visioning, and cybersecurity awareness (Conger, 1999; Yukl, 2013). In order to respond to changing technology environments and new developments in education, e-leaders must also exhibit resilience and flexibility (Lou et al., 2024). School administrators can get useful insights and best practices from case studies on e-leadership deployment in educational settings (Bush & Glover, 2014). In order to grow capacity and maintain innovation, successful E-leadership projects frequently incorporate cooperative collaborations, stakeholder involvement, and continual professional development (Fullan, 2014).

In order to promote e-leadership activities at the institutional and systemic levels, the research highlights the need of policy frameworks and governance structures (Harris, 2002; European Commission, 2020). Essential concerns for e-leadership in education include policy interventions pertaining to finance, infrastructure development, digital citizenship, and data protection. Pakistan's private schools are rapidly getting digital, and to successfully manage the challenges of incorporating technology into the classroom, strong e-leadership techniques are required. Nevertheless, despite the growing emphasis on e-leadership, there is a paucity of empirical research that focuses on the E-leadership strategies that educators and school administrators utilize in this setting (Akram & Muhammad Khan, 2020). The absence of sufficient research impedes the creation of focused

approaches to improve leadership efficacy, tackle obstacles related to technology integration, and maximize academic achievements. Thus, there is a strong need for a comprehensive qualitative study that delves into the subtleties of e-leadership in Pakistani private schools. The study should identify possibilities, challenges, and best practices for promoting organizational excellence and digital innovation in education.

The educational results of e-leadership, such as academic success, learning effectiveness, and student engagement, can be greatly impacted. Improving educational quality requires an understanding of how e-leadership practices contribute to these outcomes (Culduz, 2024). Beyond specific leadership philosophies, e-leadership influences organizational culture, communication routes, and decision-making procedures in educational institutions. Examining these relationships offers perceptions into successful digital-era leadership tactics. Determining the e-leadership qualities that educators and school administrators need is essential to creating focused professional development initiatives. Improving pedagogical innovation and technology integration can result from developing digital leadership competencies.

There is a lack of empirical study that focuses on e-leadership techniques in Pakistani private schools, despite the increasing emphasis on technology in education. By producing evidence-based insights on e-leadership dynamics and their implications, this study aims to close this gap. So, the study is to explore the e-Leadership practices adopted by schools principals in private schools of Lahore city, Punjab, Pakistan.

**Objective of the Study**

The study is aimed to:

1. Explore the e-leadership practices adopted by school principals in private schools of Lahore city.
2. Investigate the challenges/barriers in the implementation of e-leadership practices.

**Methodology**

This study is based on constructivist paradigm and used qualitative approach to investigate the subjective experiences, perspectives, and meanings associated with e-leadership practices and barriers in private school sector in Lahore, Pakistani private. The research involved 10 private school principals from Lahore that were selected purposively. Semi-structured interviews were conducted with chosen participants to collect qualitative data on e-leadership practices and barriers. Open-ended questions but in a specific direction were used to elicit extensive replies and allow participants to freely express their opinions. Thematic analysis was used to analyze the qualitative data gathered from semi-structured interviews. The analytic procedure consisted of multiple processes including data familiarization, theme and pattern coding, theme cluster organization, and findings interpretation. Constant comparative analysis was utilized to guarantee rigor and repeatability in identifying significant themes linked to e-leadership practices and associated problems, and their influence on organizational dynamics. The research ethics were completely observed during the study.

**Data Presentation and Interpretation**

Main themes emerged from the data and their description taken in this study has been presented in table 1.

**Table 1: Themes on E-leadership Practices and their Description**

<b>Theme</b>	<b>Description</b>
Digital Communication	Strategies and tools used by school principals for digital communication with stakeholders.
Technology Integration	Approaches to integrating technology into teaching, learning, and administrative processes.
Data-Driven Decision-Making	Use of data analytics and evidence-based decision-making in educational leadership.
Professional Development	Training and support provided to educators and staff in developing E-leadership competencies.
Collaboration and Innovation	Initiatives fostering collaboration, innovation, and teamwork among school principals and educators.

Table 2 presents the key data from participants on main themes in summary form.

**Table 2: Summary of Key Data on Main Themes regarding E-leadership Practices**

## E-leadership Practices of School Principals and the Barriers.....Amin, Amjad & Amin

Participant ID	Digital Communication	Technology Integration	Data-Driven Decision-Making	Professional Development	Collaboration and Innovation
P1	Utilizes email and messaging apps for communication with staff and parents.	Integrates learning management systems for online teaching and assessment.	Collects and analyzes data for personalized learning interventions.	Conducts workshops on E-leadership and technology use.	Encourages cross-departmental projects and innovation hubs.
P2	Engages in virtual meetings, webinars, stakeholder engagement.	Implements blended learning models for interactive digital resources.	Uses analytics tools for tracking student progress and performance.	Offers online courses for staff development in digital pedagogy.	Facilitates collaborative projects with industry partners for real-world learning experiences.
P3	Employs social media platforms for community outreach and parent involvement.	Embeds technology-enhanced learning activities in curriculum design.	Uses dashboards for monitoring school performance in metrics.	Partners with external agencies for leadership training programs.	Establishes innovation labs for students to explore emerging technologies.
P4	Uses school intranet and messaging apps for communication.	Adopts E-textbooks and interactive whiteboards in classrooms.	Implements student information systems for tracking academic records.	Organizes regular training sessions on new educational technologies.	Encourages staff to participate in tech innovation competitions.
P5	Conducts parent-teacher conferences via video conferencing tools.	Utilizes online assessment tools and digital feedback systems.	Analyzes behavioral data to tailor student support services.	Provides mentorship programs focusing on e-leadership.	Collaborates with other schools to share best practices and innovations.
P6	Maintains active communication channels through school websites and portals.	Integrates virtual labs and simulation tools in science curriculum.	Uses predictive analytics to identify at-risk students.	Offers certification programs for advanced technology skills.	Develops joint projects with community organizations.
P7	Uses instant messaging and collaboration tools for team projects.	Implements coding and robotics programs in the curriculum.	Tracks attendance and engagement metrics in school policies.	Facilitates peer-led training sessions on tech integration.	Partners with companies for innovation initiatives.
P8	Engages in digital newsletters, blogs for updates and announcements.	Adopts augmented reality (AR) and virtual reality (VR) in teaching.	Uses big data analytics for school-wide performance evaluation.	Hosts annual leadership conferences and workshops.	Promotes interdisciplinary innovation projects among students.
P9	Uses online forums and discussion boards for learning.	Integrates mobile learning apps.	Collects and analyzes data.	Collaborates with universities for professional development.	Implements student-led innovation and collaborate to address

Participant ID	Digital Communication	Technology Integration	Data-Driven Decision-Making	Professional Development	Collaboration and Innovation
	educational discourse.	and resources for use.	continuous student improvement.	development programs.	challenges.
P10	Utilizes live chat and instant messaging for immediate communication.	Incorporates AI-driven for personalized learning platforms.	Uses machine learning algorithms to predict academic trends.	Conducts virtual reality training for immersive learning experiences.	Encourages global collaboration projects through digital platforms.

**Key Themes, Findings and Data Support**

The study of e-leadership practices in private schools of Lahore identified five main themes: technological integration, digital communication, data-driven decision making, professional development, and collaboration and innovation.

**Technology integration** identified as critical for reducing administrative duties and improving instructional delivery via digital tools, despite considerable infrastructural constraints. Principals are prioritizing technology integration in school management and classroom activities, utilizing digital tools for lesson planning, student assessments, and administrative tasks.

*"We have integrated digital resources like as Google Classroom and electronic grade books into our everyday routines. It has considerably improved our administrative processes, making it easier to handle student information and interact with parents."* (P1)

*"While we strive to employ digital tools for teaching, our most significant difficulty is a lack of dependable internet and up-to-date technology. This makes it challenging to completely utilize technology for educational objectives."* (P3)

**Digital communication** emerges as pivotal in facilitating collaboration and transparency among stakeholders, despite concerns over communication overload. Digital tools such as email, video conferencing, and messaging apps have enhanced collaboration among educators, parents, and students. These tools facilitate timely updates and inclusive decision-making processes.

*"Platforms like Zoom and Microsoft Teams have become indispensable for our staff meetings and parent-teacher interactions. These tools have made it easier to stay connected, particularly during the pandemic."* (P2)

*"Our communication with parents and children has increased since we began using school applications and social media. However, managing several communication channels while keeping everyone updated may be stressful."* (P10)

**Professional Development** emphasized for improving digital competencies and emphasized the need for personalized training to keep pace with technological advancements.

*"Our school provides frequent training on using new digital technologies. These training sessions have been really beneficial in increasing my technical abilities and incorporating digital resources into my teaching."* (P6)

*"Continuous professional growth is critical. We require continual help and coaching to stay up with rapid technology advancements and successfully apply these tools in our teaching methods."* (P8)

**Innovation and creativity** encourages innovative teaching methods can enhance learning effectiveness, but resource constraints often hinder their full realization.

*"We urge instructors to try flipped classes and gamification. This has made learning more participatory and interesting for kids, but we require additional resources to properly execute these unique concepts."* (P7)

*"E-leadership has enabled innovative solutions for remote learning, including custom online resources and digital adaptations of curricula."* (P5)

**Challenges and barriers** have been identified in response to objective two of the study and have been considered important in implementing e-leadership practices, including inadequate technological infrastructure, digital literacy gaps, resistance to change, and limited funding. Overcoming these challenges requires strategic planning and investment in infrastructure and training.

*“The primary obstacle is the insufficient infrastructure, as many students lack access to high-quality devices and stable internet, hindering the effective implementation of e-leadership practices.”(P4)*

*“Traditional teaching methods still exist in the practice of staff and they oppose technology integration in teaching, it requires time and effort to convince them to get benefits of digital transformation.”(P9)*

*“The lack of sufficient financial support is a significant obstacle in the maintenance and upgrade of our digital infrastructure.”(P4)*

## **Discussion**

The discussion section compares and contrasts the study's findings to previous research on e-leadership and technology integration in education. It emphasizes the particular issues that Pakistan's private schools confront, such as limited resources and technical infrastructure. Personal commentary from the researcher deepens the debate, providing insights into potential solutions and future paths for study and practice.

The use of digital technologies into administrative and instructional procedures has proven to be a critical component of e-leadership. Participants emphasized the use of Learning Management Systems (LMS), electronic gradebooks, and other digital tools to simplify administrative work and improve instructional delivery. This conclusion is consistent with prior research that has highlighted the importance of technology in increasing educational outcomes and operational efficiency (Avolio, Kahai, & Dodge, 2000; Schrum & Levin, 2013). However, the survey identified significant infrastructural restrictions, particularly in remote schools, that prevent the full use of digital technologies. This is consistent with Ertmer et al.'s (2012) results about the challenges to technology integration in educational settings.

E-leadership has greatly enhanced communication and collaboration in schools. Platforms like as Google Classroom, Microsoft Teams, and Zoom have permitted virtual meetings, online classrooms, and parent-teacher exchanges, therefore increasing stakeholder participation and transparency. These findings are consistent with the work of Jameson (2013), who emphasized the relevance of digital communication in establishing collaborative and engaged school communities. However, participants voiced worries about communication overload and the need for clear rules on how to use multiple platforms, highlighting a problem that has to be addressed and managed.

Continuous professional development has emerged as a critical component of good E-leadership. Participants emphasized the necessity of training programs to improve educators' digital capabilities. This confirms Trust's (2018) claim that professional development is required for successful technology integration in schools. Nonetheless, the study revealed a need for more personalized and continuing assistance to ensure that instructors maintain their proficiency in using digital technologies. Time restrictions and severe workloads were identified as impediments to involvement in professional development, implying that schools need to discover more flexible and accessible training methods.

The study identified two critical components of e-leadership: encouraging new teaching techniques and creative problem-solving. Participants reported experimenting with flipped classrooms, gamification, and project-based learning, resulting in more dynamic and interesting learning experiences. This is consistent with Hamid, Othman, and Nordin's (2013) results about the favorable influence of innovation on educational practices. However, budget restrictions and the need to satisfy curricular standards were noted as barriers to fully adopting these new concepts. This emphasizes the importance of balanced approaches that promote innovation while adhering to academic norms.

The study revealed substantial hurdles to E-leadership implementation, such as inadequate technology infrastructure, digital literacy gaps, reluctance to change, and limited finance. These findings are consistent with earlier studies that have shown comparable impediments to technology integration in education (Ertmer et al., 2012; Mahmood, 2021). The digital divide between urban and rural schools was especially significant, highlighting the importance of specific policies and investments to alleviate these discrepancies. Resistance to change among staff used to traditional teaching techniques was also seen as a key barrier, highlighting the need for efforts to promote a more open and adaptive school culture.

The findings of this study demonstrate the transformative power of E-leadership in improving educational practices and outcomes. However, they also emphasize the numerous hurdles that must be overcome in order to fully realize this promise. As schools embrace digital transformation, it is critical to invest in strong technology infrastructure, provide continuing professional development, and cultivate an environment of creativity and adaptation. To guarantee that all kids have access to a high-quality, technology-enhanced education, legislators, educational leaders, and the broader school community must work together to address these problems. This discussion combines the study's findings with current literature to provide a thorough analysis of the primary topics and their consequences. It provides a balanced assessment of the potential and problems related with e-leadership in Pakistani private schools, indicating topics for further research and action.

### Conclusion

This qualitative study on e-leadership in private Pakistani schools concludes by synthesizing significant results and debates to derive broad insights and implications for practice and research. It emphasizes the need of e-leadership in negotiating the complexity of technology integration, encouraging innovation, and improving organizational dynamics in educational contexts. The conclusion emphasizes the significance of addressing infrastructural restrictions, digital literacy gaps, and change management problems through focused interventions and professional development programs for school leaders and instructors. It also emphasizes the importance of clear policy frameworks and governance structures in supporting long-term e-leadership practices and ensuring fair access to technological resources across all schools. Furthermore, the conclusion calls for additional research to investigate the long-term effects of e-leadership on educational outcomes, the efficacy of leadership development programs, and the changing nature of digital leadership competencies in response to technological advancements and education trends. Overall, the study provides useful insights and ideas for improving e-leadership excellence in Pakistani private schools and beyond.

### Recommendations:

1. Provide frequent training and capacity-building opportunities to school leaders and teachers for technology integration and digital communication.
2. Invest in a rigorous technical infrastructure to ensure the successful installation of Learning Management Systems (LMS).
3. Encourage collaborative leadership approaches that include stakeholders in decision-making processes.
4. Use data-driven monitoring and evaluation tools to determine the impact of LMS on school effectiveness.

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