
Reimagining Professional Development for PARAKH-Based Assessment

***Ruchita Sahu¹ & Prof. Gopal Krishna Thakur²**

^{*1}Integrated B.ed-M.ed Student, Department of Education, MGAHV, Wardha, Maharashtra
E-Mail: ruchitasahu2000@gmail.com

²Head & Dean, Department of Education, MGAHV, Wardha, Maharashtra
E-Mail: gkthakur11@gmail.com
DOI: doi.org/10.5281/zenodo.21724123

Received on: 25/05/2026

Accepted on: 29/06/2026

Published on: 30/06/2026

Abstract:

The successful implementation of competency-based assessment envisioned under India's National Education Policy (NEP) 2020 and operationalised through the National Assessment Centre—PARAKH depends not only on teachers' readiness but also on sustained opportunities for Professional Development. While recent policy reforms advocate a shift from content-driven examinations to competency-oriented assessment, relatively little empirical evidence exists regarding the kinds of Professional Development teachers perceive as necessary to enact these reforms effectively. Addressing this gap, the present study investigates teachers' Professional Development requirements for implementing PARAKH-based assessment practices in school education.

The study adopted a mixed-methods research design involving 48 school teachers selected through purposive sampling. Quantitative data were collected using a structured questionnaire, while qualitative responses provided deeper insights into teachers' experiences, perceived challenges, and expectations regarding assessment reform. Descriptive analysis was complemented by thematic interpretation to identify recurring patterns in teachers' Professional Development needs.

The findings indicate that teachers generally recognise the educational significance of competency-based assessment and demonstrate positive dispositions towards assessment reform. However, they consistently reported the need for sustained Professional Development in areas such as assessment literacy, competency-based task design, rubric development, formative feedback, authentic classroom assessment, digital assessment practices, and collaborative professional engagement. The study further suggests that one-time orientation programmes are insufficient for supporting meaningful pedagogical change. Instead, teachers emphasised continuous, practice-oriented, and school-based Professional Development supported by mentoring, peer collaboration, instructional leadership, and institutional encouragement.

The paper argues that Professional Development should be conceptualised as an ongoing process embedded within teachers' everyday practice rather than as a series of isolated training events. It

concludes by proposing a shift towards a collaborative and reflective model of teacher learning aligned with the objectives of PARAKH and NEP 2020. The findings have implications for teacher education institutions, school leadership, educational administrators, and policymakers responsible for designing Professional Development systems capable of sustaining competency-based assessment reforms in India.

Keywords: *PARAKH, Professional Development, competency-based assessment, teacher Professional Development, assessment literacy, NEP 2020, school education, assessment reform.*

Introduction:

Across the world, educational systems are redefining assessment as an integral component of learning rather than merely a mechanism for certifying achievement. Contemporary assessment reforms increasingly emphasise the development of higher-order thinking, problem-solving, creativity, collaboration, and real-world application of knowledge. Consequently, competency-based assessment has emerged as a central feature of educational transformation, requiring teachers to move beyond traditional examination practices towards assessment approaches that actively support learning and learner development (Black & Wiliam, 2009; Darling-Hammond et al., 2020).

India has embraced this global shift through the National Education Policy (NEP) 2020, which calls for a fundamental transformation in school assessment. Rejecting an excessive reliance on rote memorisation and high-stakes examinations, the policy advocates assessment systems that evaluate conceptual understanding, competencies, critical thinking, creativity, and problem-solving abilities. To operationalise this vision, the Government of India established the National Assessment Centre—PARAKH (Performance Assessment, Review and Analysis of Knowledge for Holistic Development), which seeks to promote competency-based assessment, improve equivalence across educational boards, and strengthen assessment literacy among teachers and educational institutions (Ministry of Education, 2020; NCERT, 2023). Although policy documents clearly articulate the direction of assessment reform, successful implementation ultimately depends upon teachers. Teachers are expected not only to understand competency-based assessment conceptually but also to translate it into classroom practice through authentic assessment tasks, formative feedback, performance-based evaluation, rubric development, and learner-centred assessment strategies. Such expectations substantially expand teachers' professional responsibilities and require new forms of expertise that extend beyond conventional testing practices (Popham, 2009; Xu & Brown, 2016).

Educational change research consistently demonstrates that policy reforms alone rarely produce meaningful transformation in classroom practice. Rather, sustainable reform depends upon continuous Professional Development that enables teachers to acquire new knowledge, experiment with innovative practices, reflect on their experiences, and collaboratively improve instructional

decision-making (Fullan, 2020; Hargreaves & Fullan, 2012). Professional Development, therefore, represents a critical bridge between policy aspirations and classroom implementation. Within the Indian context, however, Professional Development has traditionally been organised around short-duration, centrally designed training programmes that often emphasise information dissemination rather than sustained pedagogical development. While such programmes may enhance awareness of new policies, they seldom provide opportunities for teachers to develop practical assessment expertise, engage in collaborative inquiry, or receive continuous mentoring during implementation. Consequently, there remains a considerable gap between teachers' awareness of assessment reform and their confidence in translating policy into classroom practice (Juneja, 2018).

The introduction of PARAKH makes this challenge particularly significant. Competency-based assessment requires teachers to rethink how learning outcomes are interpreted, how evidence of learning is collected, how performance standards are communicated, and how assessment informs instruction. These changes demand an expanded conception of Professional Development that extends beyond conventional in-service training towards continuous, collaborative, reflective, and practice-based learning opportunities. Yet empirical research examining teachers' Professional Development requirements in relation to PARAKH remains limited.

The present study addresses this gap by examining teachers' perceptions of the Professional Development necessary for implementing PARAKH-based assessment in Indian schools. Rather than focusing on whether teachers are ready for assessment reform—a question addressed in the preceding study—this paper explores the nature, priorities, and conditions of Professional Development that teachers themselves consider essential for successful implementation. By foregrounding teachers' perspectives, the study contributes to the growing discourse on competency-based assessment while offering practical insights for policymakers, teacher educators, and school leaders responsible for supporting assessment reform in India.

Professional Development and Assessment Reform: A Review of the Literature

The quality of educational reform depends not only on the policies that initiate change but also on teachers' capacity to interpret, adapt, and implement those changes within their classroom contexts. Among the various dimensions of educational reform, assessment reform is particularly demanding because it requires teachers to simultaneously reconsider curriculum, pedagogy, classroom interaction, and evaluation practices. Consequently, the success of competency-based assessment depends less on the publication of policy documents than on the Professional Development opportunities available to teachers throughout the reform process (Fullan, 2020; OECD, 2019).

Professional Development has evolved considerably over the past three decades. Earlier approaches largely equated teacher development with periodic in-service training programmes organised outside schools. Contemporary scholarship, however, views Professional Development as a continuous process through which teachers expand their professional knowledge, refine instructional practices, critically reflect on classroom experiences, and collaborate with colleagues to improve student learning (Hargreaves & Fullan, 2012). This shift recognises teachers as active constructors of professional knowledge rather than passive recipients of externally transmitted information.

Assessment reform has reinforced this transition from training to Professional Development. Traditional assessment systems were largely based on standardised testing, content recall, and summative evaluation, requiring relatively limited pedagogical adaptation from teachers. Competency-based assessment, in contrast, expects teachers to design authentic learning tasks, employ multiple sources of assessment evidence, develop transparent performance criteria, provide formative feedback, and use assessment information to guide instruction. These responsibilities require sophisticated assessment literacy that develops gradually through sustained professional engagement rather than through isolated workshops (Black & Wiliam, 2009; Heritage, 2010).

Assessment literacy has therefore emerged as one of the most significant components of teacher professionalism. Popham (2009) argues that teachers require far more than technical knowledge of testing procedures; they must understand how assessment influences learning, motivation, instructional planning, and educational equity. Similarly, Xu and Brown (2016) conceptualise teacher assessment literacy as an integration of theoretical understanding, contextual decision-making, ethical responsibility, and practical classroom expertise. Their reconceptualization emphasises that assessment competence develops through continuous experience, reflection, and adaptation rather than through one-time certification. Research conducted across different educational systems similarly demonstrates that effective assessment reform depends upon collaborative Professional Development communities. Teachers who regularly engage in peer observation, joint lesson planning, collaborative moderation of student work, and collective reflection are more likely to implement innovative assessment practices with confidence and consistency than teachers working in professional isolation (Darling-Hammond et al., 2020; Hargreaves & Fullan, 2012). Such collaborative environments encourage teachers to experiment with new practices, learn from shared experiences, and gradually develop professional confidence in implementing educational reforms.

The literature on educational change further suggests that Professional Development should be viewed as an organisational rather than an individual process. Fullan (2020) argues that meaningful educational reform requires coherence among policy, leadership, institutional culture, and teacher learning. Teachers are unlikely to sustain innovative assessment practices unless schools provide

supportive leadership, opportunities for professional collaboration, adequate instructional resources, and an environment that values experimentation and reflective practice. Consequently, Professional Development extends beyond individual competence to include institutional conditions that enable continuous improvement. Within the Indian educational context, the National Education Policy (NEP) 2020 represents one of the most significant policy initiatives promoting competency-based learning and assessment. The policy explicitly recommends reducing reliance on rote memorisation and high-stakes examinations while encouraging assessment systems that capture conceptual understanding, application of knowledge, creativity, communication, and problem-solving abilities (Ministry of Education, 2020). To translate this vision into practice, the National Assessment Centre—PARAKH has been established to promote competency-based assessment, standard-setting, equivalence across educational boards, and assessment reform throughout the country (NCERT, 2023).

Recent initiatives under PARAKH, including the Holistic Progress Card, the National Curriculum Framework for School Education (NCF-SE 2023), and the PARAKH Rashtriya Sarvekshan Assessment Framework, collectively indicate that teachers are expected to assume substantially expanded roles in assessment design, implementation, feedback, and learner progression (NCERT, 2023, 2024). Rather than functioning merely as exam administrators, teachers are increasingly expected to become designers of meaningful assessment experiences that support holistic student development. This transition inevitably increases the importance of sustained Professional Development systems capable of supporting teachers throughout the implementation process.

Despite these important policy developments, empirical evidence concerning teachers' Professional Development requirements for competency-based assessment in India remains relatively limited. Existing studies have largely focused on teachers' awareness of educational reforms, implementation challenges, or perceptions of competency-based education. Comparatively fewer studies have examined the specific forms of Professional Development that teachers themselves consider necessary for successfully implementing competency-based assessment. Moreover, much of the available literature predates the establishment of PARAKH and therefore does not adequately address the Professional Development implications of India's emerging national assessment architecture (Juneja, 2018; Ministry of Education, 2020).

Another limitation of the existing literature is its tendency to conceptualise professional development primarily as attendance at formal training programmes. Contemporary theories of teacher learning suggest that effective professional growth is fostered through continuous reflection, mentoring, collaborative inquiry, classroom-based experimentation, Professional Development communities, and instructional coaching (Hargreaves & Fullan, 2012; Darling-Hammond et al., 2020). Whether

Indian teachers perceive similar priorities within the context of PARAKH-based assessment has not yet been sufficiently investigated.

Accordingly, the present study seeks to address this gap by examining teachers' perspectives on the Professional Development necessary for implementing PARAKH-based competency assessment. By integrating quantitative evidence with qualitative insights, the study moves beyond documenting implementation challenges to identify the forms of sustained Professional Development that teachers believe are essential for translating assessment reform into meaningful classroom practice. In doing so, the paper contributes to the evolving discourse on teacher Professional Development while providing evidence-informed recommendations for strengthening the implementation of PARAKH within the Indian school education system.

Methodology: Research Design

The present study employed a **mixed-methods research design** to examine teachers' Professional Development requirements for implementing PARAKH-based competency assessment. A mixed-methods approach was considered appropriate because Professional Development encompasses measurable patterns of perception as well as context-specific experiences that cannot be adequately understood through quantitative or qualitative data alone. While quantitative data provided an overview of teachers' perceptions regarding different dimensions of Professional Development, qualitative responses enabled a deeper understanding of the challenges, expectations, and contextual realities associated with assessment reform. The integration of both forms of evidence facilitated a more comprehensive interpretation of teachers' Professional Development needs.

Sample

The study involved **48 school teachers** working in different school settings. Participants were selected through **purposive sampling** because they represented teachers who were directly engaged in classroom assessment and therefore possessed relevant experience regarding contemporary assessment practices. The sample included teachers from different subject areas and levels of teaching experience, allowing the study to capture diverse perspectives on Professional Development within the context of competency-based assessment.

Research Instrument

Data were collected using a structured questionnaire consisting of **20 Likert-type items** together with a set of open-ended questions. The questionnaire was designed to explore teachers' perceptions regarding the Professional Development required for implementing competency-based assessment under PARAKH. Rather than focusing solely on participation in formal training programmes, the instrument examined multiple dimensions of Professional Development, including assessment

literacy, classroom assessment practices, collaborative learning opportunities, mentoring, institutional support, digital competence, and continuous professional growth.

The open-ended questions invited teachers to describe the kinds of support they considered necessary for implementing competency-based assessment effectively. These responses provided rich qualitative evidence that complemented the quantitative findings by highlighting teachers' practical experiences, concerns, and expectations regarding Professional Development.

Data Collection

Data were collected after obtaining the necessary institutional permissions and informed consent from all participants. Participation was voluntary, and respondents were assured that the information provided would remain confidential and would be used exclusively for academic research. Ethical principles relating to anonymity, confidentiality, and voluntary participation were maintained throughout the study.

Data Analysis

Quantitative data were analysed using **descriptive statistics** to identify overall patterns in teachers' perceptions of Professional Development requirements. Since the objective of the study was exploratory rather than predictive, descriptive measures were considered appropriate for summarising the responses and identifying areas requiring professional support. Qualitative responses were analysed through **thematic analysis**. Teachers' narratives were read repeatedly to identify recurring ideas, which were subsequently organised into broader themes reflecting common Professional Development requirements. The qualitative findings were used to enrich and contextualise the quantitative results rather than being presented as an independent strand of analysis. This process enabled triangulation of evidence and strengthened the credibility of the findings.

Trustworthiness and Rigour

Several measures were adopted to enhance the credibility of the study. The integration of quantitative and qualitative evidence allowed methodological triangulation, thereby providing complementary perspectives on teachers' Professional Development requirements. The use of open-ended responses enabled participants to articulate their experiences in their own words, reducing the possibility of restricting findings to predetermined categories. Throughout the analysis, interpretations were grounded in participants' responses and interpreted in relation to the broader literature on teacher Professional Development and assessment reform. The combination of descriptive statistical analysis with thematic interpretation contributed to a balanced and contextually meaningful understanding of teachers' perspectives.

Findings

The analysis revealed that teachers generally viewed Professional Development as an indispensable prerequisite for the successful implementation of PARAKH-based competency assessment. While participants expressed positive attitudes towards the objectives of assessment reform, they consistently emphasised that effective implementation would require sustained opportunities to develop new knowledge, practical skills, and collaborative professional expertise. The findings are organised into five interrelated themes that emerged from the quantitative patterns and qualitative responses.

Assessment Literacy as the Foundation of Professional Development

The findings indicate that teachers considered assessment literacy to be the most fundamental area of Professional Development. Participants recognised that competency-based assessment requires a conceptual understanding of learning outcomes, competencies, performance standards, formative assessment strategies, and authentic evidence of student learning. Although many teachers reported familiarity with the general objectives of competency-based education, they also acknowledged uncertainty regarding the practical design of assessment tasks that accurately measure competencies rather than factual recall.

Teachers frequently observed that existing professional development programmes had introduced the principles of competency-based assessment but had provided limited opportunities to practise designing classroom assessments aligned with those principles. Consequently, participants expressed a need for sustained learning experiences that combine theoretical understanding with practical application. These findings suggest that assessment literacy should be viewed not as a one-time acquisition of knowledge but as an ongoing professional competence that develops through repeated engagement with classroom practice.

Professional Development through Practice-Oriented Training

The findings suggest that teachers perceived a substantial gap between theoretical orientation programmes and the practical demands of implementing competency-based assessment in classrooms. While participants acknowledged that recent training initiatives had introduced the philosophy and objectives of assessment reform, many indicated that such programmes seldom addressed the practical complexities of designing competency-based assessment tasks, developing performance rubrics, generating authentic assessment evidence, or providing meaningful formative feedback. Consequently, teachers expressed a preference for Professional Development experiences that are directly connected with everyday classroom practice rather than programmes dominated by policy dissemination.

Qualitative responses further revealed that teachers considered demonstration lessons, classroom simulations, assessment workshops, and collaborative lesson planning to be considerably more

effective than conventional lecture-based training. Participants repeatedly emphasised that Professional Development becomes meaningful when teachers are provided opportunities to observe exemplary assessment practices, design assessment activities collectively, receive expert feedback, and refine their approaches through repeated implementation. Such experiences were perceived as enabling greater confidence in translating policy expectations into pedagogical practice.

Another important finding concerns the continuity of Professional Development. Teachers consistently observed that assessment competence cannot be developed through isolated workshops conducted at long intervals. Instead, they advocated continuous learning opportunities integrated with the academic calendar, allowing teachers to implement new strategies, reflect on classroom experiences, and seek guidance as implementation challenges emerge. These observations reinforce the view that competency-based assessment requires sustained professional engagement rather than episodic training interventions.

Collectively, these findings indicate that teachers value Professional Development that is practical, classroom-oriented, and continuous. The emphasis placed on experiential learning suggests that future Professional Development initiatives under PARAKH should prioritise authentic classroom applications over predominantly theoretical training formats.

Collaborative Professional Development and Peer Support

A recurring theme emerging from both the quantitative and qualitative evidence relates to the importance of collaborative Professional Development. Teachers consistently indicated that implementing competency-based assessment involves considerable pedagogical uncertainty, particularly during the initial stages of reform. Under such conditions, opportunities to learn collaboratively with colleagues were perceived as essential for building professional confidence and improving assessment practices.

Participants highlighted several forms of collaborative engagement that they considered valuable, including joint lesson planning, collaborative development of assessment tasks, moderation of students' work, peer observation, and professional dialogue concerning classroom experiences. Such collaborative processes were viewed as enabling teachers to compare different approaches to competency assessment, exchange practical solutions, and develop shared interpretations of assessment standards. Rather than relying exclusively on external experts, teachers emphasised the importance of learning from colleagues who face similar classroom realities.

The findings also suggest that collaborative learning contributes to professional confidence by reducing the sense of isolation often associated with educational reform. Several teachers reported that opportunities to discuss implementation challenges with peers encouraged experimentation with innovative assessment strategies while reducing anxiety associated with change. In this sense,

collaboration was perceived not merely as a mechanism for knowledge sharing but also as an important source of professional encouragement and reflective practice.

These findings underscore that competency-based assessment should be understood as a collective institutional endeavour rather than an individual responsibility. Effective implementation therefore requires schools to establish structures that facilitate regular professional interaction, collaborative inquiry, and shared responsibility for assessment improvement.

Institutional Support and Instructional Leadership

Teachers also identified institutional support as a critical determinant of meaningful Professional Development. Although individual motivation was regarded as important, participants consistently observed that sustained implementation of competency-based assessment depends upon supportive school environments that encourage innovation, allocate time for professional collaboration, and recognise teachers' efforts to improve assessment practices.

One recurring concern involved the availability of time for Professional Development. Teachers reported that heavy instructional responsibilities and administrative workloads frequently limit opportunities for collaborative planning, reflective discussion, and classroom experimentation. Consequently, participants argued that Professional Development should be recognised as an integral component of teachers' professional responsibilities rather than an additional activity undertaken outside regular academic commitments.

The role of school leadership emerged as another important theme. Participants perceived principals and academic leaders as instrumental in creating organisational conditions that promote professional growth. Encouragement from school leadership, opportunities for collaborative decision-making, constructive feedback, and recognition of innovative assessment practices were considered essential for sustaining teachers' engagement with assessment reform. Conversely, institutional cultures characterised by excessive administrative compliance were viewed as discouraging experimentation and limiting professional initiative.

Teachers also highlighted the importance of access to appropriate assessment resources, exemplars of competency-based assessment, digital platforms, and mentoring support during implementation. Such resources were viewed as reducing uncertainty and enabling teachers to gradually develop confidence in designing and implementing authentic assessment strategies. The findings therefore suggest that Professional Development extends beyond individual competence to encompass organisational structures that enable continuous professional growth.

Digital Competence and Emerging Professional Development Needs

The findings further indicate that teachers increasingly associate competency-based assessment with the effective use of digital technologies. Participants recognised that digital platforms provide

opportunities for creating interactive assessment tasks, maintaining learner portfolios, documenting evidence of learning, analysing assessment data, and providing timely feedback. However, many teachers also acknowledged that they require additional Professional Development to utilise these technologies confidently and pedagogically. Teachers emphasised that digital competence should not be restricted to technical proficiency alone. Rather, they perceived digital assessment as involving the meaningful integration of technology with assessment design, learner engagement, formative feedback, and evidence-based instructional decision-making. Consequently, participants expressed a need for Professional Development experiences that simultaneously address technological knowledge and pedagogical application. The findings further suggest that rapid technological change requires Professional Development systems capable of continuous adaptation. Teachers anticipated that competency-based assessment under PARAKH would increasingly incorporate digital assessment tools, data-informed decision-making, and technology-supported feedback mechanisms. They therefore viewed continuous digital Professional Development as an essential component of long-term assessment reform rather than a supplementary area of teacher development.

Overall, teachers perceived digital competence as an emerging dimension of professional professionalism that should be integrated into broader Professional Development initiatives rather than addressed through isolated technology training programmes.

Overall Pattern of Professional Development Needs

The findings collectively indicate that teachers perceive Professional Development as a multidimensional and continuous process supporting the implementation of competency-based assessment. Rather than identifying a single area of need, participants described an interconnected set of Professional Development priorities encompassing assessment literacy, practice-oriented learning, collaborative engagement, institutional support, and digital competence. These dimensions reinforce the argument that assessment reform requires systemic investment in teachers' professional growth rather than isolated training initiatives.

Table 1: Summary of Teachers' Professional Development Priorities for PARAKH-Based Assessment

Professional Development Dimension	Overall Pattern	Key Observation
Assessment literacy	High priority	Teachers require deeper understanding of competency-based assessment principles and classroom application.

Professional Development Dimension	Overall Pattern	Key Observation
Practice-oriented learning	High priority	Teachers prefer hands-on, classroom-based learning over lecture-oriented training.
Collaborative learning	High priority	Peer learning, mentoring, and Professional Development communities were widely valued.
Institutional support	Moderate to high priority	School leadership, time, and organisational support were considered essential for sustained implementation.
Digital assessment competence	Emerging priority	Teachers recognised increasing expectations regarding technology-enabled assessment and feedback.

The overall pattern demonstrates that teachers do not view Professional Development as participation in occasional training programmes. Instead, they perceive it as a continuous process of developing assessment expertise through practice, collaboration, institutional support, and reflective engagement. These findings provide the foundation for the subsequent discussion, which interprets the results in relation to contemporary theories of Professional Development, assessment literacy, and educational change.

Discussion

The present study sought to examine teachers' Professional Development requirements for implementing PARAKH-based competency assessment in Indian schools. While recent policy initiatives have emphasised assessment reform as a cornerstone of educational transformation, comparatively little empirical attention has been devoted to understanding the forms of Professional Development that teachers perceive as necessary for translating policy into classroom practice. The findings indicate that teachers' Professional Development needs extend well beyond participation in conventional in-service training programmes. Instead, teachers emphasised continuous assessment literacy, practice-oriented learning experiences, collaborative professional engagement, supportive institutional environments, and digital competence as essential components of effective assessment reform.

One of the most significant findings concerns the centrality of **assessment literacy** within teachers' Professional Development. Participants consistently viewed conceptual understanding of competency-based assessment as a prerequisite for meaningful implementation. This finding supports the argument advanced by Popham (2009) that assessment literacy constitutes a fundamental dimension of teacher professionalism rather than a specialised technical skill. Similarly, Xu and Brown (2016) argue that teachers require integrated knowledge of assessment theory, pedagogical judgement, contextual decision-making, and ethical responsibility. The present study extends these perspectives by demonstrating that teachers themselves recognise assessment literacy as a continuous learning process rather than a competency acquired through isolated training sessions.

The findings also reinforce contemporary theories of **Professional Development** that distinguish sustained learning from traditional models of professional development. Teachers consistently preferred classroom-embedded learning opportunities involving practical application, demonstration, collaborative lesson planning, and reflective practice over lecture-oriented training programmes. This preference aligns with Hargreaves and Fullan's (2012) conception of professional capital, which emphasises that professional expertise develops through collaborative inquiry, shared experience, and collective problem-solving. Rather than expecting external experts to provide ready-made solutions, teachers valued opportunities to construct professional knowledge within authentic classroom contexts.

Another noteworthy finding concerns the importance of **collaborative Professional Development**. Participants viewed peer interaction, mentoring, collaborative moderation of student work, and professional dialogue as essential mechanisms for improving competency-based assessment practices. These findings resonate with international research demonstrating that Professional Development communities promote reflective practice, reduce professional isolation, and facilitate sustainable instructional improvement (Darling-Hammond et al., 2020). Within the context of PARAKH, collaboration appears particularly significant because competency-based assessment requires teachers to negotiate new interpretations of learning outcomes, performance standards, and evidence of student achievement. Such complex professional judgements are more effectively developed through collaborative engagement than through individual study alone.

The study further highlights the influence of **institutional conditions** on teachers' Professional Development. Participants consistently reported that leadership support, organisational culture, availability of time, and access to professional resources substantially affect their capacity to implement assessment reform. This finding supports Fullan's (2020) contention that educational change should be understood as a systemic rather than an individual process. Even highly motivated teachers may experience difficulty sustaining innovative assessment practices when schools lack

supportive leadership structures or opportunities for continuous professional collaboration. Consequently, Professional Development should not be conceptualised solely as an individual responsibility but as an organisational commitment requiring active institutional support.

An additional contribution of the study concerns the emerging importance of **digital competence** within competency-based assessment. Teachers recognised that digital technologies increasingly influence assessment design, learner feedback, evidence collection, and instructional decision-making. However, they also acknowledged that effective integration of digital assessment requires pedagogical understanding rather than merely technical proficiency. This observation reflects broader international discussions regarding teachers' digital pedagogical competence and suggests that Professional Development for assessment reform should integrate technological knowledge with assessment literacy rather than treating them as separate domains.

The findings also invite reflection on the nature of educational reform within the Indian policy context. NEP 2020 and PARAKH articulate an ambitious vision of transforming assessment from a predominantly summative exercise into a process that supports holistic learning, competency development, and continuous feedback (Ministry of Education, 2020; NCERT, 2023). The present study indicates that teachers broadly endorse these objectives. Nevertheless, they also emphasise that meaningful implementation requires long-term investment in Professional Development rather than reliance on one-time orientation programmes. This distinction is important because policy implementation often assumes that dissemination of reform guidelines is sufficient to generate classroom transformation. The findings suggest instead that sustainable assessment reform depends upon creating Professional Development ecosystems capable of supporting teachers throughout the implementation process.

Collectively, the findings suggest a conceptual shift from **professional development** to **Professional Development**. Whereas professional development traditionally refers to externally organised training events, Professional Development represents a continuous process of knowledge construction, collaborative inquiry, reflective practice, and classroom experimentation. This distinction has important implications for competency-based assessment because teachers' expertise evolves through repeated cycles of implementation, reflection, feedback, and adaptation rather than through episodic participation in training programmes. The study therefore argues that successful implementation of PARAKH requires a systemic approach to teacher learning that is embedded within schools and sustained over time.

Finally, the study contributes to the emerging literature on PARAKH by foregrounding teachers' perspectives during the early phase of national assessment reform. Existing discussions have largely focused on policy intentions, curriculum reforms, and assessment frameworks. In contrast, the present

study demonstrates that teachers themselves perceive Professional Development as the principal mechanism through which assessment reform can be translated into effective classroom practice. This teacher-centred perspective enriches current policy discourse by highlighting the professional conditions necessary for achieving the transformative goals of competency-based assessment in Indian schools.

A Professional Development Framework for PARAKH-Based Assessment

One of the distinctive contributions of this study is its proposition that Professional Development for PARAKH-based assessment should be conceptualised as a continuous and interconnected process rather than as a sequence of discrete training programmes. Based on the empirical findings and their interpretation in light of contemporary scholarship, the study proposes a **Professional Development Framework for PARAKH-Based Assessment (PLF-PARAKH)**. Unlike normative policy models, this framework is grounded in teachers' own perceptions of the knowledge, skills, institutional conditions, and collaborative processes required for implementing competency-based assessment. It therefore represents an empirically informed synthesis of the study's findings rather than a prescriptive model imposed a priori.

The framework comprises five mutually reinforcing dimensions:

Assessment Literacy

Professional Development begins with a deep understanding of competency-based assessment, including learning outcomes, performance standards, authentic assessment tasks, rubric construction, formative assessment, and evidence-based instructional decision-making. Assessment literacy provides the conceptual foundation upon which all other Professional Development is built.

Practice-Based Learning

Teachers emphasised that Professional Development should be closely connected to classroom practice. Demonstration lessons, collaborative lesson planning, assessment design workshops, classroom experimentation, and reflective practice enable teachers to translate theoretical principles into effective instructional strategies.

Collaborative Professional Engagement

Sustainable assessment reform requires opportunities for peer learning, mentoring, Professional Development communities, collaborative moderation of student work, and regular professional dialogue. Such collaborative structures facilitate shared problem-solving and continuous refinement of assessment practices.

Institutional Support

School leadership, organisational culture, dedicated Professional Development time, access to quality assessment resources, and supportive administrative practices create the institutional conditions

necessary for continuous professional growth. Without such support, even well-designed Professional Development initiatives are unlikely to produce sustained classroom change.

Digital Assessment Competence

Professional Development should also address the effective pedagogical integration of digital technologies for assessment design, learner feedback, documentation of evidence, and analysis of learning progress. Digital competence is therefore viewed as an integral dimension of contemporary assessment literacy rather than as an independent technical skill.

The framework conceptualises these five dimensions as interdependent rather than sequential. Improvements in assessment literacy enhance classroom practice; collaborative engagement strengthens professional reflection; institutional support enables sustained learning; and digital competence enriches assessment implementation. Together, these dimensions create a comprehensive Professional Development ecosystem capable of supporting the long-term implementation of competency-based assessment under PARAKH.

Implications

The findings of this study have important implications for educational policy, teacher education, school leadership, and future assessment reforms in India. While PARAKH has established a clear policy direction for competency-based assessment, the present study demonstrates that its successful implementation depends upon strengthening teachers' Professional Development ecosystems rather than merely expanding training provision.

Policy Implications

The findings suggest that Professional Development should occupy a central position within national assessment reform initiatives. Policy efforts aimed at implementing PARAKH should move beyond one-time orientation programmes towards sustained Professional Development systems that support teachers throughout the process of assessment reform. Such systems should integrate assessment literacy, classroom-based mentoring, collaborative inquiry, and continuous professional reflection into regular school functioning.

The study also highlights the need for greater alignment between curriculum reform, assessment policy, teacher education, and school-level implementation. Competency-based assessment cannot be institutionalised solely through revised assessment frameworks unless teachers receive continuous opportunities to develop the professional expertise necessary for translating policy expectations into classroom practice. Consequently, investment in teacher learning should be regarded as an integral component of assessment reform rather than as a supplementary activity.

Implications for Teacher Education

The findings indicate that teacher education institutions should reconsider the manner in which assessment is addressed within both pre-service and in-service programmes. Traditional approaches often emphasise educational measurement and examination techniques but devote comparatively less attention to competency-based assessment, authentic assessment design, formative feedback, rubric construction, and assessment-informed pedagogy.

Teacher education programmes should therefore provide greater opportunities for prospective and practising teachers to engage with authentic classroom assessment scenarios, collaborative assessment design, case-based learning, and reflective analysis of assessment practices. Integrating these experiences into teacher education curricula would strengthen teachers' preparedness for competency-based assessment and reduce the gap between theoretical knowledge and classroom implementation.

Implications for School Leadership

The study reinforces the importance of instructional leadership in sustaining Professional Development. School leaders play a critical role in creating organisational conditions that encourage collaboration, reflective dialogue, innovation, and continuous improvement. Professional Development should therefore become a regular component of school culture rather than an occasional administrative requirement.

Schools implementing PARAKH-based assessment should establish structured opportunities for collaborative lesson planning, peer observation, moderation of student work, mentoring, and Professional Development communities. Such initiatives can strengthen collective professional responsibility while enabling teachers to refine assessment practices through shared experience and reflective engagement.

Conclusion

The transition towards competency-based assessment represents one of the most significant educational reforms envisioned under the National Education Policy 2020. Through the establishment of PARAKH, India has articulated an ambitious vision of assessment that prioritises conceptual understanding, higher-order thinking, authentic learning, and holistic learner development. The success of this vision, however, ultimately depends upon teachers' capacity to translate policy aspirations into meaningful classroom practice.

The present study demonstrates that teachers perceive Professional Development as the principal mechanism through which this transformation can be achieved. Participants consistently emphasised that competency-based assessment requires continuous development of assessment literacy, opportunities for classroom-based practice, collaborative professional engagement, supportive institutional environments, and digital assessment competence. These findings suggest that effective

assessment reform requires a fundamental shift from episodic professional development towards sustained Professional Development embedded within teachers' everyday professional practice.

The study therefore argues that teacher learning should be viewed not merely as a support mechanism for assessment reform but as one of its foundational conditions. Policies promoting competency-based assessment are unlikely to achieve their intended outcomes unless accompanied by comprehensive Professional Development systems that enable teachers to experiment, reflect, collaborate, and continuously refine their assessment practices. In this respect, the Professional Development Framework for PARAKH-Based Assessment proposed in this paper provides an empirically informed perspective on how teacher learning can be strengthened to support long-term assessment reform.

By foregrounding teachers' voices, the study contributes to the emerging scholarship on PARAKH and competency-based assessment while extending broader discussions on teacher Professional Development and educational change. It is hoped that these findings will assist policymakers, teacher educators, school leaders, and researchers in designing Professional Development systems capable of sustaining meaningful assessment reform in Indian school education.

Limitations

The findings of this study should be interpreted in light of certain limitations. First, the study was based on a purposive sample of **48 school teachers**, which limits the generalisability of the findings to the wider population of teachers across India. Although the participants provided valuable insights into Professional Development for competency-based assessment, larger and more diverse samples would enable broader empirical validation. Second, the study relied primarily on teachers' self-reported perceptions. While such perceptions are valuable for understanding Professional Development needs, they may not fully reflect actual classroom practices. Future investigations incorporating classroom observations, assessment artefacts, and longitudinal evidence could provide a more comprehensive understanding of Professional Development and assessment implementation. Third, the study was conducted during the early phase of PARAKH implementation. Teachers' perceptions and Professional Development priorities may evolve as assessment reforms become more firmly established within schools. Consequently, the findings should be viewed as reflecting an important transitional stage in India's ongoing assessment reform process.

Future Research

The present study opens several avenues for future investigation. Longitudinal studies could examine how teachers' Professional Development evolves during different stages of PARAKH implementation and whether sustained Professional Development contributes to measurable improvements in classroom assessment practices.

Future research may also explore differences in Professional Development requirements across school sectors, geographical regions, subject specialisations, and levels of teaching experience. Comparative studies involving government, government-aided, and private schools could provide deeper insights into contextual factors influencing competency-based assessment. Another promising area of inquiry concerns the effectiveness of different Professional Development models. Experimental or design-based studies evaluating mentoring programmes, Professional Development communities, instructional coaching, digital Professional Development platforms, and collaborative assessment networks would provide valuable evidence for strengthening teacher support systems. Finally, further research is required to validate and refine the **Professional Development Framework for PARAKH-Based Assessment** proposed in this study. Empirical testing across diverse educational contexts would help establish its applicability and contribute to the development of a robust evidence base for Professional Development in competency-based assessment.

References:

- Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7–74. <https://doi.org/10.1080/0969595980050102>
- Black, P., & Wiliam, D. (2009). Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability*, 21(1), 5–31. <https://doi.org/10.1007/s11092-008-9068-5>
- Brookhart, S. M. (2013). *How to create and use rubrics for formative assessment and grading*. ASCD.
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage.
- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. *Applied Developmental Science*, 24(2), 97–140. <https://doi.org/10.1080/10888691.2018.1537791>
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.
- DeLuca, C., Coombs, A., & MacGregor, S. (2019). Toward a teacher Professional Development continuum in assessment for learning. *Educational Assessment*, 24(2), 104–122. <https://doi.org/10.1080/10627197.2019.1590571>
- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, 38(3), 181–199. <https://doi.org/10.3102/0013189X08331140>
- Fullan, M. (2020). *The new meaning of educational change* (5th ed.). Teachers College Press.
- Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice*, 8(3), 381–391. <https://doi.org/10.1080/135406002100000512>
- Hargreaves, A., & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. Teachers College Press.
- Heritage, M. (2010). *Formative assessment: Making it happen in the classroom*. Corwin.

-
- Juneja, N. (2018). *Continuous and Comprehensive Evaluation: A study of implementation in India*. National University of Educational Planning and Administration.
- Ministry of Education. (2020). *National Education Policy 2020*. Government of India.
- National Council of Educational Research and Training. (2023). *National Curriculum Framework for School Education (NCF-SE 2023)*. NCERT.
- National Council of Educational Research and Training. (2023). *National Assessment Centre–PARAKH (Performance Assessment, Review and Analysis of Knowledge for Holistic Development)*. NCERT.
- Organisation for Economic Co-operation and Development. (2019). *OECD future of education and skills 2030: OECD learning compass 2030*. OECD Publishing.
- Organisation for Economic Co-operation and Development. (2020). *PISA 2018 results (Vol. VI): Are students ready to thrive in an interconnected world?* OECD Publishing.
- PARAKH. (2023). *Holistic Progress Card (Foundational Stage)*. National Council of Educational Research and Training.
- PARAKH. (2023). *Holistic Progress Card (Preparatory Stage)*. National Council of Educational Research and Training.
- PARAKH. (2024). *Establishing equivalence across school education boards: Towards empirically grounded guidelines for implementation of NEP 2020*. National Council of Educational Research and Training.
- PARAKH. (2024). *Holistic Progress Card (Secondary Stage)*. National Council of Educational Research and Training.
- PARAKH. (2024). *PARAKH Rashtriya Sarvekshan 2024: Assessment framework*. National Council of Educational Research and Training.
- Popham, W. J. (2009). Assessment literacy for teachers: Faddish or fundamental? *Theory Into Practice*, 48(1), 4–11. <https://doi.org/10.1080/00405840802577536>
- Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*, 18(2), 119–144. <https://doi.org/10.1007/BF00117714>
- Stiggins, R. J. (1995). Assessment literacy for the 21st century. *Phi Delta Kappan*, 77(3), 238–245.
- Timperley, H. (2011). *Realizing the power of Professional Development*. Open University Press.
- UNESCO. (2021). *Reimagining our futures together: A new social contract for education*. UNESCO.
- Villegas-Reimers, E. (2003). *Teacher professional development: An international review of the literature*. International Institute for Educational Planning, UNESCO.
- Weiner, B. J. (2009). A theory of organizational readiness for change. *Implementation Science*, 4, Article 67. <https://doi.org/10.1186/1748-5908-4-67>
- Xu, Y., & Brown, G. T. L. (2016). Teacher assessment literacy in practice: A reconceptualization. *Teaching and Teacher Education*, 58, 149–162. <https://doi.org/10.1016/j.tate.2016.05.010>