SINDH TEACHER EDUCATION DEVELOPMENT AUTHORITY

A Qualitative Study For School Advancement through the Sustainable Improvement and Leadership Growth of Educators at State Run Schools for Alpha Gen Z Students

*Areesh Sultana[1],

Educationist, Research and MPhil Scholar Sindh Education and Literacy Department

areesh.hasnain@yahoo.com

Saba Qureshi[2]

Lecturer, MPhil and Research Scholar, Government Degree College for Women

Sabaqureshi85@gmail.com

*Correspondence Author:
areesh.hasnain@yahoo.com
_____

Abstract: This qualitative study examines how teacher leadership development could increase the effectiveness of institutions and prepare schools to educate Alpha Generation Z learners' students which are characterized by their digital-focused skills and preference to collaborative learning as well as high reliance on technology. The evolving demands of 21 st century classrooms require teachers to assume leadership roles that go beyond the traditional teaching approaches. Teacher leadership is now being considered as a critical source of realizing enduring changes in schools particularly in those schools that are in the developing countries such as Pakistan, teacher leadership data were collected using a convenient sample of 15 teachers in the secondary sector schools and by conducting semi-structured interviews and focus groups. Thematic analysis revealed that there are four major themes, including leadership as a communal duty, barriers to the integration of technology into public education, aligning teaching practices with the learning needs of the Alpha Generation Z, and professional development as an engine of continuous improvement. Findings stress that despite the strong commitment of the teachers in the public schools to leadership, they are faced with institutional barriers such as the absence of digital tools, inadequate training, and rigid systems. The study concludes that empowering educators as leaders with technology-supported professional development and collaborative strategies is important in preparing institutions of the public sector to meet the needs of Alpha Gen Z students. Reforms at policy level, special training programs, and extensive leadership in schools are some of the recommendations at reducing education sustainability.

Introduction

The concept of leadership in education has always been associated with principals and school administrators; however, in recent studies, the importance of teacher leadership in facilitating sustainable improvements in schools has been noted. Teachers, who stand at the crossroad between practices and instruction, students, and the other way round, have a unique position in bringing the change inside and outside of the classroom. The aspect of teacher leadership goes beyond the teacher instructional strategies, it involves leading others, initiating change, developing the school climate and being involved in systemic

changes in education (York- Barr and Duke, 2004). In the context of public sector schools, where there is a scarcity of resources and systemic challenges remain a going concern, preparation of teachers to become leaders is particularly important.

Meanwhile, the emergence of Generation Z learners students born during the mid-1990s to the early 2010s creates new issues for educational institutions. Gen Z students are digital natives and emphasize on collaboration, personalized learning, and instant feedback (Seemiller and Grace, 2019). In the case of public schools, most of which operate within the rigidly bureaucratic environments and have problems with access to technology, the need to prepare the teachers to lead the learning process in Gen Z is urgent. Without sound leadership training, there is a risk of schools being distanced by the needs of the students.

The schools of developing countries such as Pakistan often have overcrowded classes, limited technologies, traditional methods of instruction, and a top-down system of decision making (Bashir, 2021). These factors limit the autonomy and artistic expression of teachers and make schools incapable of achieving sustainable progress. Even though such changes are usually brought forward by the policymakers, the actual performance of such moves is dependent on the ability of the teachers to launch them at the grassroots level. Increasing the role of teacher leadership, in its turn, is not only a way to improve teaching, but also to build resilience and flexibility in schools.

Problem Statement

Even with the increased awareness of teacher leadership as an educational reform factor, the public sector schools remain unprepared to satisfy the needs of Alpha Gen Z students. The teachers are often lacking in the professional development of their skills in the field of leadership and technology, which restricts their ability to increase significant student participation. Also, the leadership in these institutions is usually concentrated on the administration and there is little room or possibility of shared or collaborative leadership. Consequently, there is an acute need to explore the way the evolution of teacher leadership can contribute to the long-term school improvement in a manner that is relevant to the requirements of Alpha Gen Z students.

Purpose of the Study
This research is aimed at investigating the role of developing teacher leadership in promoting sustainable school improvement in government education facilities, with a focus on preparing teachers to reach and teach Alpha Gen Z students. The proposed research will generate insights into the way of leading in areas where resources are scarce and focused on the unique characteristics of digitally savvy pupils.

Significance of Study

This study contributes to the growing body of literature on educator leadership, sustainable practices in education and generational learning needs. It highlights the role of educators as key change agents in the public sector schools and provides evidence-based recommendations to policy makers, educational leaders and teacher training programs. Addressing the overlap of guidance, technology and readiness in generation, this study offers practical avenues of developing stronger and future ready educational establishments.

Literature Review

The leadership of teachers has become an important aspect of school reform and long-term school enhancement. Leadership in schools, so long seen as an exclusive position of principals and administrators, is now something perceived as a distributed and collaborative process, teachers being the major actors in the transformation (York-Barr and Duke, 2004). In the modern educational system, where technological innovation and the learning processes of Generation Z (Gen Z) require the ability to remain constantly adaptable, the empowerment of teachers to lead the way has become a critical aspect. It has been determined in the literature that teacher leadership can improve the quality of instruction, develop innovation and capacity in the organization to promote long-term school improvement (Day and Sammons, 2013; Muijs and Harris, 2007).

This part will examine international and local literature pertaining to the topic of teacher leadership, sustainable school improvement, and the educational requirements of Gen Z students. It also dwells on Pakistani environment where leadership development is challenged by resources limitation and hierarchical societies and determine missing links in the current literature.

Teacher leadership is the term that is used to refer to the fact that some teachers are in the initiative to enhance teaching and learning in and out of their classrooms, the teachers who influence and contribute to the development of the institutions (Katzenmeyer and Moller, 2013). York-Barr and Duke (2004) explain that teacher leadership incorporates guidance of other teachers, curriculum development, guiding professional learning communities, and engaging in decision making. Such leadership is not associated with any official power but experience, initiative, and cooperation.

Recent researchers define teacher leadership as a multidimensional concept that includes three prevailing frameworks, which are transformational, distributed, and instructional leadership. They represent two different prisms through which one can consider the role of teacher in shaping both the education practice and the culture of an organization (Leithwood and Jantzi, 2000; Harris, 2014; Spillane, 2006).

Transformational leadership is focused on vision, motivation and teamwork. Transformational leaders like teachers can motivate fellow teachers, institute innovation, and establish a common purpose in the school (Leithwood and Jantzi, 2000).
According to the research, this type of leadership leads to teacher morale and better student learning performance through a shared sense of growth commitment (Ng, 2019). Transformational teacher leaders serve as exemplarism, and they exhibit the values of reflection, creativity, and professional integrity (Hallinger, 2018).

Transformational leadership can be the driving force in Pakistan, where educators tend to be little motivated because of bureaucratic restrictions in the country, which are common in the public schools. It gives educators autonomy to promote the question of obsolete practices, spearhead the changes in pedagogy and evaluation (Afzal and Rizvi, 2021). Distributed leadership is a leadership that is distributed among individuals to networks of professionals. According to Spillane (2006), this is described as the relationship between leaders, followers and the situations. According to Harris (2014), distributed leadership fosters teamwork and shared accountability towards the student outcomes. This model promotes collaboration between teachers to address issues together, discuss professional

matters, and build school improvement processes together.

Empirical evidence proves that the distributed leadership increases the trust and job satisfaction and organizational resilience (Nguyen et al., 2021). In less-developed societies such as Pakistan, distributed leadership decreases excessive dependency on the administrative authority, whereby teachers will be left with the freedom to influence the instructional decisions independently (Shamim and Anderson, 2010).

Instructional leadership is concerned with improving student achievement and quality of teaching. Instructional leaders are those teachers who are the best models of what should be taught, lead colleagues regarding lesson planning, and are involved in curriculum development (Hallinger, 2018). Instructional teacher leadership promotes reflective practice and peer observation, which enhances consistency in the way pedagogically, the classrooms are conducted.

Studies in the Asian environment indicate that a combination of instructional leadership and professional learning communities' results in the long-term improvement (Harris and Jones, 2019). This method is quite suitable to the Pakistani context, where in most cases, the support of instructors and peer mentoring is not part of the instructional process in the state schools (Fatima et al., 2022).

Sustainable school improvement means that a school can sustain itself, responding to change and constantly innovating without necessarily depending on outside interventions (Hopkins, 2001). According to Day and Sammons (2013), sustainability can be attained when the leadership, reflection, and collaboration capacity are internalized in the school culture. One of the fundamental mechanisms that sustainability is achieved is the teacher leadership mechanism because teachers are the most positioned towards the learners and realities in the classrooms. It has been found that teacher leadership can help in providing sustainable improvement via a few pathways:

1.   Capacity Building: Teacher leaders provide mentoring of their colleagues, assist them in creation of new teaching strategies, and continuous professional assistance (Muijs & Harris, 2007).

2.   Collective Efficacy: The shared leadership increases the responsibility, which increases the morale and trust amongst the teachers (Day et al., 2020).

3.   Adaptive Innovation: Leader-teachers find solutions to contexts and initiate classroom innovations that may be institutionalized in the long run (Ng, 2019). The mechanisms are essential in Pakistan since the lack of resources and bureaucratic inflexibility prevents the top-down implementation of reforms. Raising the status of teacher as a leader will allow making changes in a sustainable way (Saleem, 2023).

Generation Z (1995-2010) is a generation that is highly technological. They are multitaskers, rapid feedbackers, interactive and collaborative learners who are digital natives (Seemiller and Grace, 2019). They place importance on independence, relevance and the flexibility in teaching (Alruthaya et al., 2021). There are, however, challenges associated with their dependency on technology like lack of focus, low attention span and lack of physical interaction (Prensky, 2010).

The educational styles of gen Z would be forcing educators to reconsider the way they teach through innovative pedagogic frameworks like blended, flipped, and project-based learning. To satisfy the expectations of these learners, teachers should incorporate digital tools, such as Google Classroom, interactive simulations, and learning management system (LMS) (Ertmer and Ottenbreit-Leftwich, 2010). This change should be facilitated by leadership, teachers should lead their colleagues in the creative and critical use of technology (Farooq, 2020).

Teacher leadership and technology integration are closely related. Research indicates that teacher leaders are very instrumental in supporting technology-based reforms through modeling and mentoring colleagues (Ertmer & Ottenbreit-Leftwich, 2010). According to a study conducted by Anderson and Dexter (2019), the schools where the teacher leadership is active exhibit better technology adoption and student engagement.

The Pakistani environment has inadequate infrastructure and insufficient training that limits the integration of technology (Bashir, 2021). Nevertheless, by empowering teachers as digital mentors, it becomes possible to identify locally relevant and low-cost plans like peer-led ICT workshops and blended lesson plans (Hoodbhoy, 2021). These programs involving the teacher help to close the divide between what policy intends should happen in the classroom and what happens.

National Education Policy (NEP) 2017 of Pakistan focuses on the professional growth of the educators and the building of their leadership skills. Likewise, the Digital Pakistan Policy (2018) will widen the access to technology as well as digital literacy among teachers. Even with these structures, digital access and teacher training continue to be major disparities experienced by public schools in the country (Pakistan Education Statistics, 2022).

Single National Curriculum (SNC) was implemented to make education fair, whereas critics state that this change cannot provide teachers with adequate training and digitalization (Hoodbhoy, 2021). These reforms may be a shame unless thorough leadership development is undertaken.

According to a few studies, there are achievements and shortcomings in the practice of teacher leadership in Pakistan:

Afzal and Rizvi (2021) discovered that the teachers in urban Pakistan exhibit leadership behaviors but are not institutionally recognized and professionally developed.
Fatima et al. (2022) found that professional training promotes teacher leadership and performance but must be followed up systematically to be long-term.

Saleem (2023) found that context-specific leadership programs are necessary in order to maintain improvement in public schools.

One of them is that the styles of leadership have a direct impact on teacher commitment and the climate of the institution (Panezai and Shah 2021).

These results highlight the fact that Pakistani teachers are leaders who have the potential of achievement but must work in strict organizational cultures that restrain innovation and autonomy.

The development of the leadership capacity is based on teacher professional development (PD). Darling-Hammond et al. (2017) claim that the effective PD is ongoing, collaborative, and classroom-oriented. In the cases when PD is integrated with leadership training, teachers are not only able to acquire pedagogical knowledge but also learn to theorize as well as to communicate.

PD programs in Pakistan are largely lecture-based and do not relate to classroom realities (Jamil et al., 2022). It is necessary to shift to practice-based PD, which involves mentorship, peer observation, and digital pedagogy. The global data indicate that schools that combine PD and leadership functions with the so-called teacher coaches or digital leaders demonstrate observable improvements in the quality of instructions and student involvement (Nguyen et al., 2021).

Regardless of its potential, there are impediments to teacher leadership in the public schools:

1. Hierarchical culture: The culture tends to centralize decision making where there is little room towards shared leadership (Shamim & Anderson, 2010).
2. The lack of resources: A significant number of schools do not have access to digital tools, professional literature, and funds to innovate (Bashir, 2021).
3. Lack of PD opportunities: One-time workshops do not often change into leadership practices (Fatima et al., 2022).
4. Cultural perceptions: The leadership is frequently related to authority and does not involve collaboration, which is against grassroots efforts (Rizvi, 2019).
5. Scarcity of contextualized empirical research on the manifestation of teacher leadership in the Pakistani public schools.
6. Lack of adequate research on sustainable leadership models between administrative control and teacher autonomy.
7. Not many studies relate educator leadership that responds to the needs of generational learning, especially how educators can prepare to meet the needs of Generation Z students.

The nexus of educator leadership, technology use, and sustainable school development is yet to be studied in detail in South Asian contexts.

The given gaps are addressed in this study based on the lived experiences of teachers and their capacity to develop leadership that can provide sustainable changes in the setting of the Pakistani public school, as well as can help teachers to address unique needs of the Gen Z students. To counter these hindrances, the systemic changes are necessary, which should acknowledge teacher agency and offer platforms to collaborate with and experiment.

The provided literature identifies some evident connections between teacher leadership, sustainable reformation, and digital transformation as a solution to Gen Z learners. But certain gaps remain.

Methodology
Research Design
This research project took the form of a qualitative research design to examine the perspectives of the educators regarding leadership development, long-term school improvement, and the readiness of the public sector schools to teach Alpha Generation Z

students. Qualitative methods were selected because they will help to immerse in the real-life experiences of the participants and demonstrate the complexity of leadership practices in challenging educational settings (Creswell and Poth, 2018). To identify the emerging themes that define the prospects and challenges to teacher leadership in the Pakistani public sector educational institutions, a research method was used.

Participants and Sampling

The participants were chosen based on the purposive sampling technique that enabled the researcher to recruit educators who had relevant backgrounds in leadership roles. The fifteen teachers (8 females, 7 males) of Karachi, Pakistan high schools participated in the study.

Teachers were selected on the grounds of a minimum of five years of teaching experience and involvement in school-based projects such as curriculum development, mentoring or leadership of extracurricular activities.

Table 1: Participant Demographics

Participant ID	Gender	Years of Experience	Subject Area	Leadership Role/Experience
T1	Male	12 years	English	Head of English Department
T2	Female	8 years	Science	Mentor Teacher
T3	Female	15 years	Social Studies	Curriculum Coordinator
T4	Male	10 years	Mathematics	ICT Integration Lead
T5	Female	7 years	Urdu	Extracurricular Activities
T6	Male	9 years	Islamiat	Professional Development Facilitator
T7	Female	14 years	Biology	Peer Coaching
T8	Male	11 years	Physics	School Improvement Team
T9	Female	6 years	Computer Science	ICT Club Coordinator
T10	Male	13 years	Chemistry	Examination Committee Lead
T11	Female	5 years	English	Classroom Innovation Team
T12	Male	9 years	Mathematics	School Council Member
T13	Female	16 years	History	Departmental Coordinator
T14	Male	7 years	Geography	Teacher Union Liaison
T15	Female	8 years	Science	Student Leadership Advisor

This diversity of the participants ensured that various topics, background of leadership and different genders were represented and thus, varied understanding of leadership development and Gen Z learners.

Data Collection

The information was collected using semi-structured interviews and focus groups. Semi-structured interviews (40 to 60 minutes each) allowed the respondents to share their experiences and reflect on their leadership roles in an in-depth way. There was also a conversation between teachers in two focus group discussions (6-7 people each), which encouraged the contributors to develop a shared vision of barriers and the most appropriate solutions.

The interviews were conducted in English and Urdu, depending on the choice of the interviewee and were taped with their consent. The transcriptions were then translated to

English to be examined.

Data Analysis

The thematic analysis was used to analyze data considering the six steps described by Braun and Clarke (2006):

1. Familiarizing with the information (reading transcripts several times).
2. Designing preliminary codes (with an emphasis on important phrases).
3. Searching themes (grouping codes).
4. Checking themes (checking consistency with data).
5. Defining and naming themes.
6. Producing the final report that includes sample quotes.

Coding was done manually, and the NVivo software helped in sorting out the transcripts. There were four main themes, which were:

1. Leadership through collective accountability.
2. Obstacles to the integration of technology.
3. Changing strategies to suit the needs of Gen Z.
4. The catalyst of professional development.

Ethical Considerations

The institutional review committee in charge of providing ethical clearance approved it. The participants were informed about the purpose of the study, assured anonymity and they were requested to sign a written consent. A means of protecting anonymity was the use of pseudonyms and participants could pull out at any time.

Findings

Four primary themes were determined by means of semi-structured interviews with ten teachers at the public-sector schools: (1) Leadership as a Collective Duty, (2) Problems in the Public Educational Institutions, (3) Readiness to Technology and Generation Z Students, and (4) Professional Growth as a Change Driver. The teacher views provided deep insights into the facts of leadership development in their workplace.

Theme 1: Leadership: Collective Responsibility.

Teachers kept on underscoring the fact that leadership should not be confined to the office of the principal. Instead, it needs to be worked on in a team to promote continuous improvement. Leadership was described by many people as being a collaboration and empowerment process.

One participant stated:

The aspect of leadership is usually considered in our school as the work of the head teacher. But we all lead in our own ability. That is also a kind of leadership when we oversee a project or take students under our guidance that are outside of conventional teaching (Teacher 3).

Another teacher added:

Being a leader does not only entail possessing power. It includes the leadership of colleagues, supporting the beginning educator, and supporting student success. Once this responsibility is shared out, the institution prospers.

Sub-theme analysis also revealed that mentorship, peer guidance, and student-centered practices by educators were linked to leadership. These views indicate that teacher leadership is an undervalued asset of sustainable change in the Pakistani state education institutions.

Theme 2: Barricades in Public Sector Schools.

The respondents also identified significant challenges that hinder development of teacher leadership. These barriers included bureaucracies, resource dearth, political interfering and rigid hierarchies.

One teacher explained:

We would like to take some measures but, in many cases, decisions are made by senior management. Teachers are rarely consulted, and they feel that they cannot make real change. (Teacher 1)

Another respondent noted the limitation in terms of infrastructure:

At times, we cannot even install the most basic of technological gadgets like projectors or Wi- Fi. How should teachers spur innovation when they do not have the basic resources? (Teacher 6)

Third teacher described cultural barriers:

The aspect of leadership in our institutions of learning has remained a source of control and influence. The teachers are not encouraged to lead efforts or research. The point of view is traditional.

These reactions imply that there are institutional and cultural obstacles that limit educator leadership, which impedes continuous school improvement in public education.

Theme 3 Preparedness to Technology and Generation Z Students.

One trend as the changing nature of classrooms due to Gen Z students. Teachers confirmed that use of technology is essential in leadership in this era. However, they expressed diverse feeling of readiness, they saw openings and difficulties.

One participant reflected:

We are not as well informed about technology as our learners are. They use Tik Tok, Instagram and YouTube daily. Unless we follow suit, they are not going to listen to us (Teacher 2).

The other technology that is mentioned as a leadership skill:

I believe that the current teacher leadership will involve the ability to use digital technology effectively. Not only traditional textbooks but a leader has to provide students with innovative resources, as well.

Still, there were also barriers to preparedness:

Many teachers are afraid of technology because they were not trained. The students are moving on, and we are falling behind. This gap should be addressed.

This topic showed how pressing the lack of digital leadership skills in educators is to be able to reach Gen Z learners effectively in community institutions.

Theme 4: Professional Growth as a Change Agent.

It was always emphasized by the teachers that professional development in the field of leadership was important. Instead, they perceived training as a continuous cycle of learning, reflection and adaptation.

One participant noted:

Whenever we attend workshops, we are given a boost in motivation. The problem with this, however, is that such training sessions are not very frequent and, in some cases, they do not apply to our real classroom issues (Teacher 4).

The connection between PD and permanent improvement was explained by another:

Unless we continuously develop as professionals, we do not grow as leaders. Educators can have the confidence to undertake leadership roles through self-reflection and training (Teacher 10).

Another suggestion of the teachers was that professional development must be more practice- like and technology-based.

Discussion

The results of this paper show that teacher leadership development is a critical component of sustainable school improvement, particularly in the public sector schools that are getting ready to teach Gen Z learners. The discussion shows the intersection of distributed leadership, systemic barriers, integrating technology, and professional development in determining the school improvement path.

The described practice of recognizing leadership as a distributed responsibility reflects the ideology of distributed leadership promoted by Spillane (2006) and Harris (2014). In this research, teachers revealed that when leadership is shared, they are empowered and get motivated to contribute. This is in line with other studies that have been carried out before by York-Barr and Duke (2004) which highlighted that teacher leadership enhances the quality of instruction as well as promoting collaborative cultures in schools.

The identified systemic and bureaucratic barriers are reflected not only by the South Asian educational systems (Bashiruddin, 2020; Rizvi, 2019) but also by the participants. This is

because in the Pakistani state, the public schools have a hierarchical decision-making structure that imposes obstacles to teacher empowerment. Such restrictions not only reduce leadership opportunities, but they also maintain the complacency culture instead of an innovative culture (Shah, 2012).

The technology readiness theme indicates the special needs of Gen Z learners, who are used to digital learning facilities (Prensky, 2010; Seemiller and Grace, 2016). Teachers saw the need to change but they could not because of lack of training and resources. This brings to fore the disconnection between the focus on ICT integration at the policy level and the reality on the ground in the classroom of the public school (Farid et al., 2019).

Lastly, professional development plays an important transformative role as highlighted in the study. As it was pointed out in previous literature (Day and Sammons, 2016; Darling-Hammond et al., 2017), sustained, context-based training can help teachers to become effective leaders. The demands of participants to proceed with their development all the time indicate that the existing practices are not aimed at leadership development enough. The integration of leadership capabilities into PD models would help to tackle systemic obstacles as well as digital preparedness.

Recommendations:
1. Police level reforms.
To encourage the decentralization of leadership, policymakers need to encourage distributed and cooperative, instead of only hierarchical strategies.

Officially recognized teachers in schools as leaders (as curriculum coordinators, digital mentors, peer coaches, etc.).

Ensure equal distribution of resources to ensure that the under-resourced schools can access technology, training and access to leadership opportunities.

2. Improving professional development (PD).
Design consistent and practice-oriented PD initiatives with a focus on digital pedagogy, leadership skills, and Gen Z learning preferences.

Transform current teacher education systems to include leadership training as a way of developing reflective, creative and adaptive leaders.
To promote mentoring and group problem solving, establish peer schools learning networks.

3. Technological integration with Gen Z students.
Provide educators with structured digital literacy workshops which will provide them with access to interactive tools in addition to Google Classroom and LMS.

Meet the collaborative and adaptive learning preferences of Gen Zer's by combining models of hybrid learning, which combine traditional and online learning. In state schools, particularly in economically disadvantaged areas, ensure that you have reliable digital access (electricity, machines, internet).

4. The school-Wide Leadership Frameworks.
Develop organizational systems that distribute leadership roles between the students, teachers and administrators.

Ask schools to form leadership teams where educators make the head in such areas as student participation, curriculum redesign, and technology.

Promote a culture of shared responsibility and therefore, the leadership is associated with outcomes such as institutional sustainability and student learning.

5. Addressing Cultural and Systemic barriers.
Participate in the decision-making mechanisms at the school and district level with the aim of reducing the red tape limitations.

Create awareness to school officials about the necessity to shift the authority-based strategies to the empowerment-based ones.

Establish monitoring and evaluation structures that underline and Honor teacher-initiated and conceived initiatives and thoughts.

6. Practice and Research Future.
Carry out longitudinal research to determine the impact of teacher leadership development on school improvement and performance of students.

Exploratory Inquiry Determine cross-district and provincial case studies to identify scaled teacher leadership patterns.

Design leadership and technology initiatives that fit in the context can be achieved through facilitating partnerships among colleges, NGOs, and schools.

Conclusion
This paper indicates that teacher leadership development in the public sector schools is a key element to sustainable school enhancement and keeping up with the needs of Gen Z students. The essential ways are shared leadership practices, systemic reform, technology integration and sustained professional development. Although there are still obstacles, the concept of teacher empowerment as a leader is a viable solution in improving the quality and sustainability of the education system in the Pakistan public sector.

REFERENCES

Afzal, S., & Rizvi, M. (2021). Teachers' beliefs about their leadership practices and leadership opportunities: Lessons from a correlation study in urban Pakistan. *International Journal of Leadership in Education*, 27(5), 1150–1171. https://doi.org/10.1080/13603124.2021.1964606

Shamim, F., & Anderson, S. (2010). Developing teacher leadership for school improvement in Pakistan: A comparative study. *Pakistan Perspectives*, 15(1).

Panezai, Z., & Shah, M. (2021). Relationship between principals' leadership styles and teachers' professional commitment in public schools of Ziarat, Balochistan. *Pakistan Journal of Social Research*, 3(4).

https://doi.org/10.52567/pjsr.v3i4.277

Fatima, M., Khan, T. M., & Jabbar, M. N. (2022). Effect of professional training on teacher leadership and teachers' performance. *Global Social Sciences Review*, 7(1), 31. https://doi.org/10.31703/gssr.2022(VII-I).31

Jamil, M., Sewani, R., & Muhammad, N. (Year). Leadership practices of head teachers: Primary school teachers' perspective in public schools of Punjab. *Research Journal for Societal Issues*. https://doi.org/10.56976/rjsi.v6i1.178

Asghar, Z., & Mukhtar, S. (Year). Interactive effect of school principals' leadership styles and teacher characteristics on curriculum implementation at public secondary schools of Punjab. *UMT Education Review*. https://doi.org/10.32350/uer.31.05

Abbasi, S., Abbasi, P., Alvi, H., & Murk, T. (Year). The impact of leadership styles on teacher effectiveness: A study in Larkana schools. *The Critical Review of Social Sciences Studies*. https://doi.org/10.59075/08p39x93

Parveen, K., Tran, P. Q. B., Khan, A. H., & Shah, A. H. (2022). Impact of principal leadership styles on teacher job performance: An empirical investigation. *Frontiers in Education*, 7. https://doi.org/10.3389/feduc.2022.814159

Spillane, J. P. (2006). *Distributed leadership*. Jossey-Bass. "Digital native." (n.d.). In *Wikipedia*.

Alruthaya, A., Nguyen, T.-T., & Lokuge, S. (2021). The application of digital technology and the learning characteristics of Generation Z in higher education. *arXiv*. https://doi.org/10.48550/arXiv.2111.05991

Afzal, S., & Rizvi, M. (2021). Teachers' beliefs about their leadership practices and opportunities in urban Pakistan. *International Journal of Leadership in Education, 27*(5), 1150–1171. https://doi.org/10.1080/13603124.2021.1964606

Alruthaya, A., Nguyen, T. T., & Lokuge, S. (2021). The application of digital technology and learning characteristics of Generation Z in higher education. *Journal of Education and Learning, 10*(6), 150–162. https://doi.org/10.48550/arXiv.2111.05991

Bashir, S. (2021). Challenges of technology integration in Pakistan's public sector schools. *Asian Education Review, 9*(3), 122–135.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.

Day, C., & Sammons, P. (2013). *Successful school leadership*. Education Development Trust.

Ertmer, P. A., & Ottenbreit-Leftwich, A. (2010). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. *Journal of Research on Technology in Education, 42*(3), 255–284.

Fatima, M., Khan, T. M., & Jabbar, M. N. (2022). Effect of professional training on teacher leadership and performance. *Global Social Sciences Review, 7*(1), 31–45. https://doi.org/10.31703/gssr.2022(VII-I).31

Farooq, M. (2020). ICT adoption in Pakistani schools: A case of public-sector integration barriers. *Pakistan Journal of Educational Technology, 1*(2), 50–65.

Hallinger, P. (2018). Bringing instructional leadership to scale: The role of professional learning communities. *School Leadership & Management, 38*(2), 77–89.

Harris, A. (2014). Distributed leadership matters: Perspectives, practicalities, and

potential. *Corwin Press.*

Harris, A., & Jones, M. (2019). Teacher leadership and educational change: The case for professional learning communities. *Journal of Educational Change, 20*(2), 1–15.

Hoodbhoy, P. (2021). The single national curriculum and the challenge of educational equity in Pakistan. *Dawn Education Review.*

Hopkins, D. (2001). *School improvement for real.*

Jamil, M., Sewani, R., & Muhammad, N. (2022). Leadership practices of head teachers: Teachers' perspectives from Punjab public schools. *Research Journal for Societal Issues, 6*(1), 45–61.

Katzenmeyer, M., & Moller, G. (2013). *Awakening the sleeping giant: Helping teachers develop as leaders* (3rd ed.). Corwin.

Leithwood, K., & Jantzi, D. (2000). The effects of transformational leadership on organizational conditions and student engagement. *Journal of Educational Administration, 38*(2), 112–129.

Muijs, D., & Harris, A. (2007). Teacher leadership in (in)action: Three case studies of contrasting schools. *Educational Management Administration & Leadership, 35*(1), 111–134.

Ng, F. S. D. (2019). Teacher leadership for educational change: A review and future agenda. *Asia Pacific Journal of Education, 39*(4), 1–17.

Nguyen, D., Harris, A., & Ng, D. (2021). Distributed leadership and the exercise of power: Building capacity for professional learning in schools. *Educational Management Administration & Leadership, 49*(4), 628–645.

Pakistan Education Statistics. (2022). *National Education Management Information System (NEMIS).* Ministry of Federal Education, Pakistan.

Panezai, Z., & Shah, M. (2021). Relationship between principal leadership styles and teachers' professional commitment in Balochistan. *Pakistan Journal of Social Research, 3*(4), 20–34.

Prensky, M. (2010). *Teaching digital natives: Partnering for real learning.* Corwin.

Rizvi, M. (2019). Challenges to teacher empowerment in Pakistan's education reforms. *South Asian Studies, 34*(1), 75–89.

Saleem, S. (2023). A phenomenological investigation of school leadership development in Pakistan. *Pakistan Social Sciences Review, 7*(3), 475–486. https://doi.org/10.35484/pssr.2023(7-III)38

Seemiller, C., & Grace, M. (2019). *Generation Z: A century in the making.* Routledge.

Spillane, J. P. (2006). *Distributed leadership.* Jossey-Bass.

York-Barr, J., & Duke, K. (2004). What do we know about teacher leadership? Findings from two decades of scholarship. *Review of Educational Research, 74*(3), 255–316.