Exploring the Practices and Challenges of E-leadership: A study of Public Schools of Larkana Sindh, Pakistan

Muhammad Ilyas
MS Scholar at SZABIST University Larkana

Muhsin Khan
MS Scholar at SZABIST University Larkana
khanmuhsin181@gmail.com

Sumeera
MS Scholar at SZABIST University Larkana

Maria Sarwar
MS Scholar at SZABIST University Larkana

Paras Abro
MS Scholar at SZABIST University Larkana

Abstract

The major aim of the present study was to explore the perceptions of public educational institutions' leaders regarding the practices of e-leadership and their challenges in integrating the e-leadership. In addition, the study utilized the qualitative design of research that suits the epistemological and ontological stances of researcher. Further, the study is constructivist paradigm thus, it used semi-structured interviews for gathering data, and thematic analysis for analyzing the data. However, the findings disclosed five major themes. The themes are technology execution, e-communication, continuous professional development, data-driven decision, and collaboration and innovation. E-communication and execution of technology were effective for enhancing the performance of administrative. While, collaboration and continuous professional development were significant for enhancing the involvement of parents, community and building strong connection with stakeholder, increasing the awareness of growing technological tools for instructors and educators. However, it was also unveiled that these all the practices are possible when there is not any obstacle in front, but study showed numerous challenges that hinder the process of e-leadership implementation. The challenges like poor technology-based infrastructure and less funding for renovation of technical tools. Nonetheless, the study recommended that stakeholders should support public schools in terms of providing appropriate technical infrastructure, sanctioning funds for enhancing e-leadership, increasing collaboration among different public school, and arranging training programs for instructors and educators for improving the e-leadership at public sector educational institutions of Larkana Sindh, Pakistan.

Keywords: *E-leadership Practices and Challenges, Public Schools, E-communication, Technology execution.*

Introduction

In the age of 21st century, ICT has become a crucial issue in numerous fields particularly field of education has driven its focus towards it. The reason behind is that it has proved it is the fastest mode of transferring knowledge from one to another person. In general, it is being incorporated in people's lives which has changed the way they live, think, and work. Keeping in view the aim that children are part that society, educational institutions have adopted ICT in teaching-learning process to prepare the learners to become a well and responsible citizen of their society (Ghavifekr, Afshari & Amla Salleh, 2012).

In addition, ICT integration in the field of education alludes to the utilization of communication that is based on computers which can be incorporated into instruction process inside the classroom. Teachers are considered as key components who play their role in preparing learners for the 21st century era by incorporating ICT in their teaching-learning process. In addition, the major of ICT is to enhance the quality of teaching-learning, increase accessibility and efficiency of cost of delivering lesson, further it also alludes to get advantage from learning communities to face hindering barriers of present globalization. Adopting ICT is not confined to a single step but rather an ongoing process which scaffolds learning and instruction process. In simple, the adoption of ICT in education field in general refers to the instruction based technological tools which are associated with adoption learning technology.

According to a study by Arnseth & Hatlevik (2010) ICT tool motivates learners and attracts them towards learning. Further it was mentioned that ICT integration boosts the learning environment of class. Other than the teacher, one of the crucial is of school heads. School heads are the highest authorities inside the premises of school who are responsible for integrating ICT classrooms. The role of school heads is undeniable because they must manage and maintain all the things needed for enhancing the performance of students as well as school.

According to previous research, management of schools is responsible for realizing the desired objectives and school performance. It is indicated by numerous studies that utilization of ICT in daily life affairs particularly in instruction process is not a luxury but rather a necessity for human growth. However, in the era of 21st school heads are encountering challenges related to the ICT implementation.

On other hand, one of the rising paradigms of leadership in context of education is e-leadership. It involves the utilization of technological tools to enhance, modify, and transform

educational leadership practices. Numerous technology-based platforms like e-communication, digital tools and various other e-forums have been utilized to lead, administer, and influence educational institutions (Avolio, Kahai, & Doge, 2000). E-leadership consists of various tasks, for example virtual team management, decision making through digitization, e-professional development, and integration of ICT into the teaching-learning process. Educational leaders who influence the organizational processes by means of technology are considered as leaders with e-leadership abilities. While the utilization of digital tools in their leadership process is termed as e-leadership. However, the trend of e-leadership in public and private educational sectors of Pakistan is gaining more and more importance.

E-leadership is very crucial in educational context because technology has surrounded all the educational activities like lesson delivery, management activities, and involvement of higher authorities. The trend of utilizing technology into leadership practices had brought considerable changes in leadership practices and how they work and benefit at fullest from it (Jameson, 2013). Everyone's movablity has been influenced by the utilization of ICT in educational institutions.

According to the study one of the key responsibilities of a school head is to include ICT in the classroom. Further to support the entire system of educational institutions now the the obligation of principal of any institution is to incorporate it into instruction as well as other capabilities of school (Tondeur et al., 2008). The quick surge in e-leadership has significantly impacted on education particularly in Pakistani context where technology made it possible for educational leaders to do their tasks on their fingertips. Thus, it is critical to grasp the subtleties of e-leadership. However, the the context for present study is public sector institutions of Sindh, Pakistan.

The public sector schools of Pakistan have been undergoing a transformation called digital transformation. This is because of the enhancement in instructional technology and rising demand for advanced teaching. On other hand, to adjust this rising change in education sector the school leaders are required to add special skills and competencies like digital skills in their leadership so called e-leadership (Makhdum et al., 2022). It helps them in making informed decisions, collaboration and enables them to face hindrance.

Those schools, colleges or any other educational institution which are under the control of the government of that state is referred to as the public sector educational institution. These are publicly financed, managed, and controlled. These institutions provide free education to children (Ahmed et al., 2014). However, the present study is aimed to explore the problems

faced in integrating e-leadership practices in public sector educational institutions of Larkana Sindh, Pakistan.

Literature Review

The key responsibility of a school head is to bring changes to enhance the teaching-learning process inside the school (Chirichello, 2010). The management of any educational institution which involves ICTs to boost up the attitude, and overall personality of instructors which helps them in enhancing the performance of that institution is known as e-leadership (Clark, Beer, & Jones, 2010).

Due to the quick surge in ICT after Covid-19 in different fields particularly in education have distracted workplaces all over the World. It has made people physically away from their leaders and enabled them to work remotely under their leadership and guidance. Although it has made their work easy and flexible but not problem free because it distracts them with challenges. Just because of the responsibilities and commitments and other field work educational leaders could not regularly be in touch with their team members (Albidewi, 2014; Mohd Yusri, 2014 & Schultz, 2010). To fill this gap the ICTs had made it possible for educational leaders to utilize e-communication mode by adopting the digital appliances such as smart phones and PCs with high-speed internet connection for monitoring the educational activities at different without their own physical presence.

In the same way, ICTs have also made it come true for the instructors to effectively teach with new technologies. From the beginning to the end of the activities at educational institutions technologies have been being used for making the educational activities more interesting, enjoyable, and flexible to achieve the desired outcomes. However, while integrating this whole process educators as well educational leadership are confronting numerous barriers which distract them from successfully integrating (Aral, Brynjolfsson & Wu, 2012).

According to Jung & Huh (2019) educational leaders who have believed in technological gadget and appliances in their leadership practices have achieved scholastic results and shown that learning is better when there is full use of ICTs in teaching-learning process. According to Akram & Khan (2021) learning management system which is a digital tool utilized for the maintaining attendance and other records of students can help them to enhance the efficiency of their work. Using such tool instructors can plan well about their upcoming lesson delivery, developing policies, and evaluate the students' performance on the data available which ultimately enable them in making informed decisions.

On other hand, Auranzeb & Mazhar (2019) mentioned in their study by utilizing qualitative research design and taking fifty respondents purposely that ICTs are effective for enhancing the e-leadership practices in educational institutions. The study involved participants in semi-structured interviews to explore their perceptions regarding the practices and challenges of e-leadership. However, the findings disclosed that e-leadership practices are replacing the ICTs but there are gaps in achieving the full implementation of e-leadership because of the barriers confronted to the leaders.

Different studies in literature have shown that educational leaders of public educational institutions have less used e-leadership before the Covid-19, therefore they have been faced with various challenges in adopting the e-leadership. Although e-leadership is full of opportunities for them but due to the lack of abilities in them they face challenges (Butt, et. al., 2022). The challenges include diverging working norms, negative attitude from instructors, communication gap between instructors and leaders, internet connectivity issues, shortage of technology-based infrastructure, and shortage of technical team for support (Lojeski & Reilly 2010; Malhotra, 2007, Van Wart et al., 2019). On other hand, numerous studies showed that there is a dire need for awareness among educators regarding the adoption of ICT and technological tools in their daily routines. Making educators aware about technological involvement in leadership enables them to work in better way and achieve desired outcomes effectively (Roman et al., 2018). However, one of the challenges for leaders is to meet growing needs of modern technologies because technology is such a field which is gaining quick rise day by day. It requires them to have capabilities of using epdated digital tools rather have same skill for all the technologies (Adserias et al., 2017). According to Avolio & Kahai (2003) the utilization of technology alters the relationship among the team members and the leaders, by enabling them to improve their communication skill, build trust in each other's, and keep their team members motivated.

Different studies like Garcia (2015) and Alvarez & Vanderlinde (2015) have disclosed numerous styles of leadership which are technology based. These styles include Distributed leadership style which enhances collective decision making and dividing the responsibilities to take proper action. On other hand, Koech & Namusonge (2012); Fisk (2002); Ruggieri (2009), have found this style of leadership somehow changing in nature because it meets changing demands by having a positive influence on both every team member as well as the performance of institution. In contrast, Vought (2017) has considered three styles of leadership i.e., transformational, transnational leadership, shared leadership, and leaders trait theory as eminent styles resembling e-leadership. However, there are four main aspects of

leadership i.e., style of leadership, devotion, process of leadership in an institution, and institutional overall performance which are inter dependent on each other. In addition, in any educational institution the leadership style of concerned leaders is critical to accomplish the desired outcomes (Manzoor, et al., 2019). According to a previous study the public educational institutions across the world are striving to take in new technologies into their teaching-learning and administrative process.

Numerous previous studies that were available before novel Covid-19 have shown the barriers confronting the educational leaders in establishing e-environment(Ljeski & Reilly, 2010; Barwick & Back 2007), use of technology by those leaders (Lee, 2014; Ljeski & Reilly, 2010; Barwick & Back 2007), and enhancement in educational technology (Bowen et al., 2013). Literature shows very few investigations have been conducted in association with e-leadership. As Van Wart et al. (2019) mentioned that confined number of studies have been done related to the exploration of challenges regarding the implementation of e-leadership. While, Jamson (2013) has mentioned this by supporting the findings of Van Wart et al. (2019). it is also found in the literature that studies on e-leadership concerning the challenges and practices of e-leadership in context of Pakistan particularly the Larkana, Sindh is scarce.

Research Methodology

The current study adopted qualitative design of research. According to Creswell (2013) "A qualitative study is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting". The reason behind is that the researcher believes in subjective constructivist paradigm and the nature of study matches with researcher's epistemological and ontological perceptions. While the aim of the study was to explore the perceptions of school leaders concerning e-leadership practices in context of public sector educational institutions of Larkana Sindh, Pakistan. Additionally, the study utilized the purposive sampling of research. According to Bernard (2002) and Lewis & Sheppard (2006) the purposive sampling is "defined as the thoughtful choice of informants due to the qualities they possess". The researcher selected the respondents very carefully by reviewing their expertise in related fields. The study evolved around eleven public school heads from Larkana that were chosen using purposive sampling. Further the study utilized semi-structured interviews as data gathering tool. The semi-structured interviews were conducted with the help of an interview guide that consisted of open-ended questions to gather data concerning e-leadership problems and practices. On other hand, thematic analysis

was utilized for analyzing the data in this study. As Creswell (2013) stated about thematic analysis "unfolding and emerging of themes from the data includes answering the major research questions and at the same time forming an in-depth understanding of the central phenomenon". This process includes numerous steps such as formalizing the data, coding, generating themes and interpreting the themes into the research paper. However, to guarantee the rigor and repeatability in knowing the important themes related to e-leadership problems and practices and their effect on the dynamics of educational organization. The ethical codes of research were fully followed during the study.

Data Analysis

Findings

Findings cover all the main themes generated from the analyzed using thematic analysis. Overview of main themes is described in the table given below.

Table 1

Major themes on E-leadership practices and their description

Theme	Description
E-communication	Tools and techniques utilize for e-communication between school principals and stakeholders
Technology execution	Approach that makes execution of technology into teaching learning and managerial process
Division of Data Decision Making	Using analyzed for decision making in educational leadership
Continuous professional development	Facilitating continuous guidance and support to instructors to enhance e-leadership abilities
Collaboration and Innovation	Measures that foster collaboration, innovation and teamwork amidst principals and instructors

Table 2

Summary of Main Themes Regarding E-leadership Practices

Respondent ID	F-Communication	Technology execution	Data-driven decision making	Continuous Professional development	Collaboration and innovation
S1	Adopts G-mail and chatting apps for communicating with staff and parents	Utilizes learning management systems for e-learning and assessment	Makes decision based on the data collected	Arranges e-leadership workshops for develop technological skills	Arrange inter-class projects and innovation center
S2	Involves in webinars and online conferences for stakeholders	Integrating online resources and blended mode of learning	Uses statistical tools for assessing students' performance	Gives e-certification for the development of staff and techno-pedagogy.	Offers projects that enhances real world learning experiences in collaboration with other industries.
S3	Involving parents and community using social	Inculcates technolgy based learning activities	Utilizes e-records for managing school performance	Collaborates with other agencies for providing	Establishing tech-labs for students to discover upcoming technologies.

	media platforms		records	training related to e-leadership	
S4	Use messaging apps by using school internet for staff communication	Uses digital white board and interactive textbooks	Adopts data system for maintaining students' academic record	Arranges training sessions for emerging trend on ICT.	Involve staff to participate in tech competitions.
S5	Audio-Video conferencing tools for parental involvement	Employs e-assessment tools and provide feedback to students	Analysis of data concerning behaviors of students for providing them support service	Offers mentor-ship sessions concerning e-leadership	Signs collaborative MOUs with other institutions for practicing innovations.
S6	Use of official website for active communication	Applies simulation for teaching science	Executes predictive apps for findings at risk students	Presents certification for advanced ICT skills.	Arranges combined tasks with community organizations.
S7	Instant collaborative tools for team projects	Uses zoom app for facilitating students away from the school	Checks attendance and participation matrices to enhance school policies	Organizes peer to peer guidance sessions on ICT integration.	Partners with tech organizations for taking initiative concerning innovations.
S8	Uses e-newsletters for announcements and advertisements	Integrate augmented and virtual reality (A&VR) for teaching	Uses an analytic for evaluating school wide performance	Arranges e-workshops annually.	Offers innovative projects of inter disciplines among students.
S9	Utilizes e-discussion forums and discussion board for communication	Uses learning apps and resources by using mobiles	Gather and analyze data for ongoing improvement	Collaborating with different organization for ongoing PDP.	Integrating student-led discoveries and cooperate to overcome challenges.
S10	Adopts live video communication	Uses AI or chat GPT for learning	Utilizes algorithms for predicting the trend related to academics	Organizes training for enhancing AI skills	Appreciates world-wide collaboration through different projects.
S11	Use zoom and google meet for teacher parents' meetings	Uses digital books in the classrooms	Uses AI for informed decision	Offers virtual reality training for long term learning experiences.	Encourage inter-province collaboration through different projects using online platforms.

Central Findings, Key Themes and Supporting Data

Present study after analyzing data found five central themes concerning problems and practices of e-leadership in public sector schools of Larkana Sindh, Pakistan. Technology execution, e-communication, data-driven decision-making, continuous professional development, and collaboration and innovation.

Technology execution

The analyzed data have shown that execution of technology into administrative affairs at public sector educational institutions is very important because enhances the performance of educational leaders in doing their duties and also improves the delivery of lesson. However, school leaders in public sector educational institutions are striving to prefer technological tools in their administrative and leadership affairs.

"We use different technological platforms for our administrative works like google sheet for students and staff attendance, google classroom for collaborative meetings among teacher and parents and many more are there." S2

"Surely! We utilize digital tools in our daily routine but still there are challenges that hinder us the most like high-speed access to internet and latest technology. As technology is one of the growing fields, in our schools there is a lack of updated trends, techniques and tools of technology. This barrier leaves a gap in execution of technology into public sector educational institutions." S5

E-Communication

According to the analyzed data of present it is found that E-communication has made it easy for the educators to collaborate among the educational leaders and their stakeholders. It also makes their communication more transparent. The platforms that were highly used for e-communication at public sector educational institutions are google meet and zoom app for video conferencing, messaging apps like whats app, messenger etc.

"We mostly use Zoom and google meet for video conference which helps us to enhance e-communication and collaboration among the teachers and parents of children. It enables teachers and school management to relate to parents." S1

"We have been connected to the parents of students since we started utilizing the benefit of e-communication. However, it has remained stressful for we people but beneficial." S6

Continuous professional development

The current study showed that enhancing the skills of educational leaders concerning digital skills helps them to better use digital tools and platforms remained crucial for them. *"Our newly appointed teachers are really cooperative and well acquainted with digital skills, so they arrange training sessions for the other educators to polish their digital abilities and aware them about the new digital tools." S2 "The District education office in collaboration with Pakistan Institute of teacher education (PITE) had arranged two times the continuous professional development including one induction training for polishing teachers and leaders' technical skills." S7*

Collaboration and Innovation

The findings revealed that due to the emergence of technology has made it possible for the teachers to teach with innovative ideas of teaching. It may help them to put students in critical thinking. *"We ask teachers to bring new pedagogical techniques into their teaching process like gamification, flipped classes and role play. These techniques an interesting learning environment inside the classroom but arrangement of resources is a hindering challenge."* S11 *"E-leadership facilitated us with different solutions to facilitate students with interesting and motivating learning climate."* S9

Challenges and Barriers

Findings have achieved the objectives of study and showed that e-leadership in the age of 21st century is crucial to be implemented but triggering challenges are distracting it. The challenges include lack of technology-based infrastructure at public sector educational institutions, less awareness of latest digital tools among educators, attitude of educators to integrate ICT, and inadequate funding. However, stakeholders need proper planning and execution to overcome these barriers for successfully integrating e-leadership. *"In my opinion one of the basic challenges is availability of technological infrastructure because I found many students who have eagerness to learn by using internet or other digital gadgets but due to its unavailability they could not do so."* S5 *"Technology is helpful in the teaching-learning process, but old-fashioned teaching methods are still there and even teachers are using those methods. This is just because of their negative attitude towards the use of technology."* S4 *"Our school has only two types of financial support to run the school. One is the school management committee fund (SMC) while, other is contingency fund. The SMC fund is utilized for daily school expensive and contingency fund is utilized for the school reparation. However, no extra or additional funding is given to us to execute technology into school leadership."*

Conclusion and Discussion

Discussion

The current study tried to explore the problems, challenges, and practices of e-leadership in context of public sector educational institutions of Larkana Sindh, Pakistan. The analyzed data of study also revealed similar findings. As it discovered the challenges and practices of e-leadership in Pakistani context particularly the Larkana Sindh. The problems like less resources and poor infrastructure in terms of technology. On other hand, utilization of technological tools into leadership affairs in education are critical to improve any organization. The respondents showed that technical tools like learning management system

(LMS), e-books, and many other gadgets have made it easy for administrators to enhance the speed of their work. While previous studies also have shown that technology is directly proportional to the performance of any institutions (Avolio, Kahai, & Dodge, 2000; Shah & Mehmood, 2013). Nonetheless, findings have revealed numerous infrastructural limitations, specifically in distant schools which have halted at fullest the use of ICT (Ertmer et al., 2012). In addition, skills like collaboration, cooperation, and communication have been boosted by the e-leadership in school. Various digital tools, for example, Zoom, Google meet, Google spread sheet, Google classroom and so on have enabled the educators to collaborate with the parents of students with regards to their performance in the classroom. While, Jameson (2013) has also shown in his study that for establishing a strong collaborative relationship among teacher-parent and community, school leaders can utilize the digital platforms. But on other hand, respondents of the study have shown worrisome challenges regarding the overload of how these digital platforms could be used in a proper way.

The ongoing professional growth of educators has remained a significant aspect of e-leadership. It helps instructors to enhance their technical capabilities. In this regard one of the studies has mentioned that for an effective integration and utilization of ICT training sessions of educators and instructors are very important to be conducted. However, the study also found a dire need of training for the public educational institutions of Larkana to enhance their technical skills.

There were two major aspects of e-leadership; one is bringing new pedagogical techniques for teaching and the other is enhancing problem solving among students. According to the respondents numerous teaching techniques such as gamification, blended learning, and assigning project-based learning were found to be more interesting and fuller learning experiences for students. On other hand, the study of Mishra & Koehler (2006) has supported the same idea by mentioning that e-leadership enables educators to bring innovative pedagogical techniques in classroom for better learning environment. However, for making the integration of these techniques is not free from the problems because of the lack of budget to provide technical resources to instructors.

Furthermore, the findings of study have also discovered that there are also the challenges which are confronting during the integration of e-leadership. The challenges are for example poor ICT based infrastructure, awareness of technological tools among instructors, their negative attitude towards the technology, and limited funds. These challenges have also been earlier discovered by different studies (Ertmer et al., 2012; Mishra & Koehler 2006). These challenges will remain a distraction if not timely overcome.

Conclusion

The present study aimed to explore the perceptions of school principals with regards to the e-leadership practices and challenges in public educational institutions of Larkana Sindh, Pakistan. The conclusion is by emphasizing the findings like the objectives. The challenges of e-leadership i.e., less funds, poor infrastructure and less awareness of latest technological tools are crucial to be overcome for successfully practicing e-leadership. While study also concluded that instructors at public educational institutions of Larkana lag in terms of technical training. They need to be well trained in terms of technology so that they integrate in better way the technology into the classroom. Furthermore, e-leadership is very helpful for the administration of public schools to connect parents and community with school but due to the less funding and resources it remains challenging for them. However, the study utilized qualitative design by leaving a gap for future researchers to investigate the same problem with other research designs like quantitative and mixed method. Nonetheless, the present study provided beneficial perceptions which can help stakeholders to integrate e-leadership at public schools effectively.

Recommendations

➢ Arrange training sessions bi-annually or annually for instructors, educators, and educational leaders so that they can be aware about the latest technological tools and trends and can utilize them for better e-communication.

➢ Provide public educational institutions with appropriate funding and technical infrastructure so that they easily practice e-leadership and enable other educators to implement it in their teaching-learning and administrative process.

➢ Involve school leaders in decision making so that they collaborate with each other at school level.

➢ Use the data available when making decisions about any institution.

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