

# HOLISTIC LEADERSHIP FOR SCHOOL IMPROVEMENT: A SYSTEMS THINKING FRAMEWORK FOR SCHOOLS IN PAKISTAN

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DOI: <https://doi.org/10.5281/zenodo.20807684>

Received	Accepted	Published
24 April 2026	07 June 2026	23 June 2026

## ABSTRACT

Schools function as interdependent systems where leadership practices, teacher engagement, school culture, policy implementation, resources, the needs of students and community relationships are interdependent. This paper reviews and critically discusses the use of systems thinking as a practical tool for holistic leadership and sustainable school improvement in Pakistan. The paper utilizes a conceptual and literature approach to examining pertinent research literature on systems thinking, transformational leadership, distributed leadership, complexity theory, and educational leadership in the context of developing countries. The other perspectives will be used for the analysis of specific leadership practices and organizational conditions, while systems thinking will be adopted as the analytic framework. Four dimensions of the paper: Interdependence, Feedback loops, Leverage points and Contextual constraints. The analysis reveals that isolated efforts for sustainable improvement are not likely to be successful without taking into consideration relationships between school conditions. Coherent policies, regular feedback routines, and meaningful teacher participation, professional trust, and contextually relevant professional learning can support improvement efforts. School-level leadership, however, is not enough to substitute for system-level changes. In Pakistan, the effectiveness of efforts to improve may be constrained by limited resources, inadequate infrastructure, teacher shortage, limited authority of teachers, and fragmentation of the policy. The paper is based on the assumption that holistic leadership should not be seen as a panacea or an added responsibility for individual head teachers. Rather, it is a process of diagnosis, specific action, feedback, reflection and adaptation that is context-specific. Coordinated responsibility is needed at school and across the education system for sustainable improvement.

**Keywords:** Systematic Thinking, Holistic Leadership, School Improvement, Leverage Points, Feedback Loops, Contextual Constrains, Pakistan

## 1 INTRODUCTION

Schools are immersed in an ever more complex context. The role of the educational leader is to facilitate education and learning; meet policy demands; foster student wellbeing; enhance teacher engagement; liaise with families; and

allocate scarce resources. These duties are interrelated. Because of this, the school improvement efforts need to be ongoing and not limited to small-scale, specific projects or the principal's workload.

The traditional school leadership models tend to disassociate administrative management, instructional leadership, pastoral care, staff development and community engagement. All of these are vital, but individually addressing each of these responsibilities could result in sub-optimal improvements. A school could adopt a new policy for assessment without thinking about the time, training and professional support teachers would need to implement assessment evidence effectively. In the same way, a school can try to boost attendance without taking the time to consider how family factors, school environment, transportation, safety, or community trust affects attendance.

A helpful perspective on these problems is systems thinking. It challenges leaders to look at the school as a whole system and not as a series of distinct activities. Shaked and Schechter (2016, 2017) state that systems thinking enables school leaders to see patterns, relationships, and interactions between various aspects of school life.

This viewpoint is aligned to the idea of holistic leadership. This paper uses the term holistic leadership to describe a leadership style that is ethical, relational, and systems oriented in its approach to school improvement. It includes an understanding of the interactions among a variety of elements of leadership practices, teacher engagement, school culture, policy application, resources, student needs, and community relationships.

Leadership is not typically an agent of learning, but it is rather a facilitator. It is a phenomenon that is typically shaped by organizational factors like teacher collaboration, professional learning, curriculum coherence, expectations and school climate. Robinson, Lloyd, and Rowe (2008) demonstrate that leadership practices relative to teaching and learning are more effective on a student's outcome than overall leadership practices. In the same vein, Hallinger (2011) underscores the need to enhance the capacity and environment needed for improvement through leadership for learning.

A systems thinking approach is especially pertinent in Pakistan. School leaders can operate in environments with limited resources, less teachers, poor facilities, top-down/bottom-up

decision making, limited teacher autonomy and access to professional development. These structural conditions will affect the ability of schools to undertake improvement plans.

Holistic leadership combined with systematic thinking is key for the sustainable school's improvement. School improvement cannot be seen as a series of disjointed efforts, or as solely the business of an individual principal. Rather, it must be seen as an ongoing process that is influenced by a complex set of interconnections, feedback, structures, and relations between schools and the broader education system. In Pakistan, this is particularly relevant in environments with constrained resources, a high degree of centralization in decision making, unequal access to education, and weak infrastructure, as is the case for school leaders. Holistic leadership approach is not the ultimate solution to the above problem but provide a framework for achieving the goals.

### **Research Problem**

When policies, leadership, teacher development, assessment, school wellbeing, and community engagement are seen as discrete issues, school improvement can be fragmented. A policy that is geared toward enhancing student achievement may not be successful if teachers are not adequately trained, provided time for collaboration, access to materials for learning, or opportunities for using assessment evidence effectively.

The challenge is especially pronounced in Pakistan where leaders could be operating in environments where they have access to limited resources, teachers, infrastructure, and centralized decision-making and differential access to professional development. Schools' ability to respond to improvement plans is affected by these conditions. The issue should, therefore, not be taken as a shortcoming in individual leadership. It should also be considered as a systems problem.

A systems thinking approach is useful, as it moves the analysis from problems to patterns instead of patterns. It is used to illustrate how leadership practices, teacher engagement, school culture, policy implementation, school resources and

community relationships interrelate. In this paper, therefore, the focus will be on holistic leadership.

### **Aim of the Paper**

This paper seeks to critically review how systems thinking can contribute to the practice of holistic leadership and sustainable school improvement in the context of Pakistan. It examines how interdependent elements such as teacher engagement, school culture, policy congruence, resources and community involvement affect efforts toward improvement. The paper also reflects the structural constraints that negatively affect the effectiveness of the school's leadership and explores contextually appropriate pathways for improvement.

### **Research Questions**

This paper is based on the following research questions:

1. How can systems thinking be used to help appreciate and explain holistic leadership and school improvement?
2. In what ways can factors like teacher engagement, school culture, policy alignment, and structural barriers be interconnected aspects of school improvement?
3. How can holistic leadership be applied in the context of schools in Pakistan?

### **Scope of Analysis**

The analytical approach adopted in the paper is the systems thinking approach. The supporting perspectives include transformational leadership, distributed leadership and complexity theory when they are applicable to the aspects of school improvement. Relationships between leadership practices and school-level conditions and wider structural barriers are considered rather than as separate topics for analysis.

### **Methodological Approach**

A conceptual (also literature) approach is used in this paper. It does not include primary empirical research or new school data collection. Rather, it combines pertinent literature on systems thinking, holistic leadership, transformational leadership, distributed leadership, complexity theory, and school improvement.

Literature is examined thematically using four lenses of systems thinking: interdependence, feedback loops, leverage points and contextual constraints. The dimensions offer a common framework to consider the connections between leadership practices, school culture, and teacher engagement, implementation of policies, school resources, student needs, and community partnerships.

This paper is not a systematic literature review, but rather a critical conceptual analysis. This is not to say that all relevant studies have been selected. Rather, it utilizes selected literature to create and apply a well-defined analytical framework to grasp the concept of holistic leadership and school improvement in Pakistan.

### **2 Systems thinking as the Primary analytical Framework**

It is essential to develop the ability to think systemically as the main analytical lens. This paper focuses on systems thinking to serve as the central framework because school improvement is not created by one leadership practice, policy or intervention. A school is a social system where the components of leadership, teacher capacity, student needs, school culture, community relations, resources and policy needs interact with each other. Changes in one area of the school can have positive or negative impact on another area. According to Shaked and Schechter (2016, 2017), systems thinking allows the school leader to view the school as a whole, and not just as a collection of individual issues. This is a different way of thinking, which transforms the questions leaders ask. Low achievement is not a problem of poor teaching in the classroom by itself, for instance. It could also be related to teacher workload, lack of professional development, teacher attendance, poor learning materials, lack of parental involvement, assessment practices, or a culture of limited cooperation. Therefore, the essential benefit of systems thinking for leaders is to dig deeper than observable symptoms and explore the relationships and patterns that perpetuate a problem.

Four analytical dimensions of systems thinking are introduced in this paper:

### **Interdependence, feedback loops, leverage points and contextual constraints.**

**Interdependence** is the impact of the various parts of the school upon each other. It is not just a matter of teacher engagement, school culture, policy implementation, student attendance, and curriculum planning or resource availability. For instance, a professional development effort that fails to help articulate the necessity for sharing, fails to connect with what happens in the classroom, and is not leveraged to guide school leaders in using data for improvement is unlikely to be effective.

**Feedback loops** are patterns that have a positive or negative impact on the long-term evolution of school improvement. Positive feedback can help to come to improvement. In other words, when teachers have real chances to get together, they can build up professional respect, enhance their teaching methods, and increase their willingness to engage in future improvements. There can be negative feedback loops as well. For instance, if teachers' workloads are excessive, this can decrease teacher engagement, in turn, diminish implementation, yield poor outcomes, and create additional strains on teachers.

**Leveraging points** Highlight places where practical change can yield more gains called leveraging points. A systems-thinking leader doesn't try to solve all problems simultaneously. Rather, the leader ensures he or she has pinpointed a specific area of action that can affect multiple linked results. For instance, a routine review of attendance at regular intervals by staff can aid in identifying pupils who may be at risk of dropping out, better communication with parents/carers, better awareness of staff and timely pupil intervention.

**Contextual constraints** involve the broader structural conditions that affect school leaders' ability to achieve their vision. These are factors such as staffing levels, infrastructure, school funding, professional autonomy, centralized decision making, data quality, and access to professional development. The need for systems thinking is particularly relevant in the context of Pakistan, where school leaders operate under certain conditions that constrain their ability to enact improvement plans. A systems approach is

not a responsibility that is solely borne by the individual head teacher. It instead acknowledges the connection among school-level management and the broader education system.

### **3 Supporting Leadership Perspectives**

While systems thinking is the key analytical model, there are three other lenses that offer insights into specific facets of holistic leadership: transformational leadership, distributed leadership and complexity theory. Transformational leadership adds the concept of shared purpose, professional commitment and change of culture. Leithwood and Sun (2012) link transformational leadership to better conditions in the school and greater teacher engagement. Transformational leadership is not a "heroic" model where one principal is seen as the one who will solve all problems. Vision needs to be linked to collective responsibility, practical planning and structural assistance. The focus of distributed leadership is that leadership should not be limited to the principal. Collaboration and school improvement can be helped by shared responsibility, as Harris (2013) claims. It has implications for holistic leadership in that all teachers, middle leaders, support staff, students, parents, and community members can help bring about improvement. Lumby (2013) warns, however, that distributed leadership can be tokenistic if teachers are allocated extra work without any real authority, time or resources. At a systems level, participation works best when there is a congruence between the structures in which decisions are made, workload expectations, and professional trust. The theory of complexity adds to this context by acknowledging that schools are not machines, but rather complex adaptive systems. It is not always a linear process of change, according to Morrison (2002). Relationships, histories, resources, and local conditions can have different effects in different schools, so a policy or intervention may result in varying outcomes. Leaders thus must be sensitive to feedback, experiment with practicable options and adjust practice based on what works without taking for granted that the model will be effective in all contexts.

### **Connection between the Framework and School Improvement**

This section outlines the relationship between the Framework and school improvement. The next section summarizes the linkage between the Framework and school improvement. The approach used in this paper is to view school improvement as a continuous, interwoven process. Leaders' practices have a significant impact on teachers' engagement, school culture, collaboration, policy enactment, and resource utilization. These factors affect wellbeing, student involvement, and learning. Student outcomes and experiences of stakeholders then feed into decisions for the future. School improvement is not a one-off project. It is a process of diagnosis, action, feedback, reflection and adaptation that continues in a cycle of action. The analysis is focused around four systems dimensions: Interdependence, Feedback loops, Leverage points and Contextual constraints. Interdependence is helping to explain the relationship between one part of school life, and another. Feedback loops provide insight into why some improvements are sustainable and others diminish over time. Leverage points assist leaders in identifying the correct steps that can be taken to achieve broader benefits. Contextual constraints are used to explain those barriers that need help in ways other than the school level.

### **4 Critical Literature Review: Analyzing School Improvement through Systems Thinking**

The research literature suggests that leadership is related to school improvement but it is not necessarily specific. The impact of leadership on learning outcomes is mostly on the leadership of the organizational context in which students learn. Conditions are teacher engagement, professional learning, school culture, policy implementation, collaboration, use of resources, and family/community relationships. Robinson, Lloyd and Rowe (2008) stress that school leadership practices related to teaching and learning more strongly influence student outcomes than school leadership practices in general. The research of Hallinger (2011) also strongly suggests that good leadership for learning occurs when it fosters the

capacity and conditions necessary for ongoing improvement.

A systems-thinking approach can help to illustrate why leadership is more than the actions of one principal. The interaction between a numbers of factors is required for school improvement. A professional development program might be introduced by a school leader, for instance, but without time for teachers to be able to collaborate; if the training is not responsive to the actual needs of the classroom; or if the school climate is such that practice is not shared, then the impact of the program will be limited. Thus, systems thinking offers a way to analyze the connections among leadership practices, organizational factors, and student results.

#### **4.1 Interdependence: Connecting Leadership, Culture and Learning**

Interdependence is one of the key tenets of systems thinking. It implies that an improvement in one aspect of a school is related to conditions in other aspects. For instance, a school might be seeking to enhance student achievement by leveraging the use of assessment data. Unfortunately, the program can backfire if teachers are not equipped to make sense of the data, if information is primarily used to "blame" teachers, or if teachers have limited time to plan for suitable interventions in their classrooms. Likewise, a wellbeing initiative can be implemented for students, but can be confined in its reach if factors like teacher workload, school environment, and family engagement are not taken into consideration. It may not always be a problem with the quality of the individual initiative.

Holistic leadership addresses this challenge by encouraging leaders to look beyond symptoms and consider how conditions in school are interconnected. Based on their studies, Shaked & Schechter (2016, 2017) suggest that systems thinking helps school leaders to grasp the whole school and to identify patterns of practice across the various aspects of school functioning. For example, if a student is not performing at their expected level, this doesn't necessarily indicate that the student has a problem in the classroom. This could be due to teacher stress, attendance

issues, low engagement with curriculum, and lack of resources, or organizational culture which lacks the ability to collaborate. This outlook offers significant implications for school improvement. Leaders should understand the interdependence of the various areas of the school before choosing an intervention. A fractured approach can result in short term activity, but no sustainable improvement. A holistic approach is one in which the priorities of leadership, teaching and learning, professional development, school culture, and student needs are coherent.

#### **4.2 Feedbacks Loop: Understanding how Improvement is Strengthened or Weakened**

Another aspect of systems thinking is the identification of feedback loops. Effects of an action affect the next behavior in the system. Some loops enhance improvement and others reinforce existing problems. Teacher engagement is an example of one that is important. Teachers may feel increased trust in school leadership when they receive opportunities to participate in decisions, contribute to decisions, and have meaningful opportunities to collaborate in teacher professional learning. The level of trust may make them more willing to share ideas, try new techniques, and be responsible for improvement. Increased involvement can result in improved teamwork and professional environment over time. This is positive feedback. In teaching, a negative loop can happen when teachers feel overwhelmed with workload and lack professional autonomy. It is important that teachers have time, authority and support to participate in new initiatives, otherwise they may see participation as an added burden and not as an opportunity for professional development. There is a risk of weak engagement and implementation if limited engagement, followed by poor results, which put pressure on implementing further programs and projects, which further weakens engagement. The problem then continues since the system maintains the conditions that lead to the initial difficulty.

Shared responsibility is a key aspect of distributed leadership, which is relevant to this analysis. Harris (2013) proposes that leadership may be executed throughout the school and not just in

formal duties. Distributed leadership can be tokenistic, however, if it is being implemented by teachers who are given additional responsibilities without any real decision-making authority (Lumby 2013). Participation is linked to workload, authority, trust and organizational support from a systems thinking point of view. Inviting teachers to the meetings isn't sufficient. Their participation should impact decisions and should be provided under realistic working conditions.

Feedback loops are also a component of school culture. Day, Gu, and Sammons (2016) demonstrate that trust, moral purpose and rejuvenated professional commitment are ways leadership can help school improvement. Creating a culture of collaboration can foster a culture of teachers being willing to use evidence and learn from other teachers. A culture focused primarily on compliance and blame, however, can stifle honest introspection. School activities will thus need to be reviewed by leaders to see if they are fostering learning or fear and passivity.

#### **4.3 Leverage Point: Identifying Realistic Areas for Action**

A systems thinking approach does not demand that leaders try to solve all the problems at once. Rather, it helps them to find leverage points. A leverage point is a place where a focus, realistic action can have an impact on a number of related outcomes. One potential leverage point is through established collaborative practices. For instance, if a school has a weekly short meeting of teachers, they could use it to discuss attendance, note who may be at risk of leaving the school, and agree what to do next. This routine can help teachers communicate with one another, help them intervene earlier, improve their relationship with families and provide helpful data for future decisions. The action is fairly limited in scope, but can impact more than one area of the school system.

Another possible leverage point is professional learning. Generic trainings can be of less value if it is not related to classroom practice. Peer mentoring, discussion focused on the lesson, and planning together, by contrast, can bring teacher learning closer to the needs of students. Sustainable school improvement in complex

adaptive systems must be approached in ways that are responsive to context and enable organisational learning, Koh and Askeff-Williams (2021) remind us.

Therefore, it is best that professional development be integrated into an iterative cycle of reflection, action, feedback and adaptation. Policy coherence is also an important leverage point. Multiple reforms, reporting requirements and improvement initiatives are typical for schools to receive. If these demands are not well aligned, leaders might get preoccupied with administrative compliance rather than with change. Leaders and policy makers should consider if the curriculum expectations, assessments, professional learning, accountability structures, and school improvement plans are mutually reinforcing in a systems approach. Fewer priorities that are connected can be more effective than many priorities that are disconnected.

#### **4.4 Contextual Constraints: Recognizing the Limits of School Level Leadership**

A critical systems thinking approach needs to be aware of conditions outside of the school that influence school improvement. Effective leadership is not a substitute for poor infrastructure, scarcity of teachers, inadequate funding, little autonomy for teachers, or an unstable policy environment. Structural factors limit options for school leaders and impact sustainability of efforts to improve.

This is particularly significant in the context of developing countries. Much of the leadership model assumes that schools have trained staff, reliable data, working facilities, professional development opportunities and some authority in decision-making. These are not always assumed conditions. In Pakistan, school leaders may simultaneously need to deal with administrative reporting, limited resources, staffing challenges, infrastructure constraints, attendance challenges, and community expectations.

According to Shah, Gurr and Drysdale (2024), head teachers in government secondary schools in Sindh have a blend of administrative and academic duties. They are hampered by such factors as shortage of money, inadequate equipment, shortage of teachers, and lack of

authority. These conditions account, in part, for the fact that leadership models that have been produced in systems with well resources cannot be easily imported into the context of Pakistan without adaptation.

The context in which a leader works is also crucial for effective education, as also stated by UNESCO (2024). Important is recruitment, preparation, trust, professional growth and support at the system level. This implies that leadership enhancement must not simply be an issue of altering individual behaviors. It needs also to include governance, resources, professional development, and policy alignment.

A systems-thinking approach is useful because it does not assign the responsibility for issues of this kind to school leaders, but to the system of which they are part. However, it does not mean that school level action is not possible. There are still opportunities for leaders to find leverage points to act on, enhance working relationships, use evidence wisely and establish practices that will bring about change over time. But the scope of their powers and means need to be recognized.

#### **4.5 Synthesis of the Literature**

In the literature, the use of holistic leadership as a systems-based approach rather than a set of desirable leadership traits is deemed to bring about school improvement. The value of this is a way to link leadership to teacher engagement, school culture, policy implementation, resources and student outcomes. From the literature, four conclusions come to light. First, school improvement is about interdependence; changes in one aspect of the school impact on other aspects. Second, feedback loops can assist in understanding why some efforts are sustainable and others are not. Third, leaders must find leverage points that can be achieved, and not start multiple unconnected programs. Fourth, structural constraints need to be taken into account, since no system level reform can be achieved with just school level leadership. The above-mentioned learning experiences feed into the contextually responsive holistic leadership discussion that follows.

## 5 Critical Discussion: Applying Systems Thinking to School Improvement in Pakistan

The literature cited in the previous section demonstrates that when holistic leadership is applied as a systems approach to school improvement, it becomes meaningful. It is not just a way of leadership or a description of the qualities that are desired in a person. It is designed to give leaders insight into the interconnections between various components of a school, the patterns that feed into and perpetuate issues, and the realistic options for action. This section contextualizes the four dimensions of the framework in the context of schools in Pakistan. It also directly addresses the research questions posed in this paper.

### 5.1 Research Question 01: How Can Systems thinking be used to understand Holistic Leadership and School Improvement?

Systems thinking offers a framework for school improvement which moves the focus from a problem to relationships between problems. A school is not a set of stand-alone departments, policies or activities. It is a system that is interrelated and decisions regarding teaching, assessment, professional development, student attendance, discipline, resources, and community engagement impact each other. That is why one intervention will not necessarily lead to lasting improvement without surrounding conditions which make this possible.

Take the case of a low level of student achievement. A narrow answer would be to say that teachers need further training. Training can be helpful, but systems-thinking poses more questions. Can teachers transfer/implement the training into the classroom? Are they well equipped with learning resources? Do pupils attend the school regularly? Is collaborative lesson planning implemented? Do the results of assessments direct instruction or simply monitoring of performance? Is there a culture of the school where teachers feel safe with their challenges?

These questions are not about the lack of the importance of teaching quality. Rather they set teaching in the broader context of the influences that affect classroom practice. Shaked and Schechter (2016, 2017) state that systems thinking

enables school leaders to identify the patterns and relationships that exist throughout the school, instead of responding to just the symptoms. This is holistic leadership from a diagnostic perspective prior to an intervention. Before choosing a response, leaders must have an understanding about how a problem is produced and sustained. Systems thinking also transforms the definition of school improvement. Improvement isn't a single reform, a short-term project. It's an ongoing process:

Diagnosis → action focused on managing the issue → feedback → reflection and adaptation

In this cycle, leaders use evidence to consider if an intervention is effective, what unforeseen effects it may have and how to make changes. Thus, holistic leadership makes ethical responsibility and concrete learning go hand in hand. Leaders continue to prioritize student needs, and know that improvement is a process of working together, establishing evidence and finding ways to constantly adapt.

### 5.2 Research Question 02: How do Interconnected Factors Impact School Improvement?

The second research question is about the relationship between teacher engagement and school culture, policy alignment and structural barriers. The factors are not independent of each other, but rather interact with each other in feedback loops. Teachers' involvement and school culture. Teacher participation cannot be "chosen" by inviting teachers to come to meetings or by taking on new responsibilities. Trust, professional respect, time to work together and decision-making opportunities are the keys to meaningful engagement. Leithwood, Harris, and Hopkins (2020) note that the effective leadership of schools relies on creating the context that allows teachers to make a difference. Teachers who engage in meaningful professional conversations may be in a positive feedback loop:

Teacher voice → increased professional trust → more collaboration → better practice → more willing to participate. But the reverse of that can also happen: lack of support for additional tasks → greater workloads → diminished motivation →

less implementation of additional tasks → further pressure on teachers.

This negative loop is an explanation for why distributed leadership can be tokenistic. Responsibilities can be delegated without an equivalent distribution of authority, as Lumby (2013) cautions. In those cases, participation is an extra burden, not a sense of professional ownership. Holistic leadership will need to therefore link teacher involvement with decision-making authority, realistic workloads and organizational support. Policy alignment and implementation the policy-practice relationship has a further impact on school improvement. Multiple reforms, reporting requirements, assessment targets, and professional development initiatives may be provided to schools. While there is value in these policies in isolation, they can be fragmented if implemented without coordination and resources or if they are too late. Negative feedback may develop: Multiple piecemeal changes/ superficial implementation / partial change in classrooms / disappointing outcomes / more changes. This cycle can lead school leaders to become preoccupied with paperwork and reporting and not with teaching and learning. There is a need for more coherence in a systems-thinking approach. These four elements—curriculum, assessment, teacher development, accountability and school improvement planning—should reinforce each other. It's not about adding more initiatives, it's about creating alignment between priorities. Resources and structural conditions (transportation, housing, employment, and food supplies) what is possible for school leaders to do is much shaped by structural conditions. School leaders in Pakistan can be faced with low budgets, substandard facilities, school shortage, limited authority, and unequal access to professional development. According to Shah, Gurr and Drysdale (2024), the head teachers in Government Secondary Schools in Sindh are burdened with administrative and academic duties, and are also responsible for the issues of basic facilities and staffing and resources. These conditions can result in yet another vicious circle: Limited resources, reduced capacity to implement improvements, weak outcomes, increased accountability pressure, less time for

long term planning. This is a good representation of why school improvement is not an issue of individual leadership. While a dedicated head teacher can enhance the level of collaboration and communication, the essential provision of infrastructure, staffing and governance cannot be replaced by school level leadership. There's also this sentiment in UNESCO (2024) that good leadership requires preparation, trust, professional development, and enabling system-level conditions.

### **5.3 Research Question 03 how Holistic Leadership be Adapted to School in Pakistan**

Holistic leadership must not be used in Pakistan as is and from better resourced education systems. It should be contextually responsive, realistic and incremental. Contextual adaptation is not synonymous with reduced expectations. It involves making choices about priorities that are grounded in realities of how schools' function.

A systems thinking leader starts with a problem that is manageable, studies the problem, and chooses an action leverage point. The leader then presents a specific action and solicits feedback and adjusts the answer. This is more realistic than trying to solve all the problems at once.

Students' attendance, for instance, can be identified as a first priority. A school principal might create a weekly meeting schedule of teacher attendance patterns, student attendance issues, and what to do next. School can follow up with families, explore barriers to attendance and determine efficacy of interventions. This process could have several inter-related benefits including better communication between teachers, early identification of vulnerable pupils, enhanced relationships with families and better-informed decision making.

Another example is teacher professional learning. If there are not formal training options, leaders could create low-cost peer mentoring, coordinated lesson planning or brief meetings on classroom issues. These practices will not remove structural barriers, but they can increase professional trust and teachers learning from each other. The complex adaptive system requires context sensitive approaches that enable continued organizational learning for sustainable improvement (Koh and

Askell-Williams 2021). Engaging the community is also crucial. Barriers to education can relate to poverty, gender norms, child labor, poor transport infrastructure, safety, language, and mistrust of public schools. These are all problems that a school leader cannot solve by himself or herself. But with more effective dialogue with families and community players, the school can be more effective in identifying barriers and choosing appropriate responses. Holistic leadership is thus linked to school improvement within the context of the school's social environment.

#### **5.4 School Level and System Level Responsibility**

In order for a critical interpretation of holistic leadership to be understood, it is necessary to differentiate between what schools do and what is required at the system level to effect change. If this is not clear there could be unrealistic demands on head teachers in discussions about leadership.

##### **At School Level**

Leaders can enhance collaborative practice routines at the school level, leverage available evidence better, establish trust among colleagues, determine practical leverage points, and communicate with families more effectively. They can also prevent fragmentation by prioritizing a few activities that can be linked together.

##### **At Systems Level**

The policy challenge at the system level is one of staffing, infrastructure, funding, leadership preparation, data quality, professional autonomy and policy coherence. These conditions aren't exclusive to leadership. They form the basis for the effectiveness of leadership practice.

Systems thinking is about the interdependence of these two levels. School leaders operate in structures, and can also offer input to the structures regarding how they influence teaching and learning. While setting system-level expectations, policymakers must also provide conditions for meaningfully responding to those expectations in the school. It is essential to communicate and learn at both levels to ensure sustainable improvement.

#### **5.5 Summary of the Discussion**

The analysis shows that systems thinking reinforces the holistic leadership concept by giving a clear picture of the school improvement pathway. Interdependence explains how the five connections between leadership, teaching, culture, policy, resources and community relationships are connected. Feedback loops show why some patterns can help fix a problem and others can worsen an existing problem. Leading change is about identifying areas for action that are realistic – leverage points are helpful for identifying these areas. Contextual constraints highlight scope of school-level leadership and need for system-level reform. In Pakistan, holistic leadership should be viewed as a process of diagnosis, action, feedback and adaptation in a context sensitive way. It should not be seen as a panacea or as ability of the school leader to "fix" structural inequalities. It is useful for schools and policymakers to have a tool to help them grasp the connections, to determine realistic priorities, and to aid in slow but steady improvements.

**Table 01 Application of the system thinking framework to school Improvement**

Systems-thinking dimension	Key question	Example in a school	Implication for improvement
Interdependence	Which factors are connected to the problem?	Low achievement may be connected to attendance, teacher capacity, resources, and assessment practices.	Diagnose the wider conditions before introducing an intervention.
Feedback loops	Which patterns strengthen or weaken progress over time?	Excessive workload may reduce teacher engagement and weaken implementation.	Monitor the effects of actions and adjust the approach.
Leverage points	Where can a focused action create wider benefits?	A weekly attendance-review routine may improve early intervention and family communication.	Prioritize feasible actions rather than numerous disconnected initiatives.
Contextual constraints	Which barriers require support beyond the school?	Staffing shortages, inadequate facilities, and limited funding may restrict improvement.	Connect school-level leadership with system-level reform.

## 6 Recommendations

The analysis demonstrates that holistic leadership should not be seen as an extra set of tasks that are added to any one school leader. It is not equivalent to a linear process of identification of relationships, monitoring of feedback, selection of realistic leverage points, and identification of structural constraints, but rather a systems-based approach. Recommendations are therefore separated into two tiers: School Level Actions and System Level Reforms.

### 6.1 School Level Action

#### 6.1.1 Use a System Based Diagnosis before Introducing New Initiatives

The best way to start planning a school's improvement is to determine how a problem relates to other issues in the school. Prior to introducing a new program, school leaders should consider the following questions: Is this issue about teacher capacity, workload, attendance, school culture, assessment practices, family engagement, or resources? This process can help schools to prevent isolated interventions that lead to activity with no sustainable improvement.

If a school is struggling with academic performance, for instance, it shouldn't simply think more teacher training is necessary. Leaders should also look at attendance, access to learning

resources, classroom environment, curriculum links, assessment approaches and opportunities for teachers to work together. The systems diagnosis enables the school to choose their response more closely in line with the causes of the problem and not just its symptoms.

#### 6.1.2 Establish Regular Feedback Routine

Simple and consistent routines should be used for schools to review evidence and make adaptations for improvement. Leaders can convene small meetings once a week or fortnight for staff to discuss a small number of focus areas, like attendance, student learning, classroom behavior, teacher workload, or student wellbeing. These meetings should be for learning and not pointing fingers. Staff should look for trends, talk to what may have caused them, look back at what has happened in the past, and agree what is achievable to move forward. This results in a vicious circle: proof, thought, purposeful action, observation, adjustment these schedules can be useful for schools to deal with issues early on in their development.

#### 6.1.3 Strengthen Meaningful Teachers Participation

Distributed leadership should be about a level of participation and not about teachers taking on

more work. Clearly defined roles and time for collaboration for teachers and middle leaders with meaningful opportunities to influence decision making. Participation, to be effective, needs to relate to professional trust, appropriate authority and realistic workload expectations. Schools should refrain from setting up committees that need to be formed for administrative reasons. Rather, these collaborative structures should be directed toward the practical aspects of lesson planning, attendance, feedback on student work, and issues with struggling students. This is in line with the caution about the risk of distributed leadership becoming tokenistic when responsibility is distributed without the attendant authority or support (Lumby, 2013).

#### **6.1.4 Identifying Manageable Leverage Points**

School leaders should not try and find the answer to all problems at once. A systems-thinking process involves the identification of leverage points, which are places where a concentrated effort can have more than one related effect.

A possible leverage point is student attendance. An attendance check-in procedure can be beneficial to teachers to identify students that may be at risk, to reach out to families sooner, to gain insight into what may be preventing students from attending, and to coordinate support. Collaborative lesson planning could be seen as another leverage point, potentially deepening teacher learning, consistency of classroom practice, and creating a level of professional trust. Do not underestimate the importance of small-scale actions! When they are well chosen, well supervised, and well adapted, they can result in school-wide improvements.

#### **6.1.5 Build contextually Relevant Professional Learning**

Professional development should relate to teachers' classrooms. However, generic workshops may not have a significant impact if they fail to link to local needs, and teachers may not have opportunities to use and reflect on what they have learned. Schools should adopt, as far as possible, low-cost and practice-based methods, such as peer mentoring, co-planning lessons, classroom observation and brief discussions on aspects that

are particularly challenging for the teacher. Such activities can be used to promote a process of continuous improvement in the absence of formal training opportunities. Koh and Askill-Williams (2021) underpin that sustainable school improvement in complex adaptive systems needs to be responsive to context in terms of learning processes.

#### **6.1.6 Strengthen Communication with Families and Community**

It is important to involve the wider social context in which the school operates in any school improvement process. Attendance and participation barriers can be related to poverty, gender norms and practices, child labor, transport, safety, language differences, or lack of school trust. School leaders must find realistic means of communicating with the families and community actors. This can involve meetings with parents, early contact if attendance falls and liaising with community representatives to understand barriers to vulnerable pupils. Community engagement should not be an "extra". It should be integrated into the school's feed-back system.

### **6.2 System Level Reforms**

#### **6.2.1 Induced Systems Thinking in Leadership Development**

Leadership preparation programs need to foster principals' and middle leaders' practical systems-thinking skills. Problem diagnosis, stakeholder analysis, identification of feedback loops, evidence-based decision making and choosing realistic leverage points are all part of the training. Case studies should be based on local schools and not just on those in highly resourced systems. This would facilitate leadership to think in systems when faced with issues of insufficient staffing, poor infrastructure, attendance, and limited school-level authority.

#### **6.2.2 Improve Policy Coherence**

Policymakers can minimize fragmentation by ensuring that what is expected in the curriculum, how it is assessed, how teachers are held accountable, how teachers are developed and how schools are improved are all congruent. Schools are less likely to effectively adopt change if they are

inundated with multiple, unrelated initiatives that have limited duration, budget or support.

A systems approach needs less number of clear and coherent priorities. Policymakers should also afford opportunities for school leaders to offer feedback regarding implementation issues. This would enable the linkage between the policy design and classroom practice.

### 6.2.3 Address Structural Barriers

Leadership needs to be backed up by the consideration of staffing, funding, infrastructure, learning materials and professional autonomy. These are not divorced from leadership. They are factors that shape the potential for successful leadership practices.

Pakistan may have teacher shortages, poor facilities, low funding and limited authority of teachers. Shah, Gurr, and Drysdale (2024) highlight that head teachers in Sindh are responsible for administrative and academic roles and have to deal with significant resource limitations. To ensure therefore that system-level reforms are in favor of schools that have basic facilities, an transparent recruitment process, good staffing ratios and better access to professional development.

### 6.2.4 Use of Multiple Indicators of Improvement

Exam results are not the only criteria for measuring school improvement. Academic achievement is a key factor but it is not the only factor that should be used to judge the functioning of a school. Student attendance, student wellbeing, teacher engagement, professional collaboration, inclusion, family trust and quality of policy implementation should be taken into account as part of the evaluation. The signs can be used to help schools and policymakers detect trends, track progress, and provide more effective support to any new challenges.

### 6.3 Summary of the Recommendation

The recommendations are based on the central theme of this paper that the process and the outcome of sustainable school improvement must involve relationships between problems, rather than single interventions. Leaders at the school level should diagnose issues in a systemic manner,

implement feedback loops, enhance meaningful participation, establish leverage points that are manageable, encourage professional development and connect with communities. Policy improvements at the system level should emphasize the development of leadership for improvement, policy coordination, structural support, and the use of multiple indicators of improvement. Holistic leadership is realized when it supports schools and policy makers to determine what is possible, who might be accountable for it and how it will be monitored over the years.

### 7 Conclusion

The paper explored the possibility of using systems thinking as a framework for holistic leadership and sustainable school improvement within the context of Pakistan. The findings indicated that school improvement is not just a series of isolated programs or a responsibility that is left to any one principal. Schools are a system of systems, where the way teachers lead, their engagement, the school culture, policy implementation, resources, students' needs and relationships with the community all impact and influence each other. To answer the first research question, the paper illustrated how systems thinking enhances the holistic leadership by providing a clear analysis framework. Four aspects are particularly crucial: interdependence, feedback loops, leverage points and contextual constraints. Interdependence provides leaders with an understanding of the interrelatedness of aspects of a school. Feedback loops show how certain patterns can help enhance improvement, and other patterns can help deepen existing challenges. Leverage points are useful for leaders to understand and prioritize possible actions that can have a significant impact on multiple outcomes. Contextual constraints help to describe the barriers which must be tackled beyond school-level leadership.

The paper answered the second research question, which was about the relationship among teacher engagement, school culture, policy alignment and structural conditions. Providing meaningful teacher participation can enhance trust, collaboration, and professional learning. But when teachers take on extra duties without adequate autonomy, time, and support, participation can be a bit of a facade. Likewise,

policy, assessment, professional development, and accountability measures that are not coordinated can stifle improvement efforts. That is how these relationships give reason to isolated reforms for limited or short term results. As a response to the third research question the paper suggested that the holistic leadership needs to be contextualized in the context of Pakistan's school environment. School leaders can operate in environments where resources are limited, facilities are under-resourced, teachers are under-resourced, and there is less autonomy and access to professional development. Holistic leadership should not therefore be offered as a panacea and nor should it be accepted as something that headteachers can solve the problem of structural issues by doing a little more themselves. It should be used gradually as appropriate through contextually appropriate routines and practices like attendance review, collaborative planning, peer mentoring, evidence-based reflection, and improved communication with families/communities.

The main thesis is that holistic leadership is helpful as a systems-based process of diagnosis, action, feedback, reflection and adaptation. Leaders have the opportunity to select manageable leverage points, enhance professional relationships, and establish routines at the school level that facilitate ongoing learning. At the system level, policy makers should enhance staffing, infrastructure, leadership preparation, policy coherence, professional autonomy and use multiple indicators of improvement. Shared responsibility is a key ingredient of sustainable school improvement. To lead effectively, school leaders require supportive systems and to design realistic policies, an education system requires feedback from schools. A systems-thinking perspective provides a practical framework to tie these roles together and facilitate an improvement journey that is contextually responsive, incremental, and happens over time in Pakistan.

## References

- Day, C., Gu, Q. and Sammons, P. (2016) 'The impact of leadership on student outcomes: How successful school leaders use transformational and instructional strategies to make a difference', *Educational Administration Quarterly*, 52(2), pp. 221-258.
- Hallinger, P. (2011) 'Leadership for learning: Lessons from 40 years of empirical research', *Journal of Educational Administration*, 49(2), pp. 125-142.
- Harris, A. (2013) 'Distributed leadership: Friend or foe?', *Educational Management Administration & Leadership*, 41(5), pp. 545-554.
- Koh, G.A. and Askill-Williams, H. (2021). Sustainable school-improvement in complex adaptive systems: A scoping review. *Review of Education*, 9(1), pp.281-314. Available at: <https://doi.org/10.1002/rev3.3246>.
- Leithwood, K., Harris, A. and Hopkins, D. (2020). Seven Strong Claims About Successful School Leadership Revisited. *School Leadership & Management*, 40(1), pp.5-22. Available at: <https://doi.org/10.1080/13632434.2019.1596077>.
- Leithwood, K. and Sun, J. (2012) 'The nature and effects of transformational school leadership: A meta-analytic review of unpublished research', *Educational Administration Quarterly*, 48(3), pp. 387-423.
- Lumby, J. (2013) 'Distributed leadership: The uses and abuses of power', *Educational Management Administration & Leadership*, 41(5), pp. 581-597.
- Morrison, K. (2002) *School Leadership and Complexity Theory*. London: RoutledgeFalmer.
- Robinson, V.M.J., Lloyd, C.A. and Rowe, K.J. (2008) 'The impact of leadership on student outcomes: An analysis of the differential effects of leadership types', *Educational Administration Quarterly*, 44(5), pp. 635-674.

- Shah, D.B., Gurr, D. and Drysdale, L. (2024) 'School leadership and management in Sindh Pakistan: Examining headteachers' evolving roles, contemporary challenges, and adaptive strategies', *Education Sciences*, 14(5), 440.
- Shaked, H. and Schechter, C. (2016) 'Holistic school leadership: Systems thinking as an instructional leadership enabler', *NASSP Bulletin*, 100(4), pp. 177-202.
- Shaked, H. and Schechter, C. (2017) 'Holistic school leadership: Development of systems thinking in school leaders', *Teachers College Record*, 120(2), pp. 1-40.
- UNESCO (2024) *Global education monitoring report 2024/5: Leadership in education: lead for learning*. Paris: UNESCO. Available at: <https://www.unesco.org/reports/gem-report/en/2024-leadership-education> (Accessed: 15 May 2026).

