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Reimagining Classroom Assessment in Pakistan: A Multi-Study Synthesis Toward Future-Oriented Assessment-Informed Pedagogy

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Abstract: This study addresses the persistent misalignment between classroom assessment practices and learning-oriented pedagogy at the secondary school level in Pakistan. To respond to examination-dominated assessment cultures and fragmented pedagogical practices, the study synthesises evidence from four empirical studies conducted between 2021 and 2023. A qualitative multi-study meta-synthesis approach was employed to integrate findings related to assessment practices, feedback processes, teacher assessment literacy, leadership roles, and systemic constraints. This synthesis reveals convergent patterns indicating limited teacher assessment literacy, constrained professional agency, inconsistent, predominantly summative feedback practices, and weak instructional leadership in the use of assessment. At the same time, an emerging but uneven shift toward formative assessment practices suggests potential for pedagogical change. Based on these synthesised insights, the study proposes a novel, context-responsive framework for future-oriented, assessment-informed pedagogy that integrates teacher

agency, assessment-centred school leadership, collaborative professional structures, and data-informed instructional cycles. The framework offers a coherent model for aligning classroom assessment with learning goals and has important implications for national assessment reform aimed at strengthening student learning outcomes.

Keywords: classroom assessment, challenges, feedback systems, meta-synthesis, future-oriented.

Introduction

In any education system, classroom assessment plays a significant role in shaping the pedagogical landscape. Assessment becomes more important in developing countries like Pakistan, where systemic inequalities and resource limitations constrain instructional quality. Here, the assessment directly affects teaching, learning and their outcome. Pakistan has one of the largest school-going populations and is continually struggling to establish a sound classroom assessment mechanism to promote conceptual understanding and improve secondary school students' learning. However, due to final board and public examinations (Secondary/Higher Secondary School Examinations), the assessment reduces to mere rote memorisation and recall of concepts (Shah et al., 2023).

Over the past decade, policymakers have shown growing interest in shifting exam-oriented assessment practices toward assessment for learning. Still, secondary school teachers lack assessment literacy, receive little professional development and operate within rigid administrative structures that prioritise exam preparation over formative assessment (Shah et al., 2021; Shah et al., 2022). On the other hand, international literature has shown that formative assessment improves students' learning outcomes (Black & Wiliam, 2018; Brookhart, 2017). But its implementation in Pakistan remains uneven. Basically, it is largely dependent on individual teacher initiative. Many teachers were themselves educated under examination-driven systems and have internalised traditional roles as knowledge transmitters and evaluators rather than facilitators of learning. Consequently, classroom assessment often takes the form of quick oral questioning, short written tests, or informal quizzes — tools that may check factual recall but rarely offer insights into student reasoning or misconceptions (Shah et al., 2021). Feedback, when given, is often summative or judgmental rather than descriptive or forward-looking. This pattern reflects what scholars describe as a “culture of correctness,” in which the primary aim of assessment is to determine whether students have remembered information rather than to guide their learning (Brookhart, 2017).

The policy environment adds another layer of complexity. Pakistan's Single National Curriculum (SNC) was introduced with the explicit intention of promoting student-centred learning and embedding formative assessment into everyday practice. In official documents, formative assessment is positioned as a pillar of effective instruction, and teachers are encouraged to adopt strategies such as think-pair-share, reflective journals, and descriptive feedback (Government of Pakistan, 2020). However, policy aspirations are often not matched with clear implementation mechanisms. Teachers report receiving limited or inconsistent professional development on assessment strategies, and monitoring systems tend to emphasise compliance rather than authentic pedagogical improvement (Shah et al., 2022). Without sustained capacity-building support, many teachers struggle to translate curricular ideals into practical classroom actions, creating a disconnect between policy rhetoric and lived realities.

Leadership and school culture play a critical role in shaping this implementation gap. Research indicates that teachers' assessment practices are strongly influenced by the expectations, priorities, and support structures established by school leaders (Leithwood et al., 2020). In Pakistan, school leaders often juggle administrative workloads, compliance tasks, and resource constraints, leaving limited room to nurture instructional leadership or provide sustained mentoring (Shah, Butt, & Khan, 2022). As a result,

teachers often work in isolation, relying on personal experience rather than collaborative professional inquiry to make assessment decisions. Schools that do cultivate supportive cultures — through collaborative planning, peer observation, or shared reflection — tend to exhibit more advanced formative assessment practices, suggesting that organisational context is just as important as individual teacher capacity.

Technological access represents another dimension of inequality within Pakistan's assessment ecosystem. While digital tools hold promises for supporting formative practices — particularly through real-time feedback, interactive tasks, and data visualisation — most public schools lack adequate infrastructure, devices, or internet connectivity (Saleem & Rafique, 2023). Teachers who wish to experiment with digital assessment tools face barriers such as insufficient training, unreliable electricity, or restrictive administrative policies. In contrast, many private schools, especially in metropolitan areas, have adopted blended learning platforms and digital assessment systems, creating a dual-track education system in which assessment innovation is largely restricted to better-resourced institutions (Shah et al., 2023). These disparities reflect broader socio-economic divides that shape educational opportunities across the country.

Sociocultural expectations further shape the meaning and use of assessment in Pakistani classrooms. Parents frequently view high marks as indicators of discipline and intelligence, reinforcing pressure on teachers to prioritise summative testing (Andrabi et al., 2021). Students themselves may internalise the belief that learning is about “getting the right answer,” making them hesitant to engage in reflective, risk-taking, or exploratory learning approaches that formative assessment fosters. Teachers often encounter resistance when introducing unfamiliar assessment strategies, such as peer assessment or open-ended inquiry. This cultural resistance highlights the importance of engaging families and communities in conversations about the purpose of assessment and the need for holistic learning (Heritage, 2018).

These contextual factors underscore the importance of synthesising evidence from multiple studies to develop a coherent understanding of Pakistan's assessment challenges. Each classroom, school, and district operate within overlapping layers of policy, culture, resources, and expectations, all of which influence assessment practice. A multi-study synthesis — such as this one — helps illuminate both the recurring barriers and the emerging opportunities across the system. The findings from Shah et al. (2023), Shah & Habib (2022), Shah et al. (2022), and Shah, Butt, & Khan (2022) collectively reveal that improving classroom assessment requires interventions at multiple levels: teacher practice, leadership support, systemic alignment, and cultural transformation. Taken together, the evidence calls for a holistic reimagining of assessment as an integrated element of pedagogy rather than an isolated evaluative procedure.

In this broader view, assessment becomes a relational, dialogic, and developmental process that supports teacher agency and student ownership of learning. The need to move toward future-oriented, assessment-informed pedagogy is not merely a curricular demand but an educational imperative. Pakistan stands at a critical juncture, with demographic shifts, technological expansion, and policy reforms opening possibilities for meaningful change. However, realising these possibilities requires an assessment framework that is responsive to context, grounded in teacher realities, and aligned with long-term national goals. This multi-study synthesis, therefore, situates classroom assessment not only as a technical skill but as a foundational component of educational transformation in Pakistan.

Research Problem

In Pakistan, teachers face several problems when conducting classroom assessments. They accept the importance of modern assessment strategies and understand the concepts of assessment as learning and assessment for learning. Still, they do not use such techniques. They prepare students to take the final exam

and earn good grades. They also prefer to complete the syllabus on time and avoid using formative assessment throughout the session (Thomas, 2017). Moreover, assessment feedback practices are not up to the mark due to a lack of interest among teachers, parents, and students. In addition, skills in creative writing and problem-solving are not assessed. This leads to a lack of assessment of higher-order thinking skills (Shazadiy & Rafaty, 2018). Overloaded classes hinder teachers' ability to conduct effective classroom assessments. They find it difficult to prepare, conduct, and evaluate multiple assessment tasks for students concurrently. They face a shortage of time in adopting different assessment strategies due to their heavy workload. Some students and parents feel formative assessments are unnecessary and prefer better performance in final term exams, which makes it difficult for teachers to run smooth and effective classroom assessments (Hussain et al., 2019; Shah et al., 2023).

Keeping the above-mentioned problems in mind, it becomes essential to conduct a systematic synthesis of empirical evidence becomes essential. During 2022 and 2023, Shah and colleagues conducted four matching studies. These focused on studying different dimensions of classroom assessment in secondary schools in Pakistan. Current practices, feedback mechanisms, challenges, and needed reforms in classroom assessment were explored (Shah et al., 2022; Shah & Habib, 2022; Shah et al., 2023). Rich datasets across school types, teacher demographics, and administrative structures were generated, and mixed-methods designs were deployed in these studies. Here, each study contributes important insights in its own right. But a consolidated synthesis can yield a more comprehensive understanding of assessment realities and illuminate future possibilities.

Research Focus

The present study is based on a synthesis through a multi-study, mixed-methods meta-analysis that gives an insight into assessment at the secondary level in Pakistan. A mere summarisation of the findings of previous studies is not the aim of this study. It aims to interpret the findings collectively to contribute to national reform efforts. The resulting synthesis supports the development of a future-oriented and teacher-led assessment framework tailored to Pakistan's educational system.

Research Aim and Research Questions

The main aim of the present study was to develop a future-oriented, teacher-led assessment framework to help improve classroom assessment in Pakistan. The following are the three guiding questions.

1. What do teachers and leaders adopt the common assessment practices at the secondary level in Pakistan?
2. What are the common challenges and patterns emerge after synthesising four major studies on classroom assessment in Pakistan?
3. To support meaningful assessment for learning in Pakistan, what future-oriented pedagogical model can be framed?

The answers to the above-mentioned questions shall help frame a future-oriented assessment that may support assessment for learning. In Pakistan, where policy and practice often diverge, a holistic, evidence-based vision for classroom assessment reform is urgently needed.

Literature Review

Classroom Assessment and Its Types

Classroom assessment is a type of assessment in which teachers evaluate students' performance throughout the session and directly indicate students' learning achievement (Dixon & Haigh, 2011).

Classroom assessment helps improve the teaching-learning process and students' achievement. It provides teachers with real feedback to modify teaching methods and strategies in accordance with student needs (Allen & Fraser, 2015; Elkatms, 2016).

For a quality classroom assessment role of teachers remains significant. For this purpose, teachers must gain up-to-date knowledge on assessment and learn modern techniques to conduct quality assessments of students (Nitko, 2010).

Both types of assessment (formative and summative) are interrelated and work in parallel. Mostly, the teachers use their combination in classes (Harlen, 2009; Leong et al., 2014). For decades, the functions of formative and summative assessment remained a subject of debate among educationists since 1970. However, later on, the concept of formative assessment became important, as it was shown to enhance student achievement (Tan & Towndrow, 2009).

Classroom Assessment and Student Academic Achievement

In the teaching-learning process, students' academic achievement is significant, and assessment revolves around them. Teachers worldwide have been focusing on it. It has been given importance in developed countries since the 18th century. Teachers have used modern techniques to assess their students' learning outcomes since that time (Marzano, 2016). Much of the research highlights that formative assessment requires more than awareness. It requires supportive conditions, practical tools, and a shared culture of assessment literacy (Black & Wiliam, 2018; Heritage, 2018). However, the institutional realities of many Pakistani secondary schools complicate this requirement. Public-sector schools, in particular, often contend with overcrowded classrooms, outdated instructional resources, and managerial demands that leave teachers with limited time to design meaningful assessment tasks (Shah et al., 2022). Teachers cannot provide effective feedback to the students in overcrowded classes. They are unable to conduct a diagnostic assessment and can't consider individual differences among students. As a result, teachers mostly depend on traditional assessment techniques, which are easier for them to administer. This reinforces rote memorisation and reduces conceptual understanding (Shah & Habib, 2022).

Classroom Assessment in Pakistan

In Pakistan, the landscape of classroom assessment shows a broader educational ecosystem. It has foundations in systemic pressures, sociocultural expectations and historical legacies. At its centre, an examination-oriented culture is present. Here, the final board exams assess students' abilities and comprehension levels. Such a type of high-stakes assessment presents a narrow interpretation of learning. It is associated with the mastery of discrete content and measuring it through standardised tests (Shah et al., 2023). In this way, examination and assessment become synonymous terms. There is no measurement of students' continuous pedagogical achievement. As a result, all stakeholders, including teachers, students and parents, focus on achieving grades rather than learning and comprehension. Ultimately, formative assessment is not considered essential for improving learning outcomes assumes and processes (Heritage, 2018). This type of exam-oriented approach has impacted teachers' instructional roles, students' pedagogy and learning attitudes.

Classroom teaching tends to prioritise rote memorisation and preparing for questions, keeping the final exam paper's style and format in mind. So, real learning and the learner's comprehension of the content are affected (Shah et al., 2021). Teachers feel compelled to "finish the syllabus" rather than cultivate deep understanding, inquiry, or reflection. Consequently, curriculum pacing accelerates toward coverage rather than comprehension, resulting in superficial learning that fails to nurture higher-order thinking skills (Stiggins, 2017). Even when teachers recognise the value of formative assessment, the

pressure to prepare students for external examinations compels them to privilege summative testing as the dominant mode of evaluation.

Issues and Improving Classroom Assessment in Pakistan

Issues in classroom assessment include, but are not limited to, poor student participation and absence, improper responses by parents to assessment results, inadequate assessment materials, insufficient guidance from the school administration on assessment, and a need for extensive training in assessment (Shah et al., 2022).

To improve classroom assessment, teachers should motivate students to participate actively and to their fullest in classroom assessment tasks. They should contact parents to highlight the importance of classroom assessment. They should prepare SLO-based assessment tasks and emphasise assessment for learning. The principals should focus on improving the quality of classroom assessment. They may help the teachers by providing guidance, training and adequate materials for classroom assessment (Shah et al., 2023)

Materials and Methods

This study employed a qualitative multi-study meta-synthesis to integrate findings from four empirical studies conducted between 2021 and 2023 on classroom assessment at the secondary level in Pakistan. A meta-synthesis approach was selected because the included studies shared overlapping conceptual foci, methodological orientations, and contextual settings, allowing for systematic cross-study interpretation rather than simple aggregation (Sandelowski et al., 2007).

Analytical Procedures and Coding

The synthesis followed a staged analytic process. First, the findings sections of each study were extracted and treated as primary qualitative data. An initial open coding process was conducted to identify recurring concepts related to assessment practices, feedback, leadership, teacher agency, and systemic constraints. Codes were generated inductively and iteratively refined through constant comparison across studies. In the second stage, related codes were clustered into higher-order analytical categories, enabling the development of cross-cutting themes that transcended individual study contexts.

Integration and Handling of Contradictions

The principles of convergence, complementarity, and divergence guided integration. Findings were synthesised where consistent patterns emerged across studies, while contradictory or divergent results were retained and analytically examined rather than excluded. Variations were interpreted in relation to differences in institutional context, participant roles, and research design, ensuring that the synthesis preserved complexity rather than enforcing artificial consensus.

Methodological Quality Appraisal

Before synthesis, each study was appraised for methodological quality using criteria adapted from qualitative synthesis guidelines, including clarity of research design, transparency of sampling procedures, appropriateness of data collection methods, and coherence of data analysis. Only studies meeting minimum quality thresholds were included, enhancing the credibility and trustworthiness of the synthesis.

Researcher Reflexivity

The researcher's reflexivity was integral to the synthesis process. Given the authors' involvement in the original studies, reflexive memos were maintained to acknowledge potential interpretive bias and to

ensure that analytical decisions were grounded in the data rather than prior assumptions. Cross-checking of codes and themes across studies further supported analytical rigour.

Sample and Participants

This meta-synthesis draws on four empirical studies conducted between 2021 and 2023 that investigated classroom assessment practices at the secondary school level in Pakistan. The included studies collectively involved secondary school teachers, school leaders, and students drawn from public-sector institutions, including Federal Government Educational Institutions and provincial secondary schools. Across the four studies, participant samples comprised classroom teachers from diverse subject areas, school administrators responsible for instructional oversight, and, in some cases, secondary-level students who provided perspectives on feedback practices. Sample sizes varied across studies, reflecting differences in research design, and included qualitative interview participants, survey respondents, and mixed-method samples.

The decision to include only these four studies was guided by their direct conceptual and empirical alignment to develop a future-oriented, assessment-informed pedagogical framework. All four studies were authored within a coherent research program, employed systematic data-collection procedures, and focused explicitly on classroom assessment practices rather than on large-scale testing or policy analysis alone. This coherence enabled meaningful cross-study comparison and synthesis.

Inclusion criteria required that studies (a) focused on secondary-level classroom assessment in Pakistan, (b) employed empirical qualitative, quantitative, or mixed-method designs, (c) reported original data on assessment practices, feedback, leadership, or professional learning, and (d) were published or completed within the 2021–2023 period. Studies focusing exclusively on primary education, large-scale examinations, or theoretical commentary without empirical evidence were excluded.

To ensure rigour, each study was reviewed for methodological transparency, clarity of sampling procedures, data credibility, and analytic coherence before inclusion. This quality appraisal strengthened the trustworthiness of the synthesis and mitigated risks of selective interpretation. A brief description of the four studies included is provided in Table 1.

Table 1

Brief Description of Four Included Studies

Study	Research Design	Participants	Educational Context	Data Sources	Focus of the Study
Shah & Habib (2021)	Qualitative	Secondary school leaders and teachers	Public secondary schools (Pakistan)	Semi-structured interviews, document analysis	Classroom assessment practices and their pedagogical role
Shah & Habib (2022)	Quantitative	Secondary school teachers and students	Federal Government Educational Institutions (FGEIs)	Survey questionnaires	Feedback practices in classroom assessment
Shah et al. (2022)	Mixed-methods	Teachers and school leaders	Public secondary schools (Pakistan)	Surveys, interviews	Changes required to improve classroom assessment
Shah et al. (2023)	Mixed-methods	Secondary school teachers	Federal Government Educational Institutions (FGEIs)	Questionnaires, interviews	Challenges in classroom assessment practices

The synthesis process included three phases. In the first phase, key findings were extracted. Here, the researchers extracted statistical findings, codes and themes from each study and formed a synthesis matrix. In the next phase, thematic integration of all four studies was done. Emergent ideas and common patterns were traced, and contradictions were explored. In the last phase, integrated themes, patterns, and findings were added to design a future-oriented, assessment-informed national model. Throughout the synthesis process, the integrity of the original studies was maintained while generating broader interpretive insights.

Results

The following challenges were explored after integrating findings across the four studies.

Lack of Assessment Literacy among Teachers

Teachers showed a lack of expertise in designing quality assessments, interpreting results, and using evidence to adjust instruction. The study also explored teachers' deficiency in clarity of learning objectives, alignment between teaching and assessment, quality of question papers, meaningful interpretation of student work, and ability to provide effective feedback (Shah et al., 2023). These patterns mirror international findings that teachers require sustained training to effectively implement AfL (Popham, 2017; Brookhart, 2019).

Exam-Oriented Instructional Cultures

Studies have shown that teachers feel compelled to focus on board exam preparation because students' futures depend heavily on their marks (Shah et al., 2021). In this way, an exam-driven system pushes teachers toward teaching-to-the-test practices in Pakistan. These practices result in rote memorisation supplanting conceptual understanding, overshadowing formative assessment by summative assessment, and decreasing creativity in teaching. This structural pressure weakens the implementation of Assessment for Learning, as formative assessment requires flexibility, experimentation, and teacher autonomy.

Limited or Ineffective Feedback Practices

Effective feedback practices are important in the assessment process. But this study found that teachers often struggle to provide actionable, timely, and personalised feedback (Shah & Habib, 2022). Reasons included large class sizes that restrict individualised attention, lack of training in feedback techniques, reliance on grades rather than comments, and minimal peer or self-assessment activities. Students often receive evaluative rather than descriptive feedback. This affects improvement in student learning.

Lack of Professional Development

The present study explored that structured and effective assessment training is lacking among teachers. In training workshops, the focus is on theoretical content, and sufficient practical application is not provided. In effective professional development training, priority is given to continuous cycles rather than one-time workshops. Classroom-focused training, coaching and mentoring systems and collaborative learning communities are considered essential components of professional development in assessment (Shah et al., 2022).

Leadership and Systemic Constraints

School leadership deeply shapes assessment culture. The studies showed that principals play both enabling and limiting roles. Effective leaders encourage teacher collaboration, establish assessment committees, monitor assessment quality, and model evidence-informed decision-making.

However, many schools lack assessment-focused leadership practices. Systemic barriers, bureaucracy, administrative overload, and resource shortages also create hurdle in improving assessment (Shah et al., 2023).

Emerging Evidence of Change

The studies also explored an emerging evidence of change. Awareness among teachers is continuously increasing regarding formative assessment. Teachers have started using peer and self-assessment. Some schools are expanding feedback practices for assessing students. School leaders are showing some growing interest in evidence-informed teaching. These developments provide a foundation for designing a future-oriented assessment framework.

Discussion

This meta-synthesis integrates evidence from four empirical studies conducted in Pakistan to examine secondary-level classroom assessment practices. The synthesis itself identifies recurring constraints — limited teacher assessment literacy, examination-oriented instructional cultures, inconsistent feedback practices, weak professional development structures, and insufficient assessment-focused leadership — while also revealing emerging signals of pedagogical change. Importantly, these findings are not direct repetitions of prior literature but represent convergent patterns derived from cross-study integration within a specific national context.

With respect to teacher agency, the synthesis finds that although teachers express willingness to adopt assessment-for-learning (AfL) strategies, their capacity to do so is constrained by systemic pressures, particularly high-stakes examinations and limited professional autonomy. This finding aligns with international research emphasising teacher agency as central to sustainable reform (Priestley et al., 2015). Still, the synthesis extends this literature by demonstrating how agency in Pakistan remains largely aspirational rather than enacted. Across the included studies, variation was evident: some teachers demonstrated innovative assessment practices, while others remained compliance-oriented, suggesting uneven enactment rather than uniform resistance.

Regarding leadership, the synthesis indicates greater agreement across studies. All four studies highlight the absence of assessment-centred instructional leadership as a critical barrier. This finding is consistent with international evidence linking school leadership to effective assessment cultures (Leithwood et al., 2020). However, the synthesis reveals a sharper leadership gap than typically reported in high-income contexts, where instructional leadership structures are more established. This contextual divergence underscores the need for leadership models specifically oriented toward assessment capacity-building rather than general school management.

Collaboration and professional learning show mixed patterns across the studies. While international research consistently positions professional learning communities as drivers of assessment improvement, the synthesis reveals that collaborative practices in Pakistan are often informal, episodic, and unsupported by policy or time allocation. Some schools reported emerging peer collaboration, whereas others showed complete isolation, highlighting significant intra-system variation.

Finally, the synthesis advances feedback literacy beyond existing literature by identifying not only deficits in feedback quality but also a limited understanding of students' use of feedback. While global studies emphasise feedback as a dialogic process, the included studies show feedback remaining largely corrective and teacher-dominated. This gap indicates that future-oriented pedagogy in Pakistan must explicitly integrate literacy in student feedback.

Overall, the synthesis advances theory by contextualising assessment reform within systemic, cultural, and leadership constraints, and advances practice by identifying coherent leverage points for reform rather than isolated classroom techniques.

A Future-Oriented, Assessment-Informed Pedagogical Framework

The findings of the present study suggest the following future-oriented, assessment-informed pedagogical framework. This framework comprises five elements: foundational teacher assessment literacy, assessment-centred school leadership, collaborative assessment communities, student-centred feedback ecosystems, and system-level assessment coherence. These have been explained in the following paragraphs.

Foundational teacher assessment literacy will help teachers develop competencies, including designing valid assessments, interpreting data, giving effective feedback and supporting student self-regulation.

An Assessment-Centred Approach to school leadership is required to improve assessment at the secondary level in Pakistan. Principals should model assessment-informed decision-making and build collaborative cultures among teachers. They should monitor assessment with developmental intent and not in a punitive manner.

Collaborative assessment communities can be established. These should engage in shared assessment design, standardise rubrics and reflection on student work.

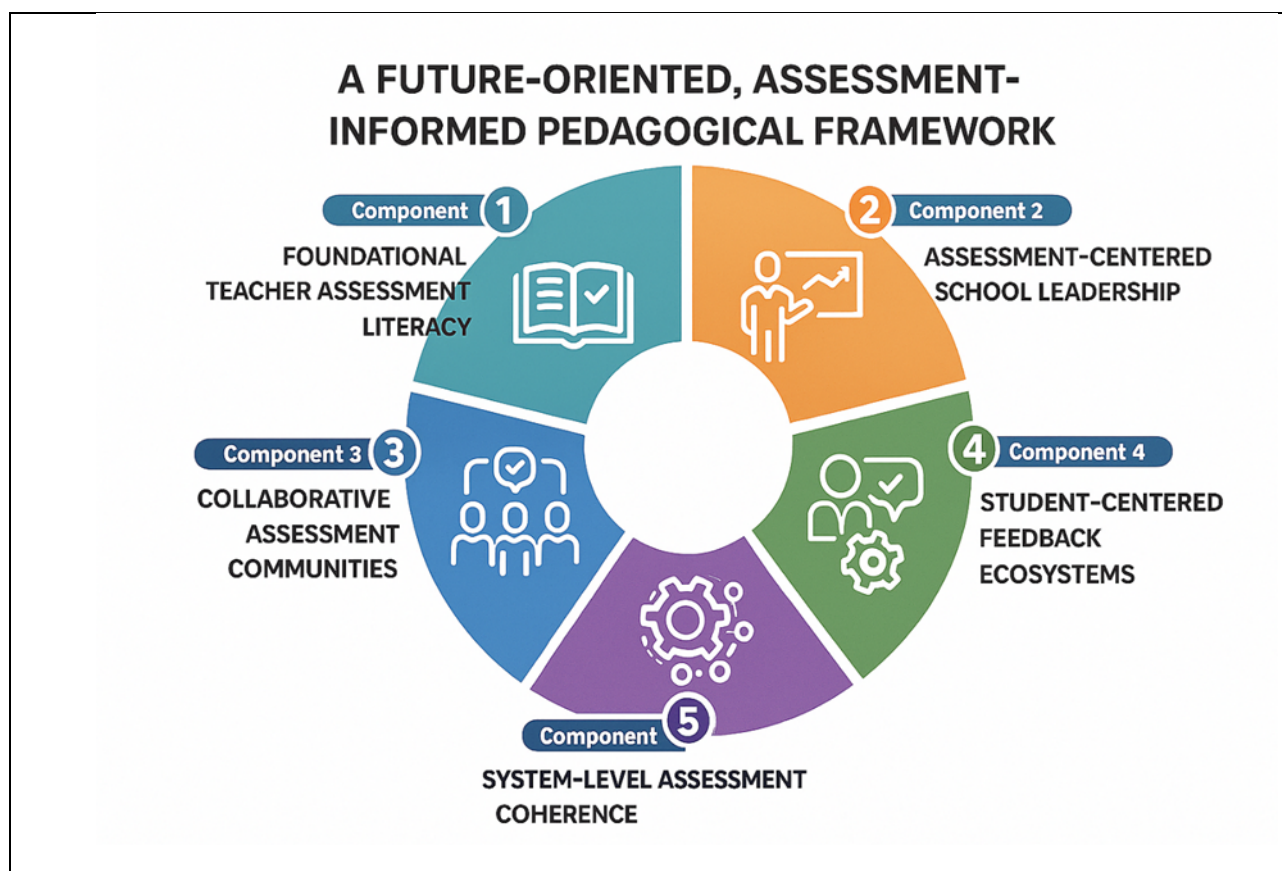
Student-centred feedback ecosystems are important. Timely, actionable and dialogic feedback should be provided. Feedback should be integrated with revision cycles.

System-level assessment coherence should be focused. The national reforms must ensure alignment between policy and practice and integration of assessment for learning in textbooks. Adopting assessment modernisation is also needed.

Graphic materials

Figure 1

A Future-Oriented, Assessment-Informed Pedagogical Framework



Conclusions

This study set out to address the misalignment between prevailing classroom assessment practices and learning-oriented pedagogy at the secondary school level in Pakistan. By synthesising evidence across multiple empirical studies, the research aimed to inform the development of a coherent, future-oriented, assessment-informed pedagogical approach. The conclusions drawn highlight persistent limitations in teacher assessment literacy, examination-driven instructional norms, fragmented feedback practices, and weak assessment-focused leadership, which continue to constrain the formative potential of classroom assessment.

At the same time, the study contributes to scholarship by offering a synthesis-driven conceptual framework that integrates teacher agency, assessment-centred leadership, collaborative professional structures, student-focused feedback, and system-level coherence. This framework extends existing assessment literature by situating formative assessment within a nationally grounded pedagogical model rather than as isolated classroom techniques.

From a policy and practice perspective, the findings underscore the need for coordinated national assessment reform that aligns teacher professional development, school leadership practices, and curriculum and examination systems. Strengthening assessment literacy and leadership capacity emerges as central to repositioning assessment as a tool for learning rather than solely for accountability.

These conclusions should be interpreted in light of certain limitations. The synthesis draws on a limited number of studies within a specific national context and relies on secondary analysis of existing data. Nevertheless, the convergent patterns identified provide a robust basis for informing policy dialogue, guiding practice, and shaping future empirical research on assessment reform in similar contexts.

Suggestions for Future Research

Future research should advance the proposed framework through rigorous empirical, policy, longitudinal, and organisational inquiries. First, large-scale mixed-method studies are needed to validate the framework across provinces, school systems, and subject areas, examining how its core components — teacher assessment literacy, assessment-centred leadership, collaborative professional communities, student-focused feedback, and system-level coherence — operate under varied contextual conditions. Quasi-experimental and design-based studies could test implementation fidelity and learning effects.

Second, policy evaluation research should investigate alignment between national assessment policies, provincial examination boards, and classroom practices. Comparative policy analyses and implementation studies can assess how policy instruments enable or constrain assessment-centred leadership and coherent feedback systems within schools.

Third, longitudinal research is essential to capture the sustained impact of assessment reform. Multi-year studies that track teachers and students can examine how assessment literacy, instructional decision-making, and feedback practices evolve and whether system coherence supports durable pedagogical change.

Finally, future studies should deepen the understanding of teacher agency and leadership models. Qualitative case studies and network analyses can explore how instructional leadership, professional learning communities, and teacher-led innovation mediate reform processes and institutionalise assessment-informed pedagogy within complex school systems. Such evidence would inform scalable reform strategies and strengthen national capacity for equitable, learning-oriented assessment systems.

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Conflict of Interest

None.

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