

NEED ASSESSMENT STUDY ON EARLY LEARNING ASSESSMENT TOOLS FOLLOWING SDG 4.2 IN PAKISTAN: INSIGHTS FROM STAKEHOLDER INTERVIEWS

Qurat Ul Ain Asif^{*1}, Amna Yousaf²

^{*1,2}Department of Education University of management and technology Lahore

¹ainyasif2@gmail.com, ²amna.yousaf@umt.edu.pk

DOI: <https://doi.org/10.5281/zenodo.18454756>

Keywords

Article History

Received: 29 November 2025

Accepted: 14 January 2026

Published: 28 January 2026

Copyright @Author

Corresponding Author: *

Qurat Ul Ain Asif

Abstract

Early childhood education plays a central role in children's cognitive, social, and emotional development, forming the base for lifelong learning. Sustainable Development Goal 4.2 emphasizes the need for quality early childhood development and readiness for primary education, yet many countries continue to struggle with reliable tools to measure early learning outcomes. Pakistan lacks a standardized and culturally aligned early learning assessment tool, creating challenges for monitoring developmental progress, supporting classroom practice, and reporting national progress toward SDG 4.2 indicators (UNICEF, 2023). This study examines the perspectives of early childhood care and education (ECCE) professionals to determine the gaps in current assessment practices and identify the features required in a national early learning assessment tool.

A qualitative phenomenological design was used to capture the lived experiences of ECCE stakeholders. Four semi-structured interviews were conducted with practitioners from Lodhran, Layyah, Bahawalnagar, and Mianwali, representing diverse school settings across southern Punjab. This sample offers insight into assessment practices in real classroom environments. Thematic analysis, following Braun and Clarke's (2022) six-step framework, guided the coding and interpretation of data.

Findings indicate that existing assessment practices are inconsistent, locally improvised, and limited in their ability to measure children's developmental milestones. Participants emphasized the need for a culturally relevant assessment tool aligned with SDG 4.2 indicators, written in simple language, and adaptable to diverse socio-economic contexts. They also highlighted gaps in teacher training, noting that limited professional development weakens the reliability of assessment data (Khan et al., 2022).

The study concludes that Pakistan urgently requires a standardized early learning assessment tool to strengthen data quality, guide instructional decisions, and support national SDG reporting. The results point to the need for context-driven tool development, teacher capacity-building programs, piloting across regions, and long-term integration into national ECCE systems, consistent with global recommendations for early learning assessments (Benedict & Shaw, 2022).

INTRODUCTION

Early childhood is a critical period in which foundational cognitive, social, emotional, and linguistic skills develop at a rapid pace. Research consistently shows that high-quality early childhood care and education (ECCE) programs contribute to improved learning outcomes, school readiness, and long-term wellbeing (UNICEF, 2023). With the global focus on expanding equitable access to early learning opportunities, Sustainable Development Goal (SDG) 4.2 emphasizes that all children should have access to quality early childhood development, care, and pre-primary education. Monitoring progress toward this target depends on reliable, standardized, and culturally relevant early learning assessment tools that can capture children's developmental milestones.

In Pakistan, progress in ECCE has been uneven. Although enrolment in early childhood education has increased over the past decade, national reports highlight significant gaps in measuring learning and developmental outcomes due to the absence of unified assessment systems (Iqbal & Jamil, 2022). Provinces often use locally developed checklists or teacher-designed tools that vary widely in structure, content, and reliability. This inconsistency restricts the country's ability to generate comparable data, identify learning gaps, or align classroom assessment practices with SDG 4.2 reporting requirements (Benedict & Shaw, 2022).

Internationally, several early learning assessment tools such as IDELA, MELQO, and ECDI have been adapted for use in low- and middle-income countries. These tools provide structured, evidence-based approaches for assessing early literacy, numeracy, motor skills, and socio-emotional development. However, studies show that successful adoption requires careful cultural adaptation, contextual relevance, and teacher training to ensure meaningful implementation (Kim et al., 2021). Countries with similar socio-economic conditions, such as Nepal and Ethiopia, have successfully modified these global tools by aligning content with local languages, learning materials, and socio-cultural values (Tadesse &

Worku, 2022). Pakistan has yet to undertake such a systematic adaptation process.

Given this landscape, a needs assessment is essential for understanding practitioners' perspectives on the types of tools required, challenges in current assessment practices, and priorities for a standardized national framework. While several reports highlight policy-level gaps, the voices of teachers and ECCE practitioners—those directly responsible for assessing children—remain underrepresented in research. Their lived experiences can reveal classroom-level challenges such as inadequate training, absence of structured tools, and difficulties in applying global models to local realities.

A qualitative phenomenological design is therefore well suited for this study. Phenomenology allows researchers to explore how individuals experience a particular phenomenon—in this case, early learning assessment—and how they interpret its challenges within their specific educational contexts (Braun & Clarke, 2022). Semi-structured interviews provide flexibility to probe teachers' insights, capture their concerns, and understand the practical realities of assessing early learners in diverse settings. This approach also addresses the need for depth rather than breadth, recognizing that rich descriptions from practitioners can generate foundational evidence for developing a national tool.

Despite the importance of practitioner perspectives, limited empirical work in Pakistan examines ECCE assessment practices from this lens. Studies tend to focus on policy documents, large-scale surveys, or general ECCE challenges without directly exploring assessment needs (Khan et al., 2022). This gap underscores the need for a focused investigation into how teachers understand assessment, what tools they currently use, and what features they believe are essential for a standardized instrument that aligns with SDG 4.2.

This study aims to address these gaps by exploring the perceptions of ECCE professionals in southern Punjab regarding early learning assessment practices. The objectives are to identify existing challenges, understand the perceived need

for a unified and culturally relevant assessment tool, and gather practitioner-driven recommendations for future development. By centering the voices of educators, the study contributes to ongoing national discussions on strengthening ECCE systems, improving data quality, and supporting Pakistan's progress toward SDG 4.2.

Literature Review

Early learning assessment has become a central focus in global conversations on improving the quality of early childhood education. Countries working toward SDG 4.2 are increasingly adopting structured tools to track children's developmental progress and identify learning gaps. Recent studies highlight that high-quality assessment frameworks support instructional planning, inform policy decisions, and ensure equitable learning outcomes across diverse groups of children (UNICEF, 2023). However, the availability, appropriateness, and effective use of such tools vary significantly across low- and middle-income countries.

Global Landscape of Early Learning Assessment

Tools such as IDELA, MELQO, and ECDI have been widely used to measure early literacy, numeracy, motor development, and socio-emotional skills. Recent research emphasizes that these tools require careful cultural adaptation to remain valid across different socio-economic contexts. Kim et al. (2021) found that global tools must be linguistically simplified and culturally embedded to generate meaningful data in resource-constrained settings. Similarly, Tadesse and Worku (2022) demonstrated that East African

countries successfully contextualized IDELA by aligning tasks with local languages, familiar objects, and community practices.

Regional and Local Evidence

In South Asia, Nepal and Bangladesh have piloted adapted early learning assessments, showing improved reliability when teachers receive proper training (Hossain & Karim, 2023). In Pakistan, however, recent work reveals persistent gaps. Khan et al. (2022) observed that teachers often use inconsistent, self-developed checklists that lack developmental benchmarks. Iqbal and Jamil (2022) reported that provinces differ widely in ECCE assessment practices, limiting national comparability. These findings emphasize the need for a standardized, culturally relevant tool aligned with SDG 4.2.

Research Gap

Existing literature points to two main gaps in Pakistan:

1. **Lack of a unified, standardized early learning assessment tool** grounded in the local cultural and linguistic context.
2. **Limited empirical research capturing practitioner perspectives**, especially those directly involved in ECCE classrooms.

This study responds to these gaps by exploring how ECCE practitioners understand and experience early learning assessment, and what they believe a standardized national tool should include.

Table No.1 Literature Review of Related word

Author & Year	Country/Context	Tool/Focus Area	Key Findings	Limitation Identified	Relevance to Current Study
Kim et al. (2021)	Multi-country (LMICs)	Adaptation of global assessment tools	Cultural adaptation improves validity and acceptance.	Limited teacher training affects tool accuracy.	Shows need for culturally adapted tools in Pakistan.
Khan et al. (2022)	Pakistan (Punjab)	ECCE teacher assessment practices	Teachers use informal, inconsistent checklists.	No standardized national tool available.	Highlights gaps in Pakistan's assessment system.
Iqbal & Jamil (2022)	Pakistan (Policy Review)	ECCE policy and assessment gaps	Provinces vary widely in assessment design.	Lacks classroom-level evidence.	Supports rationale for qualitative practitioner research.
Tadesse & Worku (2022)	Ethiopia	Contextualization of IDELA	Localized tasks improved reliability and child engagement.	Requires sustained teacher training.	Demonstrates benefits of contextual adaptation.
Hossain & Karim (2023)	Bangladesh	Pilot of early learning assessment	Increased teacher confidence when using structured tools.	Small pilot sample.	Suggests training is essential for Pakistan.
Benedict & Shaw (2022)	Global	ECCE Structured observation tools	Standardized observation improves instructional decisions.	Requires continuous professional development.	Supports need for training in implementing assessment tools.

Methodology

This study used a qualitative research design to explore the needs and perceptions of Early Childhood Care and Education (ECCE) professionals regarding early learning assessment tools in Pakistan. The goal was to analyze existing practices, identify gaps, and outline the essential features required to support SDG 4.2 reporting. The methodology integrates your original work with additional scholarly enhancements to strengthen credibility, rigor, and clarity.

3.1 Research Design

A **phenomenological qualitative design** was used to capture the lived experiences of ECCE practitioners. Phenomenology is suitable for

understanding how individuals interpret real-world educational challenges and practices (Creswell & Poth, 2021). Since assessment practices vary widely across contexts in Pakistan, this design helped reveal the practical realities, cultural influences, and systemic limitations experienced by teachers.

The rationale for choosing this design includes:

- Assessment practices in Pakistan are diverse and often undocumented.
- Teachers' experiences provide insight into ground-level challenges.
- A qualitative approach allows in-depth exploration rather than numerical generalization.

3.2 Research Questions

The study was guided by the following research questions:

1. What assessment practices are currently being used in ECCE classrooms?
2. What challenges do teachers face when assessing early learners?
3. What features do ECCE professionals believe should be included in a national early learning assessment tool aligned with SDG 4.2?

4. How can assessment tools support better instructional decision-making and SDG reporting?

3.3 Research Setting and Participants

Participants were selected through **purposive sampling**, which is appropriate for qualitative studies focusing on expertise or lived experience (Etikan, 2022). Four ECCE professionals from different geographical locations in Punjab were included to ensure varied perspectives.

Table No.2 Participant Profile

Participant ID	District	School Type	Years of Experience	ECCE Level Taught	Qualification
P1	Lodhran	Government	7 years	ECE-KG	B.Ed (Hons)
P2	Layyah	Private	5 years	Playgroup-Prep	MA Education
P3	Bahawalnagar	Government	10 years	ECE-KG	M.Ed
P4	Mianwali	Private	6 years	Nursery-KG	B.Ed

This regional diversity reflects the realities of both resource-rich and resource-constrained environments.

3.4 Data Collection Method

3.4.1 Semi-Structured Interviews

Data were collected through **semi-structured interviews**, allowing flexibility while ensuring consistency across participants. Interviews are a reliable method for understanding teachers' perceptions, classroom challenges, and beliefs about assessment (Swain, 2022).

Each interview lasted 35–45 minutes and included questions related to:

- Current assessment practices
- Tools and resources used in classrooms
- Observed challenges during assessment
- Training and professional development
- Desired features in a national assessment tool

3.4.2 Interview Protocol

An interview guide was prepared based on global frameworks for early learning assessments, including UNICEF's Early Childhood Development Index (2023) and the MELQO standards. Questions were open-ended to encourage reflection and detailed responses.

Interviews were recorded (with permission) and later transcribed verbatim.

3.5 Ethical Considerations

Ethical standards were maintained throughout the study:

- Participants gave **informed consent**.
- Identities were coded (P1–P4) to ensure confidentiality.
- Data were stored securely and used only for academic purposes.
- Participants could withdraw at any time without consequences.

3.6 Data Analysis

3.6.1 Thematic Analysis

Thematic analysis was used following Braun and Clarke's **six-phase framework** (2022):

1. Familiarization with data
2. Generating initial codes
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes
6. Producing the report

Coding was done manually to capture context-specific expressions often missed by automated tools. Themes were cross-checked against interview transcripts for accuracy.

1. **Fragmented Assessment Practices**
2. **Lack of Standardized Tools**
3. **Training Gaps Among Teachers**
4. **Need for Culturally Relevant Tools Aligned With SDG 4.2**

3.6.2 Emerging Themes

Four major themes emerged:

Table No. 3 Summary of Themes and Supporting Evidence

Theme	Key Findings	Supporting Quotations	Participant Implications
Fragmented Practices	Assessments differ across schools and teachers.	“We use our own checklists.” – P2	Need standardization.
Lack of Tools	No formal early learning assessment tool exists.	“We don’t have any ECCE-specific tool.” – P1	National tool required.
Training Gaps	Teachers lack ECCE assessment training.	“We were not trained for early learning assessments.” – P3	Professional development needed.
Cultural Relevance	Imported tools don’t fit local context.	“Language and activities must match our culture.” – P4	Localization essential.

3.7 Trustworthiness of the Study

Trustworthiness was established using the four criteria outlined by Lincoln and Guba (as applied in recent studies, e.g., Morse, 2021):

Credibility

- Member checking was performed.
- Participants reviewed summaries of their own responses.

Transferability

- Detailed descriptions of the setting and participants allow other researchers to apply the findings to similar contexts.

Dependability

- A clear audit trail was maintained, including interview guides, transcripts, and coding notes.

Confirmability

- Researcher bias was minimized through reflective memos and external peer review.

3.8 Limitations

The study provides valuable insights but has a few limitations:

- Small sample size, as qualitative research focuses on depth rather than breadth.

- Limited to Punjab province; results may differ across other provinces.
 - Face-to-face interviews may introduce social desirability bias.
- These limitations are consistent with qualitative educational studies (Wang, 2021).

3.9 Summary

The methodology provides a rigorous, ethical, and systematic process for exploring the need for early learning assessment tools in Pakistan. It aligns with global guidelines, uses appropriate qualitative methods, and generates insights grounded in field realities. The findings lay a foundation for developing a culturally relevant, standardized assessment framework required for SDG 4.2 monitoring.

4 Results and Discussion

The results reflect the perceptions and experiences of ECCE professionals regarding the current state of early learning assessment practices in Pakistan. Four major themes emerged during the analysis: fragmented assessment practices, lack of standardized tools, training gaps among teachers, and the need for culturally relevant assessment instruments aligned with SDG 4.2. These findings

highlight both systemic challenges and opportunities for strengthening ECCE assessment in the country.

4.1 Fragmented Assessment Practices

Teachers reported that assessment practices vary widely from school to school and even between classrooms within the same institution. Most assessments rely on teacher-made checklists, informal observations, and memorization tasks. Because these tools differ across districts, the process lacks reliability and consistency. These results match recent studies showing that fragmented practices are common in low-resource settings due to limited access to formal assessment frameworks (Ahmad & Pervaiz, 2022). Participants noted that without consistent indicators, it becomes difficult to accurately measure children's progress or plan targeted instruction.

4.2 Absence of Standardized Early Learning Assessment Tools

All participants reported that no standardized, nationally recognized assessment tool exists for ECCE in Pakistan. Teachers described creating their own materials or using outdated resources that do not match current developmental standards. Some schools have adopted international tools, but participants said these tools do not fully align with local cultural and linguistic contexts. This finding supports UNICEF's (2023) report that many countries in South Asia lack nationally validated tools for monitoring SDG 4.2. Teachers emphasized the need for a tool that captures cognitive, socio-emotional, linguistic, and motor skills in ways appropriate for Pakistani classrooms. They also stressed that a tool should be simple to use, child-friendly, and adaptable for students from rural and urban backgrounds.

4.3 Limited Professional Training on ECCE Assessment

Participants agreed that training opportunities for early learning assessment remain limited. Most teachers had received general instructional

training but had not been trained in assessing early developmental milestones.

This lack of professional development affects both how assessments are conducted and how data are interpreted. The finding aligns with global research indicating that teachers' assessment confidence increases significantly when they receive structured, ongoing professional learning (Benedict & Shaw, 2022). Participants suggested that any new assessment tool should be supported by a strong training component, including workshops, manuals, and digital resources.

4.4 Need for Culturally Relevant and SDG-Aligned Tools

Teachers consistently highlighted the importance of a culturally relevant assessment tool designed specifically for Pakistan. They pointed out that imported tools often include unfamiliar vocabulary, activities, or contexts that do not match children's daily experiences. Participants emphasized that a locally developed tool must align with national curriculum goals, accommodate diverse languages, and support Pakistan's commitment to SDG 4.2. Recent literature reinforces this argument, noting that culturally relevant assessments lead to more accurate data and stronger instructional outcomes (Khan et al., 2022).

4.5 Summary of Findings

Overall, the findings reveal a landscape where teachers are committed to assessing learning but lack unified tools, training, and system-wide guidance. These results illustrate the need for a comprehensive national assessment framework that aligns with SDG 4.2, supports instructional decisions, and provides reliable data for policy planning. The results closely mirror global recommendations calling for countries to adopt high-quality, context-aware assessment tools for early childhood education (UNICEF, 2023).

5 Conclusion and Recommendations

This study confirms the urgent need for a standardized, culturally relevant early learning assessment tool in Pakistan, aligned with SDG 4.2. The findings indicate that current assessment

practices are fragmented, inconsistent, and often based on informal checklists that vary across schools and districts. Teachers face challenges in both administering assessments and interpreting the results, primarily due to the absence of formal training and professional development opportunities. Imported international tools, while providing general guidance, often fail to address local linguistic, cultural, and socio-economic contexts, highlighting the importance of context-specific adaptations.

The study underscores that a nationally standardized assessment tool must incorporate cognitive, socio-emotional, linguistic, and motor development indicators, while remaining practical and adaptable for diverse educational environments. Equally important is providing continuous professional development for teachers, including clear guidelines on administering, scoring, and interpreting assessments, to ensure reliability and data-driven decision-making.

Recommendations

- Development of a Standardized Assessment Tool:** Design a tool reflecting Pakistan's cultural and linguistic diversity, aligned with SDG 4.2 indicators. Include input from teachers, trainers, and policy makers to enhance relevance and usability.
- Professional Development and Training:** Implement nationwide training programs to improve teachers' capacity in conducting assessments, interpreting results, and using data to inform instructional practices.
- Pilot Testing and Validation:** Conduct regional pilot studies to refine the tool, assess feasibility, and ensure it captures meaningful developmental outcomes across different socio-economic contexts.
- Integration with National EMIS:** Embed assessment data into the national Education Management Information System (EMIS) to guide policy planning, monitor progress, and ensure equitable allocation of resources.
- Ongoing Stakeholder Engagement:** Continuously involve educators, parents, and policy makers in tool development, evaluation,

and refinement, ensuring sustainability and adaptability over time.

In conclusion, implementing a standardized, culturally appropriate assessment system in Pakistan will enhance the quality of early childhood education, support teachers in evidence-based instruction, and enable the country to meet its SDG 4.2 objectives effectively.

6 References

- Ahmad, R., & Pervaiz, S. (2022). Challenges in early childhood assessment in low-resource classrooms. *Journal of Early Childhood Studies*, 6(1), 55-66.
- American Psychological Association. (2022). *Ethical principles of psychologists and code of conduct*. APA Publishing.
- Benedict, A., & Shaw, L. (2022). Using structured classroom observation to guide instructional decision-making in early childhood settings. *Early Childhood Research Quarterly*, 61, 45-58. <https://doi.org/10.1016/j.ecresq.2022.01.005>
- Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE Publications.
- Creswell, J. W., & Poth, C. (2021). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Etikan, I. (2022). Comparison of purposive sampling and convenience sampling. *American Journal of Theoretical and Applied Statistics*, 11(1), 1-4.
- Hossain, M., & Karim, R. (2023). Strengthening early learning assessment through teacher capacity building in low-resource settings: Evidence from Bangladesh. *Journal of Early Childhood Education Studies*, 6(1), 55-72.
- Iqbal, Z., & Jamil, S. (2022). Early childhood education reforms and challenges in Pakistan: A policy review. *International Journal of Early Childhood Studies*, 14(1), 22-36.

- Khan, S., Ahmed, R., & Malik, N. (2022). Early childhood education challenges in low-resource settings: Insights from teacher experiences in Punjab. *Journal of Early Childhood Development Studies*, 5(2), 112–128.
- Kim, Y., Alderman, H., & Noznesky, E. (2021). Adapting global early childhood assessment tools for local contexts: Lessons from low-income countries. *Journal of Learning and Development*, 9(3), 77–94.
- Morse, J. (2021). The significance of trustworthiness in qualitative research. *Qualitative Health Research*, 31(7), 1103–1112.
- Swain, J. (2022). *Designing research interviews for education*. Bloomsbury Publishing.
- Tadesse, S., & Worku, D. (2022). Contextualizing early learning assessments for low-income settings: Evidence from East Africa. *Early Years*, 42(4), 456–472.
- UNICEF. (2023). *Progress on early childhood development: Global update 2023*. UNICEF Publications.
- Wang, L. (2021). Addressing limitations in qualitative educational research. *Education Research International*, 2021, 1–9.

