

EXPLORING THE GOVERNMENT PRIMARY SCHOOL TEACHERS'  
PERSPECTIVES ON USING FORMATIVE ASSESSMENT TOOLS FOR  
STUDENTS LEARNING: A CASE STUDY

By

Gayatri Talukdar

ID: 21357042

A thesis submitted to the BRAC Institute of Educational Development in partial fulfillment of  
the requirements for the degree of  
Master of Education in Educational Leadership & School Improvement

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## **Declaration**

It is hereby declared that

1. The thesis submitted is my own original work while completing my degree at BRAC University.
2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.
5. I would like to request the embargo of my thesis 24M from the submission date due to my publication.

**Student's Full Name & Signature:**

---

**Gayatri Talukdar**  
ID: 21357042

# Approval

The thesis titled “Exploring the Government Primary School Teachers’ Perspectives on Using Formative Assessment Tools for Students Learning: A Case Study” submitted by

**Gayatri Talukdar (ID: 21357042)** of Summer, 2024 has been accepted as satisfactory in partial fulfillment of the requirement for the degree of Master of Education in Educational Leadership & School Improvement on September 8, 2024.

## Examining Committee:

Supervisor:  
(Member)

---

**MD Bayezid Islam**  
Lecturer, BRAC Institute of Educational Development  
BRAC University

Program Coordinator:  
(Member)

---

**Dr. Manjuma Akhtar Mousumi**  
Assistant Professor, BRAC Institute of Educational Development  
BRAC University

External Expert Examiner:  
(Member)

---

**Dr. Somnath Saha**  
Assistant Professor, BRAC Institute of Educational Development  
BRAC University

Head of the Institute:

---

**Dr. Erum Marium**  
Executive Director, BRAC Institute of Educational Development  
BRAC University

## **Ethics Statement**

This study adhered to rigorous ethical standards. The research protocol was granted approval by the BRAC Institute of Educational Development, BRAC University. To safeguard participant rights and well-being, informed consent was obtained from all research participants prior to data collection. Participants were provided with detailed information about the study's objectives, their role in the research, and assurances of anonymity and confidentiality. They were explicitly informed of their right to withdraw from the study at any point without consequence. Upon obtaining voluntary and informed consent, interviews were conducted with the participants.

## **Abstract**

The study delves into the challenges and prospects of implementing formative assessment practices in Bangladesh's government primary schools. While recognizing its potential to enhance critical thinking and real-world learning, the research reveals significant barriers hindering its widespread adoption. Teachers, though supportive of formative assessment, face practical hurdles such as a lack of resources, inadequate training, and unsupportive classroom environments. These factors limit their ability to effectively incorporate formative assessment strategies into daily instruction. To optimize the use of formative assessment, the study recommends comprehensive teacher training programs focused on practical application, the creation of classroom spaces conducive to interactive learning, and increased accessibility to assessment tools. Additionally, empowering school supervisors to mentor teachers and exploring the potential of digital technologies are essential for successful implementation. By addressing these challenges and capitalizing on opportunities, Bangladesh can significantly improve student outcomes and create a more equitable education system.

**Keywords:** Formative assessment; formative assessment tools; teacher's perspective; govt. primary schools, Bangladesh; implementation barriers.

## **Dedication**

This thesis is dedicated to my mother, husband, and children for their unwavering love and support. Their encouragement and sacrifices were instrumental in the completion of this study. I am especially grateful to my husband for his invaluable companionship and intellectual stimulation throughout this journey.

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## **List of Acronyms**

ADPEO Assistant District Primary Education Officer

BIED BRAC Institute of Educational Development

FGDS Focus Group Discussions

GPS Government Primary School

IDIS In Depth Interviews

IRB Institutional Review Board

UEO Upazila Education Office

## Glossary

Assessment for learning	Assessment for learning is an ongoing process that involves using assessment to provide feedback and guide instructional decisions to enhance student learning and achievement.
Assessment of learning	Assessment of learning is the process of evaluating and measuring students' knowledge, skills, and understanding to determine their achievement levels at the end of an instructional period.
Case study	A case study is a research method that involves an in-depth, detailed examination of a single subject, such as an individual, group, event, or organization, to explore and understand complex issues in their real-life context.
Causal inference	Causal inference is the process of determining whether a cause-and-effect relationship exists between variables and understanding the nature of that relationship through the use of statistical methods, experiments, or observational studies.
Formative assessment	Formative assessment is an ongoing evaluation process used by educators to monitor student learning and provide feedback to improve and guide their instruction and learning strategies.
Generalizability	Generalizability in research refers to the extent to which the findings of a study can be applied or extended to broader

populations, settings, or situations beyond the specific conditions of the original study.

Summative assessment      Summative assessment is the evaluation of student learning at the end of an instructional period, measuring the extent to which educational goals and standards have been achieved.

# **Chapter 1 Introduction and Background**

## **1.1 Introduction**

Formative assessment tools play a pivotal role in equipping students with the necessary skills to navigate their future careers successfully. However, the effectiveness of these tools in enhancing student learning hinges greatly on the attitudes and perceptions of teachers towards their utilization in the classroom. Teachers' perspectives not only shape their willingness to integrate specific assessment strategies but also influence the overall implementation of formative assessment practices within the educational framework.

In Bangladesh, the predominant mode of assessing students' academic achievement in government primary schools has traditionally been through summative assessments, including half-yearly and annual tests (Rahman, 2015). However, recognizing the critical role of formative assessment in enhancing students' academic performance, there has been a growing emphasis on transitioning from summative to formative assessment practices in the country (Hanefar et al., 2022).

This shift towards formative assessment has been underway for over a decade, reflecting the acknowledgment of its significance in fostering a more holistic approach to evaluating student progress (Rahman et al., 2021). For instance, since 2007, Bangladesh has implemented School-Based Assessment, a formative assessment approach, at the junior secondary level to gauge students' overall development (Begum & Farooqui, 2008; Rahman et al., 2012). This strategic move underscores the government's commitment to fostering a more dynamic and student-centric learning environment.

Formative assessment holds immense potential to enhance students' learning experiences in multiple dimensions. Research suggests that it positively impacts students' motivation to learn,

fosters self-awareness of their learning processes, and enhances the effectiveness of their learning outcomes (Weurlander et al., 2012). Moreover, scholars like Black and Wiliam (1998) assert that students' learning is significantly enriched when they receive constructive feedback during formative assessment processes, highlighting its crucial role in promoting continuous improvement and mastery learning.

In line with this recognition of the transformative power of formative assessment, the government of Bangladesh introduced a new assessment policy in 2023, placing a strong emphasis on the incorporation of formative assessment practices (Ahmed, 2022). This policy underscores the government's proactive stance towards equipping students with the necessary skills and competencies to thrive in an ever-evolving global landscape.

The findings of my study hold significant implications for informing policy adjustments and curriculum enhancements aligned with the new assessment paradigm. By offering insights into teachers' perspectives and potential challenges in implementing formative assessment practices, the study can guide policymakers in designing targeted interventions to support educators and ensure the smooth integration of formative assessment into the educational landscape of Bangladesh.

Ultimately, the adoption of formative assessment methodologies is essential not only for enhancing students' academic achievements but also for nurturing their adaptability and readiness to confront the emerging challenges of the future. By harnessing the transformative potential of formative assessment, Bangladesh can cultivate a generation of empowered learners poised to thrive in an increasingly complex and dynamic global society.

## **1.2. Research Topic and Title**

### **1.2.1 The research topic and title**

The research topic is “formative assessment tools as an instructional purpose in government primary schools”. It emphasizes the process of carrying out a task or learning a skill than the outcome (Tibbitt, 2020). The title of my research is “Exploring the Government Primary School Teachers’ Perspectives on Using Formative Assessment Tools for Students Learning: A Case Study”.

### **1.2.2 Rationale of title**

Formative assessment, a cornerstone of effective education, involves ongoing monitoring of student learning to inform instruction and provide timely feedback. Unlike summative assessments, which occur at the end of a learning period, formative assessments offer a dynamic approach to evaluating student progress and tailoring teaching methods accordingly (Hanefar et al., 2022). By providing real-time insights into students' understanding, formative assessment empowers educators to address learning gaps promptly and effectively. This continuous feedback loop enhances student motivation, self-awareness, and ultimately, academic achievement (Weurlander et al., 2012). Research consistently demonstrates a positive correlation between the use of formative assessment and improved student performance (Black, 2005).

### **1.3. Problem Statement**

The lack of utilization of formative assessment tools not only impedes students' ability to think critically but also limits their capacity to apply their learning in real-world scenarios. Assessment serves as a vital component in the teaching-learning process, offering educators insights into students' progress and facilitating targeted interventions to enhance learning outcomes (Black & Wiliam, 1998). In developing countries such as Bangladesh, the predominant approach to assessment has traditionally been summative, often manifesting in



annual examinations as the primary means of evaluating student achievement (Rahman et al., 2012). However, an overemphasis on summative assessments in developing countries can have several negative consequences as follows.

Firstly, it can narrow the curriculum, prioritizing content memorization over critical thinking and problem-solving skills. This can stifle creativity and hinder students' ability to apply their knowledge in real-world situations. Secondly, high-stakes summative assessments can create excessive stress and anxiety for students, negatively impacting their mental well-being and motivation to learn. Thirdly, summative assessments often fail to account for individual learning differences, potentially leaving certain students, such as those from disadvantaged backgrounds, at a disadvantage. Finally, the focus on summative assessments can limit opportunities for teachers to provide timely and actionable feedback, hindering students' learning progress. Ultimately, this can contribute to a less engaging and equitable learning environment.

Against this backdrop, the recent introduction of formative assessment into the education policy landscape of Bangladesh in 2023 marks a significant paradigm shift (Ahmed, 2022). Despite the growing recognition of the importance of formative assessment tools in education, there remains a paucity of understanding regarding their practical application within the context of government primary schools (GPS) in Bangladesh. Consequently, there is an urgent need to delve into teachers' perspectives on the utilization of formative assessment tools in this specific context to garner a deeper understanding of their experiences and unearth potential barriers to the effective implementation of these tools.

This study seeks to bridge this gap in the existing body of knowledge by undertaking a comprehensive investigation into how teachers leverage formative assessment tools to support students' learning within the GPS setting. By exploring the intricacies of teachers'

practices and perceptions surrounding formative assessment, the study aims to shed light on the nuanced dynamics at play and identify key factors influencing the adoption and utilization of these tools.

By illuminating teachers' perspectives and experiences, the study endeavors to inform targeted interventions and support mechanisms aimed at enhancing the integration of formative assessment practices in GPS classrooms. Ultimately, by empowering teachers with the knowledge and resources needed to effectively utilize formative assessment tools, the study aims to catalyze positive change and foster a more student-centered and holistic approach to education in Bangladesh's primary school system.

## **1.4 Research Questions**

This study aims to investigate the following questions:

1. How do teachers perceive the importance of formative assessment tools in the classroom?
2. How do teachers employ formative assessment tools in the classroom for student learning?
3. What are the barriers to implementing formative assessment tools in classes?

## **1.5. Purpose of the Study**

The objective of this study is to investigate the utilization of formative assessment tools in government primary schools. The study will analyze teachers' viewpoints regarding the use of formative assessment tools as a method of teaching and learning. Additionally, it will examine how teachers implement formative assessment in real-world situations and identify

the obstacles they face when incorporating formative assessment tools in classroom settings instead of exploring a large number of schools, I intend to conduct a case study at three government primary schools using a qualitative approach.

## **1.6. Significance of the Study**

Understanding teachers' viewpoints on formative assessment tools and identifying potential barriers to their implementation in the local context is paramount. By gaining insights into teachers' perceptions, educational stakeholders can address challenges effectively and facilitate the seamless adoption of formative assessment methodologies in classrooms across Bangladesh (Wiliam, 2011).

Moreover, the recent initiative by the Bangladesh government to introduce a new curriculum that underscores the importance of formative assessment tools underscores the need for a deeper understanding of teachers' attitudes towards these methodologies ((NCTB, 2021). Despite the government's efforts, it's noteworthy that many teachers may already be employing formative assessment tools unknowingly. This highlights the importance of raising awareness among educators regarding the various forms of assessment and their intended purposes (Heritage, 2010; Remesal, 2011).

The findings of this study hold significant implications for policymakers, as they can serve as a guiding framework for designing targeted professional development programs and orientation sessions aimed at enhancing teachers' proficiency in implementing formative assessment practices (Avalos, 2011; Guskey, 2002). By tailoring interventions based on the identified needs and challenges, policymakers can foster a more conducive environment for the effective utilization of formative assessment tools in classrooms (Fullan, 2015; OECD, 2013).

Furthermore, this qualitative study not only contributes valuable insights at the local level but also paves the way for future research endeavors on a larger scale. Building upon the findings of this study, researchers can delve deeper into the intricacies of formative assessment practices across diverse educational contexts, thereby enriching the existing body of knowledge and fostering continuous improvement in pedagogical approaches (Yin, 2017).

## **Chapter 2 Literature Review and Conceptual Framework**

### **2.1 Introduction**

This chapter reviews relevant literature on formative assessment and its benefits for student learning. I have explored a wide number of literatures on teachers' perspectives regarding formative assessment tools and its implementation along with the challenges and opportunities associated with its use in primary school classrooms. By understanding the existing body of knowledge, this review chapter lays the groundwork for my case study which explores the specific experiences and insights of government primary school teachers in their use of formative assessment tools. In this literature review, I compiled pertinent information from books, articles on ResearchGate, ERIC, Google Scholar, and various documents to deepen my understanding of the research topic.

This review will also inform the development of a conceptual framework for the study. This framework will integrate key themes from the literature on formative assessment teacher perspectives, and the specific context of government primary schools. The framework will guide my case study analysis and help me understand the factors that influence teachers' use of formative assessment tools and their impact on student learning.

### **2.2 Formative Assessment**

The formative assessment is a continuous process of assessing students periodically as they attempt to achieve their specific goals which are useful to keep track of their academic progress in line with the lesson plan (Tibbitt, 2020). It is a combination of interactive teaching and learning exercises that allow both teachers and students to understand the progress of learning and take appropriate measures if needed. So, the objective of a formative

assessment is to help educators and learners recognize what the pupils already are aware of and are unaware of so that modifications may be made to instruction and learning accordingly (Boston, 2019). The fundamental goal of formative assessment tools is to swiftly and readily evaluate learning outcomes in a classroom setting (Anamalai & Yatim, 2019).

It is useful for adjusting teaching and learning (T&L) activities as required by students (Makkonen & Jaquet, 2020). The tools used for formative assessment are class work, homework, question-answer (Q&A), observation, quizzes, and group projects which are mostly done in the classroom leading to formative evaluation. It may or may not be used as part of course grades (Oosterhof, 2003). While summative assessment is an “assessment of learning”, formative assessment is an “assessment for learning”. So, formative assessment is a prominent idea to impose learners all over the educational year with the purpose of enhancing their learning outcomes by identifying and overcoming their weaknesses (Hanefar et al., 2022). Formative assessments and classroom activities are closely related. Teachers should think about how their lessons, assignments, and assessments help students achieve their learning objectives and communicate what they have learned to others. They should also utilize this information to enhance students' learning quality (Boston, 2019)).

### **2.3 Significance of Formative Assessment**

In almost all types of educational contexts, classroom assessment is an effective and essential component of the learning process (Black & Wiliam, 1998). It refers to the ongoing evaluation of a student’s progress and understanding throughout a course or learning experience. Unlike summative assessments, which are used to measure a student’s overall achievement at the end of a course, formative assessment provides feedback to students as they learn and helps them identify areas where they need to Improve. Formative assessment is a process of gathering evidence of learning during the learning process to provide feedback

to students to improve their understanding and performance. The key reasons why formative assessment is important for learning are discussed below.

Formative assessment helps students to identify areas for improvement through active learning. By providing feedback from teachers, formative assessment helps students identify areas where they need to improve, allowing them to focus their efforts and improve their understanding of the learning contents or topics (Black & Wiliam, 2010). In addition, it encourages students to reflect on their learning process and strategies, promoting self-awareness and metacognition (Nicol & Macfarlane-Dick, 2006).

Formative assessment helps students take ownership of their learning. For instance, by giving students regular feedback on their progress, it helps them understand their strengths and weaknesses, and take responsibility for their own learning. This empowers students to become more self-directed learners and develop a growth mindset (Black & Wiliam, 2009). It also allows teachers to adjust their instruction to meet student needs by identifying areas where students are struggling and providing additional support and resources to help students succeed (Black & Wiliam, 2010).

Formative assessment promotes deeper learning by helping students to understand the learning objectives and how they can apply them to real-world situations. This type of assessment encourages students to think critically, solve problems, and apply their learning in meaningful ways (Wiggins, 2012).

Overall, formative assessment is a valuable tool for promoting student learning and achievement. Providing ongoing feedback and support, helps students develop the skills and knowledge they need to succeed in their academic and professional lives. This process promotes deeper learning, empowers students to take ownership of their learning, and improves

student motivation. By incorporating formative assessment into teaching practice, teachers can help learners achieve their full potential and develop lifelong learning skills.

## **2.4 Different Types of Formative Assessment Tools**

There are many different types of formative assessment tools available that teachers can use to gather feedback on student understanding and progress in classroom settings. These are discussed as follows.

(a) Observation checklists: These are lists of skills or behaviors that teachers can observe in their students, such as active listening or problem-solving.

(b) Exit tickets: These are brief assessments given at the end of a lesson or class period to assess student understanding. They can be in the form of questions, prompts, or tasks (Arrafii & Sumarni, 2018; RR. et al., 2020)

(c) Peer assessment: These are assessments where students assess each other's work or performance, providing feedback on strengths and areas for improvement.

(d) Self-assessments: These are assessments where students reflect on their own learning and progress, providing feedback on what they have learned and where they may need more support. Feedback is the most important tool of formative assessment. Formative assessment provides timely feedback to learners about their understanding of the material being taught. This feedback helps learners identify areas of strength and weakness and adjust their learning strategies accordingly (Rahman et al., 2012; Tibbitt, 2020).

(e) Quizzes or short questions: These can be short or long assessments given throughout a lesson or unit to assess student understanding and identify areas where students may need more support (Weurlander et al., 2012).



(f) Digital tools: There are many digital formative assessment tools available, such as Kahoot, Socrative, Geopardy, Quizizz, and Quizlet, that can provide instant feedback and data analysis to teachers. Quizizz is one of the online tests that help to learn a new language very effectively. To encourage students to participate more actively in the learning process, teachers must take into account the usage of creative, enjoyable exam tools (Balatero & Baclaya, 2021; Kolisnyk et al., 2022; Mdlalose et al., 2022; Permana & Permatawati, 2020). Socrative is a cloud-based student response system that can be used as a formative assessment tool. With Socrative, teachers can create quizzes, polls, and exit tickets that students can answer in real time using their smartphones, tablets, or laptops (Kaliappen et al., 2021). However, these digital tools might be ineffective in developing countries due to a lack of technologies and digital devices for students of primary school age.

(g) Rubrics: These are detailed scoring guides that teachers can use to assess work and provide feedback on specific criteria on written assignments (Weurlander et al., 2012)

(h) Think-pair-share: This is an instructional strategy where students work together in pairs or small groups to discuss and share their understanding of a concept or idea. Individual written assessments with right-wrong answers, and oral assessments help pupils to understand their subject clearly (Weurlander et al., 2012).

(i) Graphic organizers: These are visual aids that help students organize their thoughts and ideas, providing a structure for their learning and assessment.

(j) Performance tasks: These are assessments that require students to apply their knowledge and skills in a real-world context, such as a project, presentation, or simulation (Black & Wiliam, 1998).

(k) Questioning is one of the important tools of formative assessment. Many questions are asked during teacher-student interactions in the classroom, some of which are important components of formative assessment. A long conversation between the teacher and the student can start with a simple question (Arrafii & Sumarni, 2018; RR. et al., 2020)

(l) Concept maps are another excellent teaching and formative assessment tool in the classroom because they avoid rote learning and instead encourage critical thinking and reasoning skills (Choudhary & Bano, 2022).

## **2.5 Application of Formative Assessment Tools**

Empirical evidence suggests that teachers who make better use of interactive teaching and learning (T&L) strategies can deliver more enjoyable and productive lessons in the classroom (Dayal, 2021). On the other hand, several evaluation techniques of formative assessment are used to gauge students' comprehension, improving teaching, and learning instructions.

Furthermore, it creates an environment in the classroom where students feel comfortable speaking out, taking risks, and making errors; this will help them to more easily demonstrate what they grasp and don't comprehend (Alordiah & Okoro, 2018).

Additionally, the learning process of formative assessment encourages students to express their thoughts in the classroom. It helps teachers to identify their problems in different types of challenges. Thus, teachers help students to overcome their educational problems (Kültür & Kutlu, 2021). Another experimental study has found that these assessment practices remarkably impact learners' academic achievement and positive attitudes toward learning (Ozan & Kincal, 2018). However, formative assessment practices do not necessarily make the students proactive to advance their learning goals (Makkonen & Jaquet, 2020). In addition, with more pupils in a class and a greater burden for the teachers, formative assessment tools

may assist the teachers to evaluate the results more swiftly and efficiently (Anamalai & Yatim, 2019).

Regarding teachers' perspectives, teachers' level of education and experience are key factors for using formative assessment practices in classroom settings (Alsubai'ai, 2021). Teachers use various tools (e.g., teacher-led small groups, one-to-one teaching, teacher-created resources, and digital media) of the formative assessment to identify learners' gaps, to enhance the learner's knowledge and learning (Martin et al., 2022). Oosterhof (2003) stated that the main foundation of formative evaluations is an ongoing informal assessment, which includes paying attention to what students say, asking them oral questions to check their understanding, and observing their facial expressions and other actions. Additionally, formal assessments including tests, seatwork, homework, and group projects serve as the foundation for formative evaluations. The aims of each formative assessment tool used with the students and track their development in relation to those goals (Alordiah & Okoro, 2018).

## **2.6 Formative Assessment Policy in Bangladesh**

The national education policy of Bangladesh has been implementing a new curriculum that basically emphasizes formative assessment since early 2023 (Ahmed, 2022). Therefore, Bangladesh education policy has been transitioning from conventional summative to formative assessment system in order to meet the long standing demand (Rahman et al., 2021). This formative assessment system is known as School Based Assessment (SBA). Rahman (2021) stated that there are many challenges to implement SBA such as teachers' heavy workloads, lack of experience on new system, large class sizes, extensive curricula, lack of reflection of SBA scores in public exams, lack of honesty and fairness on the part of teachers, lack of validity and reliability of SBA as an assessment tool, poor socioeconomic conditions of teachers, and lack of monitoring and supervision by relevant authorities are all

contributing factors (Rahman et al., 2021). This study would contribute to inform policy about real-world challenges in implanting SBA from teachers' perspectives.

The education system in Bangladesh is undergoing a transformation, moving away from a traditional summative assessment model towards a more formative approach. This shift emphasizes continuous evaluation throughout the academic year and focuses on assessing students' competencies rather than relying solely on numerical scores or grade points.

Unique formative assessment tool: A distinctive feature of this new system is no final examination up to class three and the use of geometrical shapes as formative assessment tools as follows:

No class tests and no marking system: Traditional class tests and marking systems are absent in these grades.

Shape-based feedback: Teachers provide feedback and assess student performance using shapes with symbolic meanings: (i) Square: Represents a strong performance, indicating the student has fully grasped the learning objectives (BDNews24, 2024). (ii) Circle: Represents a satisfactory performance, indicating the student partially understands the concepts and may need some additional support. (iii) Triangle: Represents a need for improvement, indicating the student requires significant help mastering the learning objectives.

Additionally, other formative assessment tools used in Bangladesh may include:

Observation and questioning: Teachers play a crucial role in observing student participation in classroom activities, their problem-solving skills, and their progress towards achieving learning objectives outlined in the NCF 2021(NCTB, 2021). This ongoing observation allows

for identifying areas where students might need additional support or differentiation in instruction.

**Portfolios:** Portfolios are collections of student work over time, including written pieces, drawings, projects, and reflections. This cumulative record allows teachers to track student progress, identify areas of strength and weakness, and showcase their development of skills and competencies.

**Peer and self-assessment:** Encouraging self-assessment and peer assessment can foster student metacognition and self-reflection. Students can use checklists, rubrics, or reflection prompts aligned with learning objectives to assess their own learning or that of their peers. This promotes self-awareness and ownership of learning.

**Alignment with National Curriculum Framework 2021:** This innovative approach aligns with the principles outlined in the National Curriculum Framework 2021 (NCTB, 2021), which emphasizes: (i) Creativity and soft skills: development of creativity, critical thinking, communication, and other soft skills over rote memorization. (ii) Student-centric learning: Creation of a learning environment that prioritizes student engagement and participation. This shift towards formative assessment using non-traditional tools signifies a commitment to making learning more joyful, engaging, and student-centered.

## **2.7 Barriers of Implementing Formative Assessment Tools**

### **2.7.1 Bangladesh context**

Several challenges hinder the effective implementation of formative assessment in Bangladesh's education system. Firstly, many teachers may lack the necessary training and understanding of its principles and practices. The current emphasis on summative

assessment, where final exams hold significant weight, creates a disincentive for incorporating formative approaches that focus on continuous learning and improvement (Alamgir & Rahaman, 2024). Secondly, the education system's traditional focus on rote learning and test-taking skills clashes with formative assessment's core objective of developing deeper understanding and fostering a process-oriented approach to learning.

Large class sizes, a common reality in Bangladesh, pose another hurdle. With limited time and attention to spare, teachers struggle to provide individualized feedback, a key element of effective formative assessment (Rahman et al., 2021). Schools may also lack the resources for technology-based assessment tools, further hindering implementation.

Finally, resistance from some parents presents a significant challenge. Concerned that a shift away from traditional testing might negatively impact their children's academic future, parents have voiced their anxieties through protests and social media (Alamgir & Rahaman, 2024; Suhrawardy, 2024). Addressing these concerns and ensuring clear communication about the benefits of formative assessment will be crucial for its successful adoption.

### **2.7.2 Global context**

Several factors create obstacles for teachers effectively implementing formative assessment strategies in the classroom.

A significant challenge lies in the lack of proper training and support. Many teachers haven't received adequate guidance on using formative assessment techniques and interpreting the valuable data they generate. Furthermore, limited administrative support within the school system can create additional hurdles to successful implementation (Nguyen & Khairani, 2016).

Time constraints pose another major barrier. Conducting thorough formative assessments, particularly in large classrooms, can be a time-consuming endeavor (Akoyt, 2024). Teachers struggle to balance the demands of formative assessment with covering the curriculum content and preparing students for summative evaluations, leading to significant workload pressures (Asare & Afriyie, 2023; Nguyen & Khairani, 2016). Research by Mak & Lee (2014) further highlights this point, suggesting that formative assessment tools might not be universally implemented due to inconsistencies and limitations in teacher practices. Factors like time, workload, a packed curriculum, large class sizes, and the sheer number of lessons taught were all reported as barriers to effective implementation.

Beyond logistical challenges, a shift in mindset is also necessary. Transitioning from a traditional emphasis on summative assessment to a more formative approach requires a fundamental change in teaching practices. This can be a difficult adjustment for teachers accustomed to older methods. Adding to this complexity, the pressure associated with high stakes standardized testing creates a tendency to prioritize summative assessment over formative practices, even when teachers understand the benefits of the latter.

## **2.8 Conceptual Framework**

**Addressing the disconnect:** Existing research establishes the value of formative assessment ("assessment for learning") in promoting student learning outcomes. Previous studies have also documented a wide range of formative assessment tools used primarily in developed countries. However, a critical gap remains in understanding the mechanism by which these tools translate into improved learning as well as how those tools have been adopted by educators in developing countries like Bangladesh. This study aims to bridge this gap by focusing on the under-researched context of government primary schools in Bangladesh,

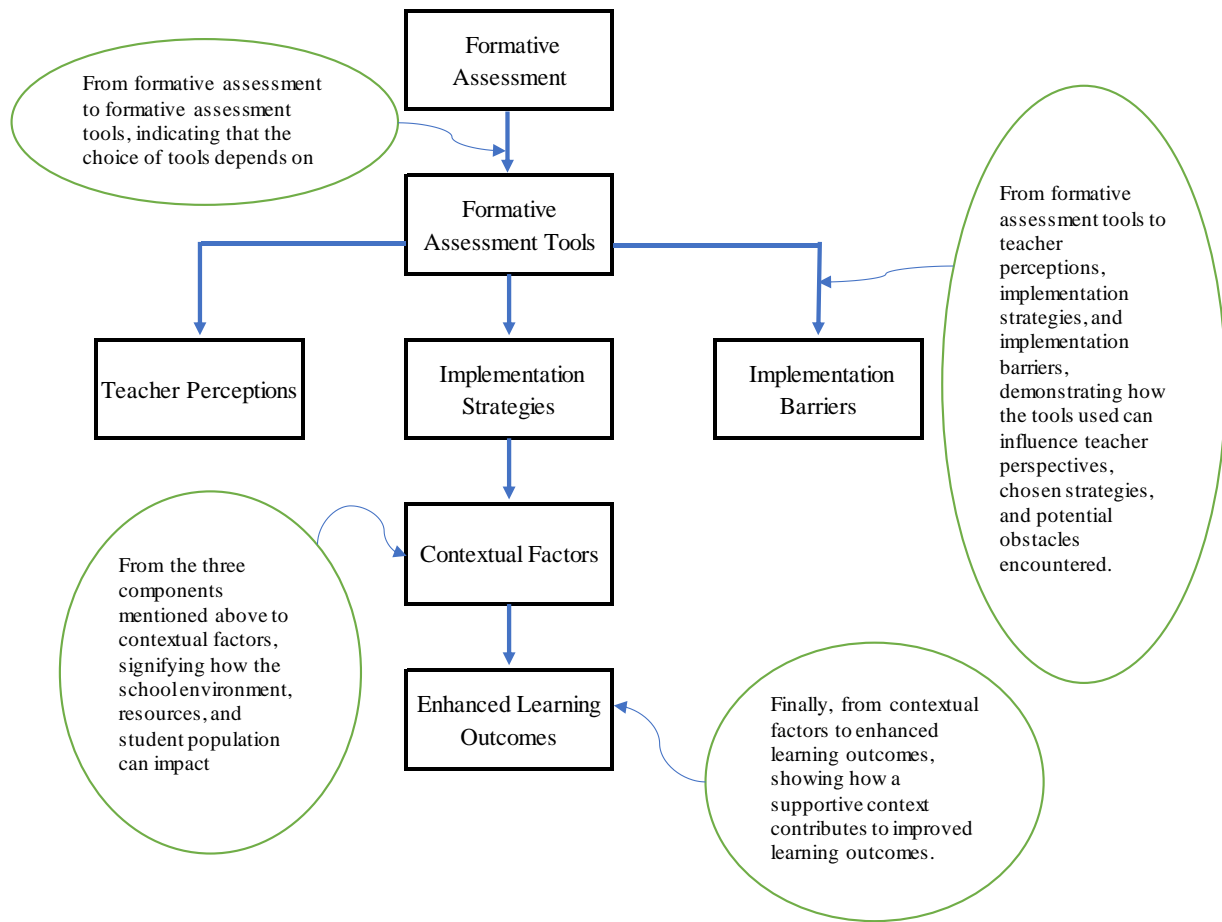
especially when the country is transitioning from summative to formative assessment systems (Figure 1).

**Educator perceptions and strategies:** The current study will explore how educators in this setting perceive formative assessment and the specific strategies they employ to implement formative assessment tools in their classrooms. Examining their experiences can reveal the facilitators and barriers that influence the effectiveness of these practices within a developing country context.

**Contextual nuances:** By delving into the unique challenges and opportunities faced by government primary schools in Bangladesh, I can gain valuable insights into how resource constraints, class size, and curriculum design might influence the use of formative assessment tools. This will provide a more nuanced understanding compared to existing research, which often focuses on developed contexts.

**Bridging the gap:** The usage of formative assessment tools may not directly or linearly relate to enhancing students' learning outcome. It ignores intermediary mechanisms such as teachers perceptions, contextual adoption of tools and challenges of implementing formative assessment tools in different context (in this case government primary schools in Bangladesh). This research will contribute to a more comprehensive knowledge base by: (i) understanding the mechanism: Identifying the specific ways formative assessment tools, when implemented effectively, lead to improved learning outcomes; (ii) developing context-specific strategies: Providing insights into how educators in developing countries can adapt and utilize formative assessment tools within their resource-constrained environments; and (iii) informing policy and practice: The findings can inform policy decisions and professional development programs to support a successful transition from summative to formative assessment systems in developing countries.





**Figure 1: Conceptual Framework for the Thesis**

In sum, by addressing these knowledge gaps, this study will contribute to a more effective use of formative assessment tools to enhance student learning outcomes in government primary schools in Bangladesh and other developing contexts. Is in their classrooms. Examining educators’ experiences can reveal the facilitators and barriers that influence the effectiveness of these practices within a developing country context.

## **Chapter 3 Methodology**

### **3.1 Introduction**

This chapter delves into the methodology employed to investigate the research questions. Building on the conceptual framework established in Chapter 2, this research utilizes a qualitative design. For instance, the data collection primarily involved interviews, focus group discussions (FGDs), and classroom observations in three government primary schools. With this brief introduction, the following sections detail the research design, data collection procedures, and data analysis techniques used to address the research objectives and ensure the credibility and trustworthiness of the findings.

### **3.2 Research Approach**

I employed a qualitative research methodology to gain insight into the perspectives of teachers at government primary school (GPS) about using formative assessment tools in teaching-learning. This phenomenon (teachers' perspective) required exploration and understanding about the idea (J. W. Creswell, 2002). As such, qualitative methods were essential to obtain the intricate details about phenomena such as feelings, thought processes, and emotions that were difficult to extract or learn about through more conventional or quantitative methods (Strauss & Corbin, 1998). Unlike the quantitative approach, a qualitative approach believed that there was no single truth as everyone had distinct perspectives on a given topic based on meaning, culture, and context (Teherani et al., 2015). Additionally, the qualitative approach gave me a unique and deeper understanding of the research topic which was difficult to gain from a closed-ended survey using a quantitative approach. In the qualitative approach, participants could share their knowledge, experiences, thoughts, and feelings during the open-ended interactive conversation which was nearly impossible with structured surveys (OnePoll, 2017).

### **3.3 Research Site**

While selecting the research site, I consciously chose schools from the area where I reside, as it will provide me with better access to the participants. This study focuses on three government primary schools located in Narayanganj Sadar, Bangladesh: Kusum Kanan Government Primary School, Bulbul Girls' Government Primary School, and Enayat Model Government Primary School. These are all pseudonyms of all three schools. These schools are situated within the same sub-district (upazila) of Narayanganj Sadar.

### **3.4 Research Participants**

There are 20 participants who participated in this study. These included both head teachers and assistant teachers from Math, English, and Science subjects, from three different schools. I made sure to have two people from each subject area so I could get different opinions. I also included both male and female teachers, who had five years of teaching experience. This helped me understand what they think about formative assessment tools and the problems they face when using them.

One interesting thing is that one of the assistant teachers had only been teaching for six months. This gave us a fresh perspective from someone who is new to teaching. Between the two headteachers, one had been teaching for more than twenty years, while others had nine years of experience. To gather information, I used different methods. I asked assistant teachers about their experiences with these tests, like how they use them and what challenges they face. Headteachers gave me guidance on how these formative assessment tools are used in the school and what works best.

## **3.5 Sampling technique**

### **3.5.1 Target population**

This study investigates how primary school teachers, particularly assistant teachers working with third and fourth graders, utilize educational technology tools in their classrooms. The focus on assistant teachers stems from their direct involvement in implementing these tools with students. Third and fourth grades were chosen because this is a critical time for foundational learning, and understanding how technology is integrated during this period can provide valuable insights. Ultimately, by observing teachers in these real-world classroom settings, the study aims to identify effective practices for incorporating technology to enhance student learning outcomes.

### **3.5.2 Sample selection process**

To ensure the research reflected the local context, I collaborated with local education officials. Initial discussions with the Assistant District Primary Education Officer (ADPEO) led me to the Upazila Education Office (UEO) for assistance in selecting appropriate schools. The sample selection process is briefly discussed below.

### **3.5.3 Consultation with Education Officers**

The Assistant District Primary Education Officer (ADPEO) initially recommended contacting the Upazila Education Office (UEO) for guidance. The UEO then provided valuable advice in choosing these three specific schools.

### **3.5.4 School Selection Rationale**

These schools were purposefully chosen because they represent the teachers, students, and the broader community within your area. This selection ensured the data collected would directly address your research questions.

### **3.5.5 Teacher Selection**

Following permission from the headteachers of the chosen schools, twelve teachers were selected in consultation with each headteacher. This ensured you reached educators directly involved in teaching English, Mathematics, and Science to Grade III and Grade IV students.<sup>3</sup>

## **3.6 Research Design**

This research adopted a qualitative approach, specifically a case study design, to gain an in-depth understanding of how teachers perceive formative assessment tools and their practical applications within primary school settings (Shelden et al., 2010).

### **Single case study design with multiple units**

There are several justifications for choosing a single-case study design with embedded multiple units (Budiyanto et al., 2019; Priya, 2021; Yin, 2009) for the present study. Unlike single case study and multiple case study, in the single case study with multiple units, researchers focus on a single case but examine multiple units within it. In this case, single case is “formative assessment tools” and three selected schools are multiple units within it. As my research question centers on a unique or rare phenomenon such as formative assessment tools and its challenges in real life situation. In this situation, a single in-depth case study with embedded multiple units can be highly informative In the exploratory stages

of research, a single case study can be a valuable springboard to gain a deeper understanding before expanding to multiple cases (Baškarada, 2014; Yin, 2009). Finally, resource constraints such as limited time or funding can make a single case study with multiple units the more feasible option for this research.

### **3.7 Data Collection Methods**

To comprehensively understand the requirements of this study, I employed three qualitative data collection methods: in-depth interviews (IDIs), classroom observation, and focus group discussions (FGDs).

In-depth Interviews (IDIs): This method provided an opportunity to engage in rich, one-on-one conversations with participants (assistant teachers and headteachers) using semi-structured questions. IDIs are advantageous because they: (a) allow for in-depth exploration of individual experiences and perspectives (Marshall & Rossman, 2014). (b) can delve into complex topics and uncover detailed information related to research questions (Rossman & Rallis, 2003). In-depth interviews unlock rich details and individual perspectives, unlike surveys or focus groups. This depth of understanding is crucial for unraveling the "why" behind the unique case such as formative assessment tools (Boyce & Neale, 2006). For qualitative research I need in-depth understanding of the participants' perspective individually, which is hardly possible without IDIs. During the interview, I asked participants some questions that can only be answered through in-depth interviews (IDIs) such as "How do you assess whether students are understanding your lessons?", "What are your thoughts on the formative assessment tools introduced with this curriculum?". Additionally, I need to ask more questions to gain a better understanding of the topic through interactive conversations.

Classroom Observation: Observing teachers' behavior and activities in a natural classroom setting offers valuable insights not always captured through interviews. This method allowed me to: (a) gather real-time data on how teachers interact with students and utilize formative assessment tools (J. W. Creswell, 2002). Observe classroom dynamics and identify potential areas of strength or weakness in practice. Qualitative observation method offers rich, detailed descriptions of a situation, capturing complexities beyond numbers. It serves well for exploratory research, providing a deeper understanding of the case such as application of formative assessment tools in classroom settings, and can be combined with other methods for a more well-rounded analysis with triangulation (George, 2023). I need to understand the real scenario of classroom settings without interaction between teacher and students for qualitative research.

Focus Group Discussions (FGDs): This method involved group discussions with assistant teachers from government primary schools. FGDs are beneficial because they: (a) enable the exchange of diverse perspectives and ideas within a focused discussion (J. Creswell & Guetterman, 2018; Marshall & Rossman, 2014). (b) can generate rich data in a relatively short time frame compared to individual interviews. (c) the relaxed and natural environment of group discussions can encourage participants to share openly, potentially revealing details not obtained through individual interviews. Focus groups, where a moderator guides a discussion among a small group, are a strong fit for my study where I played a moderator role during discussion. This method goes beyond individual interviews or observations by fostering group interaction and revealing diverse perspectives within the case I examine. Given my research context and objectives FGD is an appropriate tool to leverage in the study. I need to generate rich data of diverse perspectives within a short period of time for my study. I posed certain questions to the interview participants that require a focus group discussion (FGD) to be adequately answered such as “What are some of the challenges faced when

implementing formative assessment tools in the classroom?”, “Have teachers received training on how to use formative assessment tools?”. FGDs are ideal for obtaining diverse perspectives on the given topic.

By strategically combining these data collection methods, I gained a well-rounded understanding of teachers' perceptions and experiences with formative assessment tools in primary school settings.

### 3.8 Methodology Matrix

Methodology matrix of the study is presented in Table 1

**Table 1: Methodology Matrix**

Research questions	Research method	Data source	Sampling techniques	Total number of participants
1. How do teachers perceive the importance of formative assessment tools in the classroom?	In-depth interview,	Primary	Purposive sampling	12 individuals (3 teachers from each three subject and three Head Teachers) from 3 schools
2. How do teachers employ formative assessment tools in the classroom for n students' learning?	Observatio	Primary	Purposefully select classrooms	7 Classroom observation (Mathematics-3, Science-2 and English-2 from three schools)
3 What are the barriers to implementing formative assessment tools in classes?	Focus Group Discussion (FGD)	Primary	Purposive sampling	6 participants (2 teachers from each of three selected schools)



### **3.9 Role of Researcher**

Having spent over ten years as a teacher in a non-governmental school, I embarked on a research journey. This transition involved a conscious shift in my role from educator to learner. While my experience equipped me with valuable teaching skills, it was crucial to set those aside during data collection. In essence, I needed to shed my "teacher hat" and wear the "researcher hat" instead. Throughout the research process, involving interviews and classroom observations, I actively suppressed my natural teacher instincts. The objective wasn't to offer guidance or instruction, but to observe and collect data objectively. This distinction was paramount because I wasn't there to teach, but to learn from the participants' perspectives.

Being a teacher doesn't negate my ability to be a fair researcher. However, acknowledging my background as an educator was essential to maintain research transparency (J. W. Creswell, 2014). As a beginner researcher, it was particularly important to set aside any preconceived notions or biases that might color my interpretations. My goal wasn't to dictate or lead, but to approach the situation with a curious mind, akin to a detective uncovering new information. By recognizing the potential impact of my background and actively mitigating its influence, I aimed to collect unbiased qualitative data. This self-awareness and role recognition are crucial for any researcher, especially those transitioning from practitioner roles.

### **3.10 Data Analysis Process**

This sub-section offers a valuable glimpse into the qualitative data analysis process that I employed in my research. I delve deeper into each step, unpacking the details and highlighting the rationale behind my choices.

### **3.10.1 Deconstructive Listening**

The first step involved a process in which I immersed myself in the conversations. This was not a passive listening exercise. I actively engaged with the interview recordings, revisiting them multiple times. This repetitive listening served two key purposes:

**Grasping the Use of Formative Assessment Tools:** By immersing myself in the details of each conversation, I aimed to understand how teachers in each specific school utilized formative assessment tools within their classrooms.

**Identifying Key Areas for Exploration:** As I listened intently, I began to identify the main points discussed by the participants. This process helped me hone in on crucial aspects of the conversations that would be most relevant to my research questions.

Through repeated engagement with the interview recordings, I was essentially building a comprehensive understanding of the participants' experiences and perspectives on formative assessment tools.

### **3.10.2 Transcribing and Translation**

Since the interviews were conducted in Bangla, the next step involved creating written transcripts from the recordings. This process allowed me to analyze the data more efficiently in text form. However, an additional layer of complexity arose due to the language difference. Translation was necessary to ensure the research remained accessible to a broader audience. During the translation process, I prioritized two crucial aspects:

**Accuracy:** The primary goal was to ensure the intended meaning of the participants' words remained unchanged during translation. Any discrepancies or ambiguities could potentially alter the interpretation of the data.

Preserving Authenticity: Beyond accuracy, it was important to maintain the natural flow and style of the conversations as much as possible. This would help retain the essence of the participants' experiences and avoid introducing unintended biases through the translation process.

### **3.10.3 Developing Themes**

Having built a solid foundation through deconstructive listening and translation, I embarked on the core analysis phase. Thematic analysis was chosen as the analytical framework due to its straightforward approach to interpreting qualitative data (Braun & Clarke, 2006). I followed the following steps on how thematic analysis unfolded in my research:

**Familiarizing with the Data:** Immerse and identify the initial step within thematic analysis involved a deep dive into the transcripts. This stage was about immersing myself in the data, repeatedly reading and re-reading the participants' words (Vaismoradi et al., 2016). The primary objective was to become thoroughly acquainted with the content and gain a holistic understanding of the participants' perspectives. As I engaged with the transcripts, I actively identified noteworthy or conflicting points. These could be recurring themes, unique experiences, or areas where participants expressed contrasting views. By flagging these points, I essentially created a roadmap for further exploration in the following stages.

**Generating Initial Codes:** With a strong foundation in the data, I transitioned to a more systematic approach through coding. Coding involves assigning labels or categories to segments of text that capture a specific concept, idea, or experience (Islam, 2019; Vaismoradi et al., 2016). This process serves two primary functions: (i) structuring and condensing - data coding helps break down the vast amount of text into smaller, more manageable units. This allows for easier organization and comparison of information. (ii) identifying patterns - as I

assign codes, patterns and recurring themes may begin to emerge. Similar codes can be grouped together, providing early clues about the potential themes that might be present in the data (Table 2).

**Table 2: Process of Generating Initial Codes**

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
1	How do you assess whether students are understanding your lessons?	I gauge my students' understanding through their feedback. After a class or when I finish a lesson, I ask questions. If students can answer them correctly, I understand that they've grasped the topic well.	Ask questions after each lesson	Theme: formative assessment tools  Subtheme: Interactive Questioning
2	What teaching and learning methods do you use in your class?	It depends on the subject. For example, in English, we use dialogue practice for speaking and reading aloud to improve pronunciation.	Use dialogue practice, reading aloud, and assignments	Theme: formative assessment tools  Subtheme: Interactive materials
3	What do you do when some students don't understand a topic?	When students don't understand, we repeat the topic to make sure they understand. We also encourage interaction among students, including those who already understand the topic, so they can learn from their peers. Peer learning is effective for those who initially struggled to understand.	We repeat topics, encourage peer learning, and use peer learning effectively.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Methods for gauging student understanding

Searching and Constructing Themes: Having completed the initial coding, the next step involved analyzing the coded data to identify potential themes (Islam, 2019; Vaismoradi et

al., 2016). Throughout this process, my research questions remained the guiding light. Once the coding was complete, I began organizing the codes based on their similarities. My analytical judgment played a crucial role in grouping similar codes together to form the basis for potential themes. If a code exhibited characteristics that fit into multiple groups, I assigned it to the group that best aligned with its core meaning. Through this process, I aimed to arrive at a collection of well-defined candidate themes, each supported by relevant coded data that exemplifies the theme (Table 2).

**Refining Potential Themes:** Having identified potential themes, I embarked on a crucial stage of the analysis in which I refined those themes. This involved critically examining each theme to ensure its coherence and substance. A well-defined theme has clear boundaries and a central organizing concept that captures the essence of the coded data it represents. Braun and Clarke (2006) emphasize the importance of this stage, particularly for researchers new to qualitative analysis. To avoid bias, I have adopted a strategy of alternating between immersing myself in the data and maintaining a critical distance from it. This approach, as suggested by Tinker and Armstrong (Tinker & Armstrong, 2015) and discussed by Braun and Clarke (2006), can help streamline and enrich the data analysis by allowing researcher to maintain a sense of self-critique and examine the phenomenon from various perspectives.

**Finalizing the Themes:** The final stage involved refining and presenting the themes in a clear and comprehensive manner. This involved providing detailed definitions for each theme and its corresponding sub-themes (Hallberg, 2006; Islam, 2019). Additionally, the relationships between different themes were explored, highlighting how they might connect or interact with each other.

### **3.11 Trustworthiness and Rigor of the Study**

The trustworthiness and rigor of my study were assessed through these strategies: prolonged engagement, persistent observation, triangulation, peer debriefing, and member checking.

With prolonged engagements, I invested sufficient time in learning the culture, building trust with participants, and collecting authentic and unbiased data. With persistent observation, I appropriately observed certain situations (e.g., classroom observation) to understand the facts under investigation over sufficient time to identify certain relevant aspects. Triangulation helped me to accommodate the diverse perspectives of different participants. Peer debriefing helped me to strengthen my thesis by addressing feedback and suggestions from faculty members and research experts. Finally, members checking by research participants validated my research findings.

### **3.12 Ethical considerations**

This study prioritized ethical research practices throughout the process as follows:

**Institutional Review Board (IRB) Approval:** The research protocol received formal approval from the Institutional Review Board at IED, BRAC University. This ensures the study adhered to ethical guidelines for research involving human participants.

**Informed Consent:** Prior to each interview, I obtained written informed consent from all participants. This consent form clearly explained the purpose of the study, the participant's rights and responsibilities, and the data collection procedures. Importantly, the consent form emphasized the participants' right to withdraw from the interview at any point without penalty.

**Confidentiality and Anonymity:** Maintaining participant confidentiality and anonymity was paramount. Participants' names were not mentioned in the consent form, interview recordings,

or final research report. The data was anonymized to ensure their privacy cannot be compromised.

**Data Use and Integrity:** I clearly informed participants that the collected data would be used solely for research purposes. The data analysis process maintained the authenticity and integrity of the information provided. No changes were made to the data that would alter its original meaning.

**Permission for Classroom Observation:** Before observing classroom activities, I obtained permission from both the headteacher and assistant teachers. This ensured transparency and respect for the school administration and teachers involved.

By adhering to these ethical principles, the study aimed to protect the rights and well-being of participants while conducting valuable research.

### **3.13 Limitations of the Study**

Although I employed accepted qualitative research methods for this study, it's crucial to acknowledge that the validity of the findings may have been influenced by several limitations as follows.

**Generalizability:** Qualitative studies typically involve smaller sample sizes and specific contexts, making it challenging to generalize findings to a wider population (Carminati, 2018). For instance, the present study was conducted exclusively within three schools out of a total of 89 government primary schools and 751 others primary schools in the Narayanganj district (DPE, 2023). While this focused approach aimed to provide a detailed understanding of the specific context, it inherently limited the scope of the research and may affect the generalizability of the findings to the broader population of primary schools in the district.

Subjectivity: Researchers' interpretations and biases can influence how data is collected, analyzed, and presented (Bumbuc, 2016).

Limited causal inference: Qualitative methods are better suited to understanding experiences and perspectives rather than establishing cause-and-effect relationships.

Potential for bias in participant responses: Participants may intentionally or unintentionally misrepresent their experiences or respond in a way they believe the researcher wants (e.g., social desirability bias). So, participants might not be entirely accurate or truthful in their responses due to social desirability bias or difficulty articulating experiences (Bispo, 2022; Grimm, 2010).

Time-consuming: Collecting and analyzing qualitative data can be a lengthy process compared to quantitative methods (Silverio et al., 2020).



## **Chapter 4 Results**

### **4.1 Introduction**

Key findings show that teachers, in general, opted for formative assessment tools, particularly teaching-learning tools. They believe it benefits both students and teachers by promoting better understanding, engagement, and more practical learning experiences. The most commonly used formative assessment tools include interactive questioning, group work and peer learning, visual aids, role-play, multimedia, and low-cost real materials. The major barriers to implementing these tools are categorized as: lack of parental awareness, teaching-learning resources-related barriers, School environment-related barriers, system-related barriers. The results have been presented under three broad themes, each aligned with answering one of the three research questions as follows: perceived importance of formative assessment tools, strategies for implementing formative assessment tools, and barriers to implementing formative assessment tools.

### **4.2 Perceived Importance of Formative Assessment Tools**

Teachers' opinions and experience about using formative assessment tools in classroom settings are presented below. These tools are used for student's understanding and learning, for creating effective learning environment, for strengthening students' learning.

#### **4.2.1 For student's understanding and learning**

Teachers employ a variety of methods to assess student understanding, including questioning, written responses, and observation of student participation and engagement in class. This approach allows them to get real-time feedback on how well students grasp the learning material. Additionally, peer interactions and feedback are considered crucial indicators of

comprehension as they added. Teachers find continuous assessment methods under the new curriculum to be effective for monitoring students' progress, enabling them to identify learning gaps promptly.

When I notice that some students are struggling to understand a topic, I provide extra assistance to help clarify the material. I also mix students who understand the topic with those who do not understand the topic to facilitate peer learning (Interview# 7, 13-06-23).

In addition, teachers are mindful of student's expressions and body language. They motivate students to approach the blackboard and help them conquer their shyness. One of the head teachers mentioned as follows:

We pay close attention to their expressions and body language. If we notice a student struggling, we encourage them to come to the blackboard and assist them in overcoming their shyness. This approach helps even the weaker students gain confidence and understanding (Interview# 11, 20-06-23).

#### **4.2.2 For creating effective learning environment**

Teachers emphasize the importance of using practical, interactive, and multimedia-based teaching methods. Hands-on learning, group work, and relating lessons to real-life situations are common strategies. Teaching-learning tools such as pictures, charts, and multimedia enhance student engagement and attention. One of the assistant teachers mentioned that "I use tools regularly to assess students' existing knowledge, their ability to relate lessons to practical life, and to maintain their interest and attentiveness." (Interview# 04, 13-06-23). These tools capture students' interest, encourage active participation, and promote critical thinking. By using a combination of these methods and tools, teachers aim to create an engaging and effective learning environment. One of the assistant teachers mentioned that "We use tools as needed, and some tools are used daily. They help students stay attentive and concentrated, improving their learning." (Interview# 12, 13-06-23). Teachers rely on tools to

facilitate easier explanations of lessons. They incorporate various tools in every class to enhance learning outcomes. According to one assistant teacher “These tools assist us to explain the lessons easily in the classes. They are easy to arrange for every class and lesson, and they contribute to better learning outcomes.” (Interview# 05, 13-06-23). They hold the belief that employing tools proves more effective than solely delivering lectures. Integrating tools into their teaching methods is a practice they follow. One of the assistant teachers noted “Using tools is more effective than just delivering lectures. I find that students learn more clearly and easily when we incorporate tools into our teaching methods.” (Interview# 07, 13-06-23). Teachers believe that the use of tools enhances the learning environment, leading to positive student responses and an improvement in their academic performance. One of the head teachers expressed the following idea:

Learning tools have significantly improved the learning environment in my class. Students respond positively, and their academic performance has improved. For instance, I've seen a notable improvement in a student's reading skills due to the use of learning tools and follow-up (Interview# 10, 13-06-23).

#### **4.2.3 For strengthening students' learning**

The shift from summative to formative assessment is welcomed by teachers, as it allows for more frequent evaluation, identifies learning gaps, and encourages a deeper understanding of subjects. Continuous assessment is seen as a way to reduce the pressure of traditional exams and promote active learning. Teachers appreciate the benefits of providing continuous feedback to students, enabling them to track their progress and make improvements. One of the assistant teachers mentioned that “Continuous assessment involves daily learning and evaluation over consecutive days.” (Interview# 06, 13-06-23). Diverse methods are employed to gauge a student's comprehension of a subject. Many teachers use questioning as a means of assessment. Others opt for classwork or homework to evaluate academic progress,

recognizing that some students may feel hesitant to communicate orally. Moreover, teachers offer feedback based on class activities, group tasks, or assignments.

Several teachers group students according to their comprehension levels, conducting separate classes for those who need additional support. These classes begin with fundamental concepts and are offered without any tuition fees. One of the head teachers stated the following:

We have instructions for supporting weaker students, and this applies to all classes. Beforehand, we conducted a baseline survey to categorize students into Groups A, B, and C based on their understanding. We offer separate classes for weaker students in a different building, without charging any tuition fees. We start teaching from the basics, even covering Bengali letters. We ask weaker students to sit in the front rows, allowing teachers to pay more attention to them. We not only teach but also assess their handwriting and classwork to ensure comprehension. ensure that all students understand the topics (Interview# 10, 13-06-23).

#### **4.2.4 For illuminating students' comprehension**

Teachers utilize various teaching tools and materials based on the subject and lesson. The use of practical materials, such as balloons for science experiments, helps students imagine and understand complex concepts. Teachers stress the importance of using these tools to make learning more enjoyable and relatable to real-life situations.

We prepare these materials ourselves. It saves us from the effort of explaining complex topics extensively. Preparing visuals in advance and showing them in class significantly eases the understanding of various topics for our students. It reduces my workload by 50% in the classroom (Interview# 08, 13-06-23).

Teachers unanimously agree on the benefits of teaching tools in the classroom. These tools not only capture students' interest but also help them understand complex topics more easily. The use of visual aids and practical materials contributes to improved academic performance. Teachers also find that creating teaching materials in advance reduces their workload and enhances the effectiveness of their lessons.

## **4.3 Strategies for Implementing Formative Assessment Tools**

### **4.3.1 Interactive and Engaging Questioning Activities**

Interactive questioning is a favored approach across all interviews. Teachers engage students through thought-provoking questions, stimulating critical thinking and active participation.

One of the assistant teachers stated that “I assess their understanding by asking questions. If they answer correctly and show interest in learning more, I consider that they have grasped the concepts.” (Interview# 12, 13-06-23). Another assistant teacher mentioned as follows.

I usually employ the question-and-answer method in class. I avoid the lecture method as it doesn't facilitate deep understanding; students tend to memorize instead of comprehending. When I ask questions, students are motivated to provide answers, which, in my view, constitutes genuine learning. We learn interactively, and that's when real learning happens (Interview# 6, 13-06-23)

The implementation of this tool in classroom settings is consistently reported as very effective, with clear instructions given to students. (Observation notes# 2, 13-06-23).

Students across the classroom actively participate and display enthusiasm for this assessment activity.

### **4.3.2 Organizing Group Work and Peer Learning**

Group work and peer learning strategies are employed by teachers. These methods encourage collaborative problem-solving and knowledge exchange among students. One of the teachers of among them mentioned as follows:

I use group work to promote socialization and life skills among students. For instance, we ask students to relate a story we've told to their own family context. This approach helps us gauge their understanding of the topic (Interview# 5, 13-06-23).

Most teachers encourage student interaction between those who understand the topic well and those who need extra help. While they assist weaker students, they also believe in the value of peer learning. Among them, one of the teachers cited the following: “We guide the weak students separately and also encourage interaction between those who understand the topic well and those who need extra help. Peer learning is valuable” (Interview# 2, 13-06-23). The implementation of this tool is consistently reported as very effective, with clear instructions given to students. (Observation notes# 3, 13-06-23). Students display active involvement and enthusiasm in these assessment activities.

#### **4.3.3 Using Visual Aids in Mathematics Class**

Several educators actively incorporate visual aids like pictures and charts into their teaching methods. One of the assistant teachers stated that “We always show pictures from textbooks. It is a daily part of our lessons, along with posters, and chart paper.” (Interview# 7, 13-06-23). These visual tools serve to illustrate concepts, making them more comprehensible and engaging for students as the teacher mentioned.

I employ several strategies to teach students in class. Multimedia is a daily part of our lessons, along with posters, chart paper, and pictures from textbooks. I also incorporate practical examples, like using sticks for counting and number cards in mathematics class. (Interview# 7, 13-06-23).

The implementation of this tool is consistently reported as very effective, with clear instructions given to students. (Observation notes# 2 and 3, 13-06-23). Clear instructions and expectations are typically provided to students, ensuring their active participation.

#### **4.3.4 Arranging Role-Play Events in English Class**

Teacher incorporates role-play as an effective teaching tool. It immerses students in real-life scenarios, enabling them to apply their knowledge in practical situations. She stated that “Using role play helps students relate classroom learning to real-life situations, making learning more effective and long-lasting.” (Interview# 3, 13-06-23). The implementation of this tool is consistently reported as very effective, with clear instructions given to students. Students across the classroom actively participate and display enthusiasm for this assessment activity. (Observation notes# 1, 13-06-23).

#### **4.3.5 Engaging Students through Multimedia Unique in English Class**

Many teachers harness multimedia resources to enrich their lessons. One of the assistant teachers stated, “We use multimedia tools, prepare lessons, and use appropriate tools based on the lessons and topics.” (Interview# 6, 13-06-23). These include digital presentations, videos, and interactive applications that cater to diverse learning styles and maintain students’ interest as one of the head teachers mentioned.

I employ various methods depending on the subject. For instance, in English classes, I use a sound system with a soundbox to project my voice clearly and engage students. The soundbox is appealing to children. Additionally, I use multimedia tools to make the lessons more interactive. Multimedia is particularly effective as it captures students’ attention and enhances their learning experience. I encourage face-to-face conversations during conversational topics (Interview# 10, 13-06-23).

The implementation of this tool is consistently reported as very effective, with clear instructions given to students for correct pronunciation of English words and sentences. (Observation notes# 4 and 5, 13-06-23). Students across the classroom actively participate and display enthusiasm for this assessment activity.

Despite embracing modern tools like multimedia, our school faces the double-edged sword of large class sizes. With 100 students packed into a room, even the most engaging technologies can't replace the individual attention crucial for disadvantaged students. Coming from low socioeconomic backgrounds, some students lack support at home, making them more susceptible to falling behind in the face of this overwhelming environment. One of the assistant teachers mentioned as follows.

In many schools, contemporary tools like multimedia are not used. This deprives students of modern technology. Our school is different in this regard. However, class size is a significant factor. With 100 students in a class, it's challenging to provide individual attention, especially when some students come from low socioeconomic backgrounds and lack support at home. These students may fall behind in their studies (Interview# 05, 13-06-23).

#### **4.3.6 Using Practical Materials in Science Class**

Practical materials, including tangible objects and hands-on activities, are extensively utilized by educators. One of the assistant teachers stated that “We also incorporate practical examples, like using sticks for counting in math or bringing fruits and vegetables for science lessons.” (Interview# 7, 13-06-23). These materials promote experiential learning, allowing students to grasp complex ideas through direct engagement as teachers mentioned.

I also use practical materials in science class. For example, we bring clay to class. Students observe the clay's color and texture. Without such observations, there is no scope for learning in science (Interview# 5, 13-06-23).

Students often struggle to grasp topics effectively when teachers solely rely on explaining from the textbook without incorporating tools, like explaining the nature of oxygen and its role in combustion, understanding the concept of matter, and so on. One science teacher highlighted this issue by mentioning the following.



In a science class where we learned about how oxygen supports fire; I brought a candle to class. When students saw the candle, they became enthusiastic and were eager to learn about oxygen's role in combustion (Interview# 1, 13-06-23).

Consistently, reports highlight the tool's implementation as highly effective, providing clear instructions to students. Active participation and enthusiasm for this assessment activity are evident among students throughout the classroom. (Observation notes# 6, 20-06-23). Not only in science but also in English, teachers consistently employ practical materials to explain their topics. For instance, they use word cards to help memorize new vocabulary and utilize wall clocks to demonstrate how to determine the actual time. To comprehend celebrations, they occasionally organize birthday celebrations within the classroom. One of the head teachers mentioned the following:

When teaching about birthdays, we use related pictures and sometimes even arrange birthday celebrations in class. We also use practical materials like word cards and wall clocks for specific subjects. At times, we create our own drawings to explain concepts (Interview# 11, 20 -06-23).

The tool's consistent implementation is frequently cited as highly effective, offering clear instructions to students. Throughout the classroom, students actively engage and show great enthusiasm for this assessment activity. (Observation notes# 6, 20-06-23).

These teaching-learning tools serve to address the evolving educational landscape, aligning with the new curriculum's emphasis on formative assessment and practical, continuous learning. Educators recognize the pivotal role of these tools in reducing exam pressure, promoting deeper understanding, and enhancing overall learning experiences for students.

Across various classroom observations, it is evident that teachers prioritize frequent and effective use of formative assessment tools to learn student understanding. These educators

employ a diverse array of tools, including posters, role-play, multimedia, group work, questioning, and real-life examples, aligning them with instructional goals. The implementation of these tools is consistently reported as very effective, with clear instructions given to students. Oral feedback is a common practice, contributing to students' learning process. Importantly, students display active involvement and enthusiasm in these assessment activities, emphasizing the valuable role formative assessments play in enhancing the teaching and learning experience (see Annex for details observation notes).

## **4.4 Barriers to Implementing Formative Assessment Tools**

### **4.4.1 Lack of parental awareness**

Interestingly, the teachers noted that parents generally did not complain about the tools used for teaching and assessment. However, a challenge emerged in the form of parental awareness. Parents appeared to be unaware of the benefits of tools in enhancing their children's learning experiences. The teachers mentioned that parents were more content when tools were employed in a hands-on, interactive manner. Still, there was a need for increased parental engagement and awareness regarding the advantages of tool-based learning. Parents occasionally expressed concerns about the inconsistency in teaching methods, particularly in subjects like English and Mathematics. One of the teachers expressed her concern as follows.

Parents may not be aware of the tools that are being used in the classroom. Additionally, parents may be concerned about the teaching methods that are being used, especially in subjects like English and Math (Focus group discussion notes#1, 19-06-23).

Differences in teaching styles among teachers could lead to confusion among students.

Parents were encouraged not to teach these subjects at home to avoid conflicts, but not all parents were aware of the alignment between school instruction and private tutoring. While private tutoring was not highly dependent upon, especially in primary school, some parents

did continue to seek additional help which created problems between schoolteachers and private tutors. One of the teachers expressed her concern as follows.

Few students depend on private tutoring. Low qualified guides or private tutors try to help our students by covering all the lessons at home, it creates conflicts between us and private tutors as they follow different methods for teaching. Sometimes, private tutors guide students wrongly since most of them are grade-5 or 6 passed. It also creates a burden for us to repeat the same lessons in the class (Focus group discussion notes #1, 19-06-23).

#### **4.4.2 Teaching-learning resources-related barriers**

One of the prominent challenges highlighted by the teachers in the focus group discussion was the scarcity of teaching-learning materials. Despite the potential benefits of tools in enhancing understanding, limited resources hinder their effective implementation. This scarcity extends to both used and new materials, with materials primarily supplied by the school. The teachers explained that while they receive materials for pre-primary levels, they often need to create teaching materials themselves for other classes. During the COVID-19 pandemic, preservation of materials became even more challenging, resulting in significant waste. Participants noted that there is a shortage of materials to support hands-on learning for all students. One of the teachers expressed her concerns as follows.

Compared to the number of students, we cannot provide materials to all the students. You know, tools help understand topics quickly, but if we cannot give tools to each and every student, it will not serve the purpose of using tools. So, they cannot learn hands-on (Focus group discussion notes #1, 19-06-23).

The scarcity of materials was particularly pronounced in pre-primary classes, where each student needed access to teaching materials. While the government supplied some materials, the sheer number of students in these classes posed a challenge. The teachers described

instances where materials designed for pre-primary students were often taken home as students perceived them as toys. The inability to provide sufficient materials to every student in pre-primary classes led to wastage and hindered effective tool-based learning. One of the teachers mentioned as follows:

The little kids want to take those materials home because they consider them their toys. They like those toys very much and try to take them home. But we cannot give them all at school, sometimes we do, but we don't have enough material to give to all students (Focus group discussion notes #1, 19-06-23).

Another challenge related to materials was the insufficient supply of coloring paper. This shortage impacted the quality and variety of tools that could be used for teaching and assessment. One of the assistant teachers mentioned as follows:

We have encountered an additional challenge related to coloring paper. The office provided some coloring papers during our tool training sessions. Additionally, we purchased more paper. Sometimes, we create tools using the papers provided by the office, but that supply isn't sufficient. Students frequently damage or tear the tools due to rapid use. Consequently, we frequently require additional coloring papers to make new tools (Focus group discussion notes #1, 19-06-23).

#### **4.4.3 School environment-related barriers**

**Large Class Size:** Class sizes were noted as a significant challenge, particularly in primary classes. Government regulations stipulated a maximum of 40 students per teacher, but in reality, teachers often had to manage twice that number. While smaller classes during the pandemic were appreciated, overcrowded classrooms remained a persistent issue, affecting the effectiveness of tool-based teaching and assessment. One of the teachers mentioned “Class size can be a problem when implementing formative assessment tools. We may have difficulty providing individualized attention to all of their students in a large class.” (Focus group discussion notes #1, 19-06-23). Additionally, schools with large student populations

face logistical and financial challenges in adapting to the continuous monitoring and feedback required by this new system. The cost of implementing and maintaining effective assessment tools and practices can be significant, posing another barrier to widespread adoption. Another head teacher also expressed her concerns about the new curriculum as follows.

The continuous assessment system in the new curriculum is crucial for fostering deep and lasting learning. However, adapting to it is challenging, especially in schools with a large number of students. The cost of implementing continuous assessment can also be a challenge (Interview# 11, 20-06-23).

Heavy workload: Teachers' dedication shines through despite a crushing workload. They understand the importance of preparation, stressing the need for time between classes and breaks to ensure effective lesson planning and personal well-being. Yet, their days are jam-packed from 8 AM to 4 PM, often lacking even lunch breaks. Administrative tasks and weekend work add to the pressure, pushing them to develop formative assessment tools outside of school hours. This constant pressure has become the norm, a worrying trend highlighting the need for lighter workloads and sustainable practices. Despite the strain, teachers remain committed to using these assessment tools in the classroom, showcasing their resilience and passion for their students. However, a question remains: how long can this dedication be sustained when basic needs like time and breaks are neglected? Addressing the issue of teacher workload is crucial not only for their well-being but also for ensuring the continued effectiveness of these valuable tools in the classroom. One of the teachers reflected on this as follows.

For effective teaching, preparation is essential. However, we are so overwhelmed by our schedules that we lack the time to adequately prepare for the next lesson. Although we have various instructions to follow, the pressure of consecutive classes leaves us unable to adhere to them. At times, we don't even have time for lunch. In summary, we are under immense pressure. From 8 am to 4 pm every day, there is no gap between classes. We have to navigate through a hectic day consistently. This is very common, not exceptional. Additionally, we often have tasks to complete even on the weekends (Interview# 08, 13-06-23).

#### 4.4.4 System-related barriers

Lack of clear guidelines: Confusing policy change hampers formative assessment efforts. For instance, class test results in grade one being included in the final exam is a government decision, as teachers explained. However, the policy is still under pilot, and frequent changes make it hard for parents to understand its importance. As one of the teachers mentioned, “Class test results are included in the final exam according to govt. decision. But it changes frequently as it is under pilot. So, parents do not pay good attention to formative assessment”. (Focus group discussion notes #1, 19-06-23). This lack of clarity translates to reduced parental engagement with formative assessments, as they are unsure how much weight these tests carry in the final evaluation.

Lack of funding: While the continuous assessment system offers benefits for student learning, schools with large class sizes face significant challenges in implementing it effectively to buy materials. One of the head teachers explained as follows.

With an average of 50 students per class compared to my smaller class of 20, managing the assessment workload and associated costs becomes difficult. Printing materials, and additional personnel for large-scale assessments can strain school budgets, particularly if they rely solely on internal funds. This can lead to reduced assessment quality, teacher burnout, and ultimately, hinder the effectiveness of the system in achieving its goals. (Interview# 11, 20-06-23).

Additionally, teachers face challenges when they have to rely on several support mechanisms for solving problems related to teaching-learning materials, for instance, they first communicate with their headteacher followed by sub-cluster head such as “*Upazila Nirvahi Officer (UNO)*”, who, in turn, informs the headteacher. Then, as the head of Welfare Association, headteacher discusses and resolves issues locally. These mechanisms enabled

teachers to address challenges, seek guidance, and share experiences but had to maintain a long chain that takes time.

**Inadequate training for teachers:** Despite the potential benefits of the continuous assessment system, teachers expressed significant concerns regarding their preparedness. They highlighted the stark shift from a traditional grading system to one requiring ongoing feedback and individualized support, a difference they felt inadequately equipped to handle. While an online training platform ("Muktopaath") was provided, teachers found it insufficient, emphasizing the need for more immersive, physical training to overcome inherent limitations of online learning. This lack of proper training, coupled with the abrupt change in teaching philosophy, left teachers uncertain about their ability to effectively implement the new curriculum and navigate the challenges posed by its reliance on a point system.

**Adapting new curriculum:** Additionally, some questioned the application of a model borrowed from developed countries to a different educational context, raising concerns about its suitability for Bangladesh's specific needs and resources. These anxieties and uncertainties surrounding teacher training paint a picture of a system potentially hindered by its own good intentions, highlighting the crucial role of comprehensive and context-sensitive training in ensuring the successful implementation of educational reforms. The head teacher mentioned as follows:

Continuous assessment was launched in Classes 1 and 2 yet absent in Classes 3, 4 and 5. The challenge with this approach is that it originates from developed countries, and our country's educational environment is not yet ready to adopt such methods of education and assessment (Interview# 11, 20-06-23).

While the continuous assessment system holds promise for deeper learning, its implementation faces hurdles on multiple fronts. Students accustomed to traditional exams might struggle with the lack of high-stakes tests, potentially affecting their attention. Parents, too, may be less responsive to this unconventional approach, accustomed to the clear structure and feedback provided by exams. One of the head teachers explained her concerns as follows.

The systematic evaluation or continuous evaluation method is beneficial, but students are accustomed to the old way of evaluation, which they prefer. The absence of exams might make some students less attentive, and parents are generally more responsive to traditional exams (Interview# 10, 13-06-23).

In some teachers overwhelmingly embrace the use of formative assessment tools because they offer numerous benefits for both students and educators. These tools, ranging from interactive questioning to multimedia resources, promote deeper understanding, boost engagement, and create a more effective learning environment. However, implementing these tools faces hurdles such as parental unfamiliarity, resource scarcity, large class sizes, and confusing policy changes. Despite these challenges, teachers remain committed to utilizing formative assessment tools, acknowledging their crucial role in enhancing the overall learning experience.



## **Chapter 5 Discussion and Conclusion**

### **5.1 Introduction**

This discussion section of my thesis delves into the key aspects of formative assessment tools used in government primary schools in Bangladesh. I have explored three main areas of formative assessment corresponding to my three research questions: (i) the crucial role of formative assessment perceived by educators - this section examines the significance of formative assessment tools in enhancing student learning. (ii) strategies for effective implementation of formative assessment tools - here, I have discussed practical strategies educators can leverage to successfully integrate formative assessment tools into their classrooms. (iii) challenges in implementation of formative assessment tools - in this section I highlight how to tackle the challenges educators have faced when implementing formative assessment tools. Finally, I provide future research ideas and conclude the chapter with some related recommendations.

### **5.2 Discussion**

#### **5.2.1 The Crucial Role of Formative Assessment Perceived by Educators**

I have discovered from the existing literature that formative assessment plays a crucial role in education, particularly in determining students' areas of need and providing them with feedback (Earl, 2012) which is consistent with the findings of my study. For instance, study participants (in this case assistant teachers and head teachers) acknowledged the benefit of formative assessment tools to improve students' learning outcomes through feedback and continuous assessment. As I interviewed the participants, my point of view is that teachers are aware of the meaning and intent benefit of using formative assessment tools in the classroom.

According to Wiggins (2012), formative assessment fosters critical thinking, problem-solving, and the application of knowledge in meaningful contexts. My interviews and focus

group discussions (FGDs) revealed that teachers generally recognize the benefits of formative assessment, particularly for struggling students. However, many teachers expressed a preference for summative assessments for grading purposes.

While most teachers acknowledge the value of formative assessment, they also feel pressure to make the tools readily accessible. This sometimes leads to an overreliance on limited resources such as textbook pictures for explanations, which may limit engagement. This highlights the need for improved access to appropriate materials. My observations suggested that practical materials, group work, and engaging activities enhanced student engagement. However, the use of small, unclear pictures from the back of the classroom hindered learning for students seated further away. Similarly, relying solely on activities like role-playing may not effectively connect with all learners in a diverse classroom.

Government primary schools often face a shortage of teachers, placing a heavy burden on existing staff. These educators must juggle both teaching and administrative tasks, creating a challenge in dedicating sufficient time to each.

In classrooms exceeding 70 students, this teacher shortage significantly hinders the ability to provide individualized or small-group assessments, critical for effective learning. The pressure to manage administrative duties often leads to shortened class time, sacrificing in-depth instruction and personalized support for students.

While streamlining administrative tasks might appear beneficial in the short term, it comes at a significant cost. Reduced instructional time directly impacts the quality of education students receive. This is particularly concerning in public institutions with subsidized tuition fees, where students may have fewer options to seek alternative learning opportunities if class time is insufficient.

Although it was not a study objective, my observations suggest that the quality of primary education may vary depending on location and socioeconomic background. Students in urban schools, which often serve populations with higher socioeconomic backgrounds, may have access to additional educational opportunities like after-school programs offered by teachers. However, the prevalence and affordability of such programs require further investigation.

In contrast, schools in suburban areas, where students may come from lower socioeconomic backgrounds, may lack these same opportunities. This highlights potential inequities within the primary education system. To address these disparities, initiatives such as equal funding allocation or needs-based resource distribution could be explored.

### **5.2.2 Strategies for Implementing Formative Assessment Tools**

This study explored the use of formative assessment tools in Bangladeshi primary schools. Interviews with teachers revealed a common practice of employing various formative assessment tools, including question-and-answer sessions, group work, and real-life materials aligned with lesson content (Arrafii & Sumarni, 2018). These diverse approaches aim to enhance student comprehension (RR. et al., 2020).

However, observations across three government primary schools show contrasting results regarding teacher engagement with students in implementing formative assessment tools. In one school, teachers actively moved throughout the classroom during activities, ensuring all students were engaged. However, in the other two schools, there was a lack of focus on "backbencher" students (students seated in the rear) who may be disengaged or inattentive. This aligns with previous research highlighting the importance of active monitoring and ensuring participation from all students (Almutairi, 2017).

I also observed teacher-student interaction during implementing formative assessment tools in the classroom. For instance, while all teachers utilized questioning as a formative assessment tool, observations suggest a pattern where most responses came from "front bencher" students with fewer responses from middle and backbenchers. This raises concerns about inclusivity and the potential for missing out on the understanding of students who may be hesitant to participate.

Interviews revealed that teachers primarily used questioning before lessons to gauge prior knowledge and at the end to assess comprehension. While this is a valuable approach, research suggests formative assessment can be most impactful when integrated throughout the lesson (Black & Wiliam, 1998). Additionally, the focus on identifying weak students solely through questioning, as opposed to identifying learning gaps for all students, suggests room for improvement in formative assessment strategies.

Both interviews and observations confirmed that teachers assign homework and conduct class tests to assess student learning. For instance, teachers administered class tests after completing chapters to assess overall student understanding. These test scores were then documented in registers. In my opinion, there appears to be a disconnect between what educators' report and what I observed in their classrooms. While teachers mentioned using formative assessment tools, some of the practices I witnessed seem more aligned with traditional assessment methods, which often have summative elements. While these practices can provide insights, effective formative assessment involves providing immediate feedback and adjusting instruction based on student needs (Sadler, 1989).

Regarding usage of digital devices as formative assessment tools, the literature highlights various online formative assessment tools like Kahoot, Socrative, Jeopardy, Quizizz, and Quizlet (Balatero & Baclaya, 2021; Kolisnyk et al., 2022; Mdlalose et al., 2022; Permana &

Permatawati, 2020). These tools offer instant feedback and data analysis, potentially enhancing teaching practices. However, my observations suggest limited adoption of these sophisticated online tools in the studied schools. While teachers utilized multimedia (e.g., videos, audio) for specific purposes like pronunciation improvement (due to potential limitations in teacher pronunciation), these tools don't fully capture the interactive and data-rich nature of formative assessment platforms. This might be due to the restricted use of sophisticated online tools could be attributed to several factors common in developing countries like Bangladesh. For instance, widespread internet connectivity issues, limited access to devices for all students, and a potential lack of training on these specific platforms could hinder their implementation.

Weurlander et al. (2012) advocate for "Think-Pair-Share" as a formative assessment strategy, where students work in pairs or small groups to discuss concepts and share ideas. While my observations revealed teachers employing small group work for notetaking and topic discussions, the strategy was not fully aligned with the Think-Pair-Share model. As observed, there appeared to be an absence of dedicated paired discussions and knowledge sharing within these groups.

### **5.2.3 Challenges in implementing formative assessment tools**

One significant challenge hindering formative assessment implementation is the current emphasis on summative assessments as educators have been practicing it for a long time. For instance, while teachers diligently record progress through chapter exams and reports, this system prioritizes measuring achievement at the end of a learning period (summative assessment) over providing continuous feedback for improvement (formative assessment). This pressure to perform well on summative assessments can overshadow the ongoing, formative check-ins crucial for effective learning.

Teachers acknowledge the value of formative assessments but struggle to implement them effectively due to high workloads and large class sizes. Strategies like peer learning, although utilized, might be limited in their impact. My observations suggest that some students, particularly those seated in the back, may not fully participate. This could be due to a lack of individual teacher attention during peer activities or potential distractions within large classrooms. Further research is needed to understand the specific challenges associated with peer learning in this context and identify strategies to optimize its effectiveness despite limitations.

While the introduction of online training on formative assessment tools within the new curriculum for government primary schools is a positive step, a potential challenge lies in the limited prior exposure teachers might have to these methods. Successfully implementing formative assessments requires not just knowledge of the tools themselves, but also the ability to integrate them effectively into lesson plans, use them to identify student learning gaps, and adapt instruction accordingly. If teachers have not had previous training in formative assessment principles, these online courses might need to address not just the "what" of the tools, but also the "how" and "why" of using them to create a more dynamic and responsive learning environment for students.

### **5.3 Future Research on Formative Assessment Tools in Primary Education**

This present study has provided valuable insights into diverse formative assessment tools and their implementation strategies and challenges in government primary schools in Bangladesh. However, my study is not beyond the limitations. To gain a more comprehensive understanding of this topic we need diverse contextual information. For example, future research efforts should explore the following dimensions to understand the holistic situation of formative assessment tools in Bangladesh.

1. Rural vs. Urban Schools: While this study focused on urban schools, a comparative study examining both rural and urban settings would provide a holistic picture of the challenges and opportunities associated with implementing formative assessment tools across Bangladesh's primary education system.
2. Quantitative Data and Scalability: The current study's qualitative approach offered rich detail but lacked generalizability. Future research may incorporate quantitative surveys to assess the prevalence and scale of the identified issues related to formative assessment implementation. This would allow for a more statistically robust understanding of the situation.
3. Socioeconomic Background and Teacher Initiative: This study identified potential variations in school performance based on socioeconomic background and teacher effort. Future research could explore these factors in greater depth, comparing schools across different socioeconomic demographics and levels of teacher initiative. This would provide insights into how these factors influence the effectiveness of formative assessment practices.
4. Public vs. Private/NGO Schools: This study focused on government primary schools. To gain a more comprehensive understanding, future research should include private and NGO-operated schools. Comparing their implementation of formative assessment tools and its impact on student learning outcomes would offer valuable insights into the effectiveness of different educational models.
5. Stakeholder Perspectives: The current study lacked the perspectives of students, parents, teachers, and government stakeholders regarding formative assessment tools. Future research should incorporate surveys, interviews, or focus group discussions with these diverse stakeholders. This will provide a more comprehensive understanding of the perceived

benefits, challenges, and potential improvements surrounding formative assessment implementation in Bangladesh's primary education system.

## **5.5 Conclusion**

This study explored teachers' perceptions, implementation strategies, and challenges related to formative assessment tools in government primary schools. I collected qualitative data using interviews, focus group discussions (FGDs), and classroom observations methods.

Participants included head teachers, assistant teachers, and other teachers from three schools in Narayanganj Sadar. These schools have a teacher-student ratio ranging from 1:60 to 1:70.

The findings, presented under three key themes, offer valuable insights:

1. **Teacher Perceptions and Benefits:** Teachers generally expressed positive views towards formative assessment tools, particularly those categorized as "teaching-learning tools." They acknowledged the benefits for both them and students, including promoting deeper understanding, increased engagement, and more practical learning experiences.

2. **Implementation Strategies:** The study identified a range of formative assessment tools commonly used by teachers. These include interactive questioning techniques, group work and peer learning activities, visual aids, role-playing scenarios, multimedia resources, and the incorporation of low-cost, real-life materials.

3. **Barriers to Implementation:** Despite the potential of formative assessments to improve student learning, several roadblocks hinder their widespread adoption. A lack of understanding among parents can make it difficult to garner their support for these practices. Additionally, teachers may face limitations due to a lack of resources, like technology or suitable materials. The classroom environment itself can also play a role, with large class sizes or limited space hindering the use of certain methods. Finally, the educational system



itself can be a barrier, with an overemphasis on summative assessments or limited professional development opportunities for teachers on formative assessment techniques.

In conclusion, this study highlights the potential of formative assessment tools in enhancing primary school education. By addressing the identified barriers and promoting effective implementation strategies, educators can leverage these tools to create a more dynamic and learner-centered educational environment. Future research could explore the impact of targeted interventions, such as parental education campaigns or professional development programs focused on formative assessment practices, on overcoming these challenges and maximizing the benefits for students in government primary schools.

## **5.5 Recommendations**

The study's findings highlight areas for improvement in utilizing formative assessment tools within government primary schools. Here are specific recommendations:

1. **Enhanced Teacher Training:** While initial training on formative assessment exists, teachers struggle with application in large classes with limited time. The government may provide ongoing professional development focused on using these tools effectively in diverse classroom settings. Training should equip teachers with practical strategies for integrating formative assessments throughout lessons, even with large student numbers.
2. **Classroom Design Optimization:** The physical classroom environment can impact formative assessment implementation. The government can provide guidance on organizing and managing classroom space to facilitate activities using formative assessment tools. This might involve creating designated areas for small group work, allowing for easy movement during formative assessments, and ensuring clear visibility for all students.

3. Ensuring Accessibility of Formative Assessment Tools: The study indicates a need for sufficient quantities of formative assessment tools. This ensures all students can participate in activities simultaneously. This may involve budgeting for additional tools, exploring cost-effective options, and encouraging creative use of readily available materials.

4. Supporting Teacher Mentorship: School supervisors may be trained in formative assessment tools and their applications. This equips them to mentor and support teachers in selecting the right tools for specific lesson plans and student needs. Regular observations and feedback from supervisors can further guide teachers in effectively utilizing formative assessments.

5. Exploring Digital Formative Assessments: The research suggests limited use of digital tools for formative assessment. A dedicated study could investigate the reasons behind this and explore strategies to promote wider adoption. The research could examine factors like teachers' comfort level with technology, access to devices, and the need for training on specific digital assessment tools.

6. Parental Awareness of Formative Assessments: Another study could be designed to understand parents' awareness and perspectives on the use of formative assessment tools in their children's education. This could involve surveys, focus groups, or interviews to identify communication gaps and develop strategies for better informing parents about the benefits of these tools and their role in supporting student learning.

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# Appendices

## Appendix A. Consent Letter

Date: -----

Dear MR/Mrs. -----

You are invited to participate in a study of “*Exploring the Government Primary School Teachers’ Perspectives on Using Formative Assessment Tools for Students Learning: A Case Study*”. I am a student at the Institute of Educational Development (IED) of BRAC University. I have to do research for my thesis in one of my courses. I have to conduct this research because I’m a Master of Education (M. Ed.) student. As a qualified teacher, you might take part in my research. To learn more about formative assessment tools and how it is used to enhance student learning, I would want to interview you. To take the required steps for further teaching-learning improvement in the near future, it may be helpful for us to understand your perspectives on formative assessment tools for learning through this study.

An electronic gadget will be used to record the interview, which will last about an hour. Your professional standing won't be impacted by whether you participate or not. If you choose to participate, you have the right to revoke your consent at any time and without cause. All the data you supply will only be used for study and displayed anonymously. I won't provide anyone other than my thesis committee access to my transcriptions and field notes.

You may be sure that I won't share your name and will keep your identity discreet. Regarding this study, feel free to enquire. You won't gain any advantages from this study, but individuals in the education area who are like you may in the future gain advantages from it. A copy of this form will be made available to you.

For any more questions, don't hesitate to get in touch with me.

Email: [pbgt2008@gmail.com](mailto:pbgt2008@gmail.com) (Contact: 01715491628 ).

Thank you.

I have read the prior material, and by participating in this study, I voluntarily consent to do so.

.....

.....

Signature of Participant & Date

Signature of Researcher & Date

## Appendices B: Interview Guides

### 1. IDI Guide

#### IDI: Interview guide for the assistant teacher at a government primary school

Date: ----- Place of interview: -----

Time: -----(AM/PM) Duration: 1-hour

Interviewer: Gayatri Talukdar

Name of interviewee: -----

#### Participant's Background

(After greetings and rapport building)

Gender: .....

Working experience: This school: -----

Subject: Mathematics/ Science/ English

**Research question:** (1) How do teachers perceive the importance of formative assessment tools in classroom? (2) How do teachers employ formative assessment tools in the classroom for students' learning?

**Interview purpose:** I will learn/understand how teachers perceive formative assessment tools in the classroom.

#### Interview questions

##### Teachers' perception about formative assessment tools:

1. How long have you been teaching this subject in this school?
2. What subject(s) do you teach?
3. How do you understand that student understands your class lessons?
4. What methods and techniques have you applied in the classroom directly?

5. What do you do when you find the students do not understand a topic well?
6. What do you do when you find some students who lag behind others?
7. Do you know about the new evaluation system which launched by in 2023? If yes, please mention what do you know about this. (If no, move to ques.11)
8. Do you prefer the new method and why?
9. Why is this assessment more important to you?
10. What is the significance of formative assessment?
11. Could you please tell me your idea of formative assessment.

**Usage of Formative assessment tools:**

1. Do you use any formative assessment tools for teaching-learning in classroom? If yes, please mention what those tools are.
2. How often do you do a formative assessment tools and why?
3. What formative assessment tools do you use to help them in the classroom to better learn and how?
4. Do you think formative assessment tools help to improve student learning? If yes, please mention how does it works.
5. How do formative assessment tools help the students learn? Please explain with some examples if any.
6. How do formative assessment tools help teachers? Please explain with some examples if any.
7. Do you prefer formative assessment tool, why?
8. Why do some formative assessment tools not be applied (if any)? What are those?

9. Would you like to share anything more about the practice of formative assessment?

10. Do you have any questions for me?

## 2. FGD Guide

### Focus group discussion (FGD) guide for the assistant teachers at a government primary school

Date: -----

Place of interview: -----

Time: -----(AM/PM)

Duration: 1-hour

Interviewer: Gayatri Talukdar

#### FGD Participant's Background

(After greetings and rapport building)

ID	Name	Gender	Working experience (this school)
1			
2			
3			
4			
5			
6			



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**Research questions:** What are the barriers to implementing formative assessment tools in classes?

### **Interview questions to the Group**

#### **Barriers (probing question):**

1. What are the difficulties have you faced in implementing formative assessment in the classroom from the viewpoint of
  - a. Students
  - b. parents
  - c. school authority
  - d. technological support (computer, projector)
  - e. lack of training
  - f. teachers' heavy workload
  - g. large class size
  - h. large contents of syllabus
  - i. students depend on private tutoring
  - j. SBA marks is not included in public examination
2. What are your suggestions for the policymakers to redesign the formative assessment tools?
3. What support do you get to design and implement formative assessment tools from the school and community?
4. What support do you need from them? Is there any policy from the school regarding formative assessment?
5. Do you want to share anything more about the practice of formative assessment?

### **3. Observation Guide**

**Observation checklist/ guide for classroom of a government primary school.**

**Research question:** How do teachers employ formative assessment tools in the classroom for students' learning?

**Observation purpose:** I will understand teachers employ formative assessment tools for students' learning in the classroom.

**Observation protocols:**

I will be present in the setting.

I will watch attentively to collect data.

I will listen carefully

I will do unstructured observation

I will write down exactly what I will observe (teachers' movement, class size, teacher-student interaction, students' response, teaching learning tools)

**Observation checklist question**

**a) Frequency of use**

1. During the class how often does a teacher use formative assessment tool?
2. Do the formative assessments occur at various stages of the learning process such as beginning, middle or end of class?

3. How frequently do students engage in formative assessment activities during the class?

**b) Types of formative assessment tools?**

1. What type of formative assessment tools does a teacher use in the classroom?

2. Which tool is more responsive?

3. Do the formative assessment tools align with the learning objectives and instructional strategies as written in the teacher's instructional guidebook?

**c) Implementation**

1. How do teachers implement/execute the formative assessment tool such as using learning material, games, pen and papers?

2. Are students provided with clear instructions and expectations for participating in formative assessments?

3. How effectively does the teacher implement formative assessment strategies?

**d) Feedback**

1. Do teachers provide any feedback to student?

2. How does the teacher provide feedback to students based on formative assessments?

3. Are students given opportunities to act on feedback and improve their understanding or performance?

4. Is the feedback specific, constructive and personalized to individual student needs?

### **e) Student Involvement**

1. To what extent are students actively engaged in the formative assessment process?
2. Who participate more (male students or female students, back bencher, or front bencher)?
3. Do students have opportunities to reflect on their strengths, areas for improvement, and set goals based on formative assessment.

## **Appendix C: Transcription of Interview**

### **Transcript of Interview with an Assistant Teacher**

**Question 1: How long have you been working in this school?**

**Answer:** I've been working in this school for six years.

**Question 2: Can you tell us which subjects you teach?**

**Answer:** Certainly, I teach mathematics, science, and Introduction to Bangladesh (Bangladesh Parichiti).

**Question 3: How do you assess if your students are understanding your lessons?**

**Answer:** I gauge my students' understanding through their feedback. After a class or when I finish a lesson, I ask questions. If students can answer them correctly, I understand that they've grasped the topic well.

**Question 4: That's a good approach. What teaching and learning methods do you use in your class?**

**Answer:** In my class, we utilize both practical and virtual methods. We use practical materials to introduce the topic and help students visualize it.

**Question 5: What do you do when some students don't understand a topic?**

**Interview:** When students struggle with a topic, I provide extra support. I also encourage interaction among students, pairing those who understand with those who need help. This way, weaker students can learn from their peers.

**Question 6: Are you aware of the new curriculum launched in 2023?**

**Answer:** Yes, I am aware of it.

**Question 7: Could you tell us more about this new curriculum?**

**Answer:** Certainly. The new curriculum rollout has begun with Class 1, and it will gradually extend to Class 2, 3, 4, and 5. I support this modernization as it helps us keep pace with technology and global changes.

**Question 8: What are your thoughts on the new assessment system introduced with this curriculum?**

**Answer:** I believe the shift to a formative assessment system is positive. Unlike the traditional summative assessment system, formative assessment is real-time learning. Students relate what they learn to practical or real-life situations. It involves more frequent testing after each chapter, offering a better understanding of students' progress.

**Question 9: How have you adapted to this transition?**

**Answer:** We are gradually transitioning from summative to formative assessment. With formative assessment, students stay more engaged as they have to be attentive daily, not just during annual exams.

**Question 10: Do you think students benefit from this shift?**

**Answer:** Yes, definitely. In the new system, students experience less examination pressure and more of a learner-centric environment. They interact with peers, receive teacher feedback, and enjoy learning without the fear of exams.

**Question 11: Why do you believe formative assessment is important?**

**Answer:** Formative assessment fosters deep, durable learning. It allows students to apply their learning in real-life situations, which wasn't possible in the traditional exam-based system. It's more practical and applicable.

**Question 12: What teaching and learning tools do you use in your class?**

**Answer:** We utilize various materials aligned with our lessons.

**Question 13: Can you provide some examples of these tools?**

**Answer:** Certainly. For instance, in a science class about water pollution, we use drawings and questions to illustrate the water pollution process. We also show polluted water to help students understand the source of pollution.

**Question 14: How frequently do you use these teaching and learning tools?**

**Answer:** I use them regularly in every class because they are effective in conveying new concepts to students.

**Question 15: How do these tools enhance student learning?**

**Answer:** These tools capture students' attention and encourage active participation. They promote critical thinking and reduce the need for memorization.

**Question 16: Do you believe every teacher should use these tools?**

**Answer:** Yes, I think every teacher should employ these tools because they significantly improve students' understanding and make learning more engaging.

**Question 17: Can you share an example of when these tools were particularly effective in your class?**

**Answer:** Certainly. In a science class where we learned about how oxygen supports fire; I brought a candle to class. When students saw the candle, they became enthusiastic and were eager to learn about oxygen's role in combustion.

**Question 18: Is there a teaching tool you dislike or cannot use?**

**Answer:** In some cases, it's challenging to bring real-life situations into the classroom. In such instances, we rely on virtual tools like pictures to convey concepts.

**Question 19: Thank you for sharing your insights.**

**Answer:** You're welcome. Thank you for the opportunity.

## Appendix D: Data Analysis and Code Book

### 1. Interview Codebook

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
1	How do you assess whether students are understanding your lessons?	Sujan Chandra Shaha: I gauge my students' understanding through their feedback. After a class or when I finish a lesson, I ask questions. If students can answer them correctly, I understand that they've grasped the topic well.	Ask questions after each lesson	Theme: formative assessment tools  Subtheme: Interactive Questioning
		Parimol Chandra Das: After teaching, we ask questions. If they respond correctly, then we understand that they have grasped the lessons well. So, we employ a question-answer method.	Ask questions after teaching	Theme: formative assessment tools  Subtheme: Interactive Questioning
		Lubna Naznin: We understand this from their feedback, their response to questions, and whether they receive our feedback.	Ask students for feedback and observe their responses to questions	Theme: formative assessment tools  Subtheme: Interactive Questioning
		Jahoratun: We understand our students' comprehension through assessments, including classwork. Our goal is to ensure that students learn what we teach. We emphasize learning within the school premises, as students often do not study at home, and parental involvement is limited.	Through assessments, including classwork	Theme: formative assessment tools  Subtheme: Group Work and Peer Learning
		Afroza Sultana: We understand by observing their activities, such as group work and individual work. We also observe how they participate in group work and how they respond to questions. Their level of engagement tells us whether they understand a topic or not.	By observing their activities, such as group work and individual work	Theme: formative assessment tools  Subtheme: Group Work and Peer Learning



SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Salma Akhtar: I understand whether students are grasping my lessons by observing their responses. When we enter the classroom, we notice that students fall into three categories: highly meritorious, average, and those with lower aptitude. This observation helps us provide tailored feedback to each category of students. I can also gauge which students' study at home and which ones do not through their responses. Accordingly, I try to give them feedback.	By observing their responses and evaluating their responses	Subtheme: Group Work and Peer Learning
		Tania Akhtar: I gauge their understanding by asking questions. When they answer correctly and can write responses, I understand that my students comprehend the material.	By asking questions and seeing if students can answer correctly and write responses	Theme: formative assessment tools  Subtheme: Interactive Questioning
		Fatima Akhtar: I get to know my students by understanding their understanding of the topic. We assess their comprehension through exams and discussions. If a student cannot complete their assigned task, it indicates that they did not understand my lesson. Sometimes, students sit idly without completing their tasks, showing a lack of engagement in class. In such cases, they often struggle to grasp the topic. Those who are active in class tend to understand the lessons better.	By assessing their comprehension through exams.	Theme: formative assessment tools  Subtheme: Interactive Questioning
		Ruhi Salma: I employ various strategies to gauge students' understanding. First, I start by engaging their attention and exchanging greetings. I often begin with a warm-up, which includes singing songs or reciting poems to make students feel at ease and comfortable in my class. After the warm-up, I review what was taught in the previous class and introduce the day's topic. I believe that starting abruptly without a recap may cause students to miss the connection with the previous lesson. Therefore, I always ensure that we revisit previous lessons before moving on. I write the name of the topics on the whiteboard, and students learn about the topic. I often ask small questions during the discussion, assign group work, and maintain eye contact with every student to ensure their comprehension. Sometimes, I assign readings, and	I use a variety of methods, including engaging questions, group work, and individual work. I also monitor students' attentiveness and ask them to read aloud or answer	Theme: formative assessment tools  Subtheme: Group Work and Peer Learning, and Interactive Questioning

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		students read aloud and answer my questions. Group work is also an essential part of my teaching strategy. I can identify if students have grasped the topic when they answer my questions without mistakes.		
		Mariam Khatoon: I assess my students' understanding based on their responses. When students actively participate, learn through play, and answer my questions, I understand that they grasp the topics. In class, I also observe their facial expressions to gauge their comprehension.	I assess my students' understanding based on their responses, participation, and facial expressions.	Theme: formative assessment tools  Subtheme: Interactive Questioning
		Shahida Ahmed: I keep a close eye on their engagement during lessons and also set specific targets for each class. These targets are based on the learning outcomes outlined in our teacher's guide, which helps me track their progress.	I keep a close eye on their engagement during lessons, set specific targets for each class, and track their progress using a teacher's guide.	Theme: formative assessment tools  Subtheme: Group Work and Peer Learning, and Interactive Questioning
		Salma Khatun: I assess their understanding by asking questions. If they answer correctly and show interest in learning more, I consider that they have grasped the concepts.	I assess their understanding by asking questions and looking at their interest in learning more.	Subtheme: Interactive Questioning
2	What teaching and learning methods do you use in your class?	Sujan Chandra Shaha: In my class, we utilize both practical and virtual methods. We use practical materials to introduce the topic and help students visualize it. In a science class where we learned about how oxygen supports fire; I brought a candle to class. When students saw the candle, they became	Use a combination of practical and virtual methods	Theme: formative assessment tools  Subtheme: Practical materials

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		enthusiastic and were eager to learn about oxygen's role in combustion.		
		<p>Parimol Chandra Das: Well, we use materials and content, depending on the requirements. It varies based on what is needed for effective teaching.</p> <p>We guide the students separately and encourage interaction between those who understand the topic well and those who need extra help. Peer learning is valuable.</p>	Use materials and content depending on the requirements	<p>Theme: formative assessment tools</p> <p>Subtheme: Practical and Interactive materials, Group work and peer learning</p>
		Lubna Naznin: It depends on the subject. For example, in English, we use dialogue practice for speaking and reading aloud to improve pronunciation.	Use dialogue practice, reading aloud, and assignments	<p>Theme: formative assessment tools</p> <p>Subtheme: Interactive materials</p>
		Jahoratun: I use group work to promote socialization and life skills among students. For instance, we ask students to relate a story we've told to their own family context. This approach helps us gauge their understanding of the topic	Group work to promote socialization and life skills	<p>Theme: formative assessment tools</p> <p>Subtheme: Group Work and Peer Learning</p>
		Afroza Sultana: I employ several strategies to teach students in class. First, we introduce the topic with an interesting word or picture to draw students' attention. For example, in Bengali class, we show pictures related to the topic, like a picture of Begum Rokeya and her life and activities. Then we start reading the story and ask questions. After reading, I give them time to read first, and then we discuss.	Several strategies, including introducing the topic with an interesting word or picture, asking questions, and using practical materials	<p>Theme: formative assessment tools</p> <p>Subtheme: Pictures and Charts, and Practical Materials</p>

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		In science class, I use brainstorming with students and assess their previous knowledge. We add on to their existing knowledge and relate it to the topic. This method helps in better learning. I also use practical materials in science class. For example, we bring clay to class. Students observe the clay's color and texture. Without such observations, there is no scope for learning in science. Using materials like clay in class significantly enhances students' learning.		
		Salma Akhtar: I usually employ the question-and-answer method in class. I avoid the lecture method as it doesn't facilitate deep understanding; students tend to memorize instead of comprehending. When I ask questions, students are motivated to provide answers, which, in my view, constitutes genuine learning. We learn interactively, and that's when real learning happens.	I use the question-and-answer method to encourage deep understanding.	Theme: formative assessment tools  Subtheme: Interactive questioning
		Tania Akhtar: Yes, I use various techniques, such as group work and individual assignments, among others. We also incorporate practical examples, like using sticks for counting in math or bringing fruits and vegetables for science lessons.	I use various techniques, including group work and individual assignments.	Theme: formative assessment tools  Subtheme: Group Work and Peer Learning, Practical Materials
		Fatima Akhtar: Yes, I do. I use specific teaching strategies for different subjects. For example, in science class, we begin with observations and relate the concepts to real-life situations. We encourage students to connect what they	I use different strategies, relate concepts to real life	Theme: formative assessment tools  Subtheme: Practical Materials and Interactive Materials
		Ruhi Salma: Our approach to teaching is student-centric and adaptable to students' diverse backgrounds and demands. Our primary goal is to ensure that all students understand the topic thoroughly. We use various methods, including group work, individual work, rhythm-based activities, and question-answer sessions, to achieve this goal. The main objective is to attain the desired learning outcomes.	Our teaching approach is student-centric and adaptable, using various methods to achieve desired learning outcomes.	Theme: formative assessment tools  Subtheme: Group Work and Peer Learning, Interactive Questioning

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		<p>Mariam Khatoon: I employ various methods depending on the subject. For instance, in English classes, I use a sound system with a soundbox to project my voice clearly and engage students. The soundbox is appealing to children. Additionally, I use multimedia tools to make the lessons more interactive. Multimedia is particularly effective as it captures students' attention and enhances their learning experience. I encourage face-to-face conversations during conversational topics.</p>	<p>I use various methods depending on the subject, including a sound system for clarity and multimedia tools for interactivity.</p>	<p>Theme: formative assessment tools</p> <p>Subtheme: Multimedia, and Interactive Materials, Group Work and Peer Learning</p>
		<p>Shahida Ahmed: To engage students, I use various techniques. I make use of attractive teaching materials, word cards and encourage group work, which helps maintain discipline. Additionally, we actively involve students by having them write on the blackboard and introduce themselves in English, which boosts their confidence and attentiveness.</p> <p>For instance, when teaching about birthdays, we use related pictures and sometimes even arrange birthday celebrations in class. We also use practical materials like word cards and wall clocks for specific subjects. At times, we create our own drawings to explain concepts.</p>	<p>I use attractive teaching materials, word cards, group work, and active student involvement to maintain discipline and boost confidence.</p>	<p>Theme: formative assessment tools</p> <p>Subtheme: Practical Materials, Group Work and Peer Learning</p>
		<p>Salma Khatun: We usually use the question-and-answer method. However, in mathematics, we utilize symbols and gradually help students understand the concepts.</p>	<p>I use question and answer, symbols in math</p>	<p>Theme: formative assessment tools</p> <p>Subtheme: Interactive Questioning</p>
3	<p>What do you do when some students don't understand a topic?</p>	<p>Sujan Chandra Shaha: When students struggle with a topic, I provide extra support. I also encourage interaction among students, pairing those who understand with those who need help. This way, weaker students can learn from their peers.</p>	<p>I provide extra support and encourage interaction</p>	<p>Theme: Teachers' perspectives on formative assessment tools</p> <p>Subtheme: Methods for</p>

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
				gauging student understanding
		Parimol Chandra Das: In such cases, we guide the students separately and also encourage interaction between those who understand the topic well and those who need extra help. Peer learning is valuable.	I guide students separately and promote peer learning	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Methods for gauging student understanding
		Lubna Naznin: If they don't understand, we retake the lesson, give assignments, and provide extra support.	I retake lesson, give assignments, and provide more support	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Continuous assessment
		Jahoratun: In such cases, we identify those students and engage them in discussions and practice on the board. We also assign homework and assess their progress through class assessments. We dedicate time to help weaker students grasp the basic concepts, and we investigate why some students may not be learning effectively.	We identify weaker students and provide extra support through discussions, practice, homework, and assessments.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Continuous assessment
		Afroza Sultana: When students don't understand, we repeat the topic to make sure they understand. We also encourage interaction among students, including those who already understand the topic, so they can learn from their peers. Peer learning is effective for those who initially struggled to understand.	We repeat topics, encourage peer learning, and use peer learning effectively.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Methods for

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
				gauging student understanding
		Salma Akhtar: In such cases, I repeat the lesson for those students. I like to confirm that a student has grasped my lesson by evaluating their responses. Additionally, I encourage interaction between students, particularly with those who have a strong understanding of the lessons. Peer learning is also beneficial.	I repeat lessons for struggling students, evaluate their responses, and encourage peer learning.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Methods for gauging student understanding
		Tania Akhtar: When I notice that some students are struggling to understand a topic, I provide extra assistance to help clarify the material. I also mix students who understand the topic with those who do not to facilitate peer learning.	I provide extra assistance, mix students, and facilitate peer learning.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Methods for gauging student understanding
		Fatima Akhtar: When a student cannot grasp a topic and he is not attentive in class, we mix them with peers who understand the topic. This allows them to discuss and learn from their classmates, which is an effective approach. Additionally, I sit with individual students to clarify the topic for them. We overcome learning barriers by providing extra time and attention to those who need it.	We mix struggling students with peers who understand, sit with them individually, and provide extra time and attention.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Methods for gauging student understanding

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		<p>Ruhi Salma: I have two methods to determine whether a student understands the topic or not. Firstly, I ensure that the student genuinely does not understand by monitoring their attentiveness during my lecture and asking them questions. If a student still struggles, I ask them to stand up and read the topic themselves. After reading, I ask them questions, and if they answer correctly, I am assured of their understanding. Sometimes, students may feel shy and nod their heads, indicating understanding when they do not comprehend. In such cases, I make extra efforts to help them grasp the topic. Another method I use is homework. If a student completes and submits their homework, I check it for mistakes and provide feedback. If a student struggles with individual tasks or makes errors, I adjust my teaching approach accordingly. By using group work, individual work, and instant feedback within the class, we aim to ensure that all students understand the topics.</p>	<p>I monitor attentiveness, ask questions, check homework, adjust teaching approach, and use group work, individual work, and instant feedback.</p>	<p>Theme: Teachers' perspectives on formative assessment tools</p> <p>Subtheme: Continuous Assessment</p>
		<p>Mariam Khatoon: We have instructions for supporting weaker students, and this applies to all classes. Beforehand, we conduct a baseline survey to categorize students into Groups A, B, and C based on their understanding. We offer separate classes for weaker students in a different building, without charging any tuition fees. We start teaching from the basics, even covering Bengali letters. We ask weaker students to sit in the front rows, allowing teachers to pay more attention to them. We not only teach but also assess their handwriting and classwork to ensure comprehension. ensure that all students understand the topics.</p>	<p>We support weaker students, conduct a baseline survey, offer separate classes, start with basics, ask weaker students to sit in front, and assess handwriting and classwork.</p>	<p>Theme: Teachers' perspectives on formative assessment tools</p> <p>Subtheme: Continuous Assessment</p>
		<p>Shahida Ahmed: We pay close attention to their expressions and body language. If we notice a student struggling, we encourage them to come to the blackboard and assist them in overcoming their shyness. This approach helps even the weaker students gain confidence and understanding.</p>	<p>We pay close attention to expressions and body language, encourage students to come to the blackboard, and help them overcome shyness.</p>	<p>Theme: Teachers' perspectives on formative assessment tools</p> <p>Subtheme: Methods for gauging student understanding</p>



SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Salma Khatun: We conduct a baseline assessment at the beginning of the year and categorize students into weak and strong groups. If some students lag behind, we provide extra support.	We conduct a baseline assessment, categorize students, and provide extra support.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Methods for gauging student understanding
4	Could you tell us more about this new curriculum?	Sujan Chandra Shaha: Certainly. The new curriculum rollout has begun with Class 1, and it will gradually extend to Class 2, 3, 4, and 5. I support this modernization as it helps us keep pace with technology and global changes.	I support the new curriculum as it helps us keep pace with technology and global changes.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and adaptation to new curriculum
		Parimol Chandra Das: It's currently being implemented in Class 1 and will continue to Class 2, 3, 4, and 5	New curriculum in Class 1, expanding to Class 2-5.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and adaptation to new curriculum
		Lubna Naznin: We will receive online training on the new curriculum.	Online training for new curriculum.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and adaptation to new curriculum
		Jahoratun: The new curriculum emphasizes creativity and replaces	New curriculum emphasizes creativity	Theme: Teachers' perspectives on

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		summative assessments with a continuous assessment method.	and continuous assessment.	formative assessment tools  Subtheme:  Challenges and adaptation to new curriculum
		Afroza Sultana: We received some online training about the new curriculum, but we haven't read the new books yet.	We received some online training and haven't read the new books.	Theme: Teachers' perspectives on formative assessment tools  Subtheme:  Challenges and adaptation to new curriculum
		Salma Akhtar: Continuous assessment involves daily learning and evaluation over consecutive days.	Continuous assessment involves daily learning and evaluation.	Theme: Teachers' perspectives on formative assessment tools  Subtheme:  Continuous assessment
		Tania Akhtar: We are currently learning about the new method, which was introduced starting in Class 1. It includes new pictures, plots, and rhymes.	Learning about new method with new pictures, plots, and rhymes.	Theme: Teachers' perspectives on formative assessment tools  Subtheme:  Benefits of formative assessment
		Fatima Akhtar: Yes, I am aware of the new assessment methods. While it doesn't apply to my class (it applies in class one), I know about the new formative or systematic assessment method. It emphasizes continuous assessment and records of what students learn. We now assess students after	Aware of new formative assessment method, emphasizing continuous assessment and records.	Theme: Teachers' perspectives on formative assessment tools

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		completing each chapter, which helps us understand their learning progress better.		Subtheme: Benefits of formative assessment
		Ruhi Salma: In the new curriculum, formative assessment involves taking a written test after completing each chapter. For example, if I finish teaching a science chapter, I administer a 20-mark test to ensure that students understand the topic clearly. These marks are added to the final exam scores. However, not all chapters' scores are added; only scores from five selected chapters are included in the final assessment. The selection of these chapters is determined by the curriculum guidelines.	Formative assessment involves written tests after each chapter.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Mariam Khatoon: In the new method, there are no exams. Instead, we follow guidelines and maintain detailed records. We receive evaluation papers and guidelines to plan how students will learn each of the 40 lessons. If some students struggle, we mark them and provide extra support. The method focuses on continuous evaluation and keeping records. It requires training for all teachers because it doesn't involve traditional exams. Without exams, it's important to understand how students will be evaluated.	In the new method, there are no exams. Instead, we follow guidelines and maintain detailed records. We focus on continuous evaluation and keeping records.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Shahida Ahmed: The new curriculum introduces continuous assessment, a significant departure from the previous grading system.	New curriculum introduces continuous assessment.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Continuous Assessment
		Salma Khatun: Certainly. I teach Bengali, focusing on listening, speaking, reading, and writing. In this new method, there are no exams; instead, we emphasize practical learning. We gauge whether students understand the topic, and we do this every day.	I teach Bengali and emphasize practical learning.	Theme: Teachers' perspectives on formative assessment tools

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
				Subtheme: Benefits of formative assessment
5	What are your thoughts on the new assessment system introduced with this curriculum?	Sujan Chandra Shaha: I believe the shift to a formative assessment system is positive. Unlike the traditional summative assessment system, formative assessment is real-time learning. Students relate what they learn to practical or real-life situations. It involves more frequent testing after each chapter, offering a better understanding of students' progress.	Formative assessment provides real-time learning and better understanding.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Parimol Chandra Das: I believe practical or hands-on learning is essential because it helps students learn better and retain their knowledge for longer periods	Practical learning helps students learn better and retain knowledge.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Lubna Naznin: In this new curriculum, the assessment system has changed from summative to formative assessment. We assess students' learning after every chapter rather than waiting for the end of the entire book.	We assess students' learning after every chapter in the new curriculum.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Jahoratun: Students now take exams after each lesson. They also learn how to fill out forms, which contributes to their mental development.	Students now take exams after each lesson and learn how to fill out forms.	Theme: Teachers' perspectives on formative assessment tools

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
				Subtheme: Benefits of formative assessment
		Afroza Sultana: The new curriculum emphasizes practical observation in the science class, focusing on hands-on training for students. We need to assess hands-on, practical aspects, and this is emphasized more in the new curriculum.	The new curriculum emphasizes practical observation and hands-on training.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Salma Akhtar: This approach allows me to identify students' learning gaps promptly and take necessary actions. It's crucial because it helps pinpoint students who struggle with specific lessons. Without regular chapter-based exams, we cannot understand these learning gaps.	Regular chapter-based exams help identify students' learning gaps promptly.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Tania Akhtar: We use a systematic evaluation approach. After each chapter, students undergo an exam to ensure their understanding. This systematic evaluation continues throughout the curriculum. It allows us to understand the students' learning progress effectively.	We use a systematic evaluation approach with exams after each chapter.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Fatima Akhtar: We have shifted our focus to it under the new curriculum. While class one doesn't have a formative assessment system, it offers immediate feedback after each chapter. This is beneficial for both teachers and students as it allows for timely corrections and improved learning.	We have shifted our focus to formative assessment with immediate feedback.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
				formative assessment
		Ruhi Salma: In the new curriculum, formative assessment involves taking a written test after completing each chapter. For example, if I finish teaching a science chapter, I administer a 20-mark test to ensure that students understand the topic clearly. These marks are added to the final exam scores. However, not all chapters' scores are added; only scores from five selected chapters are included in the final assessment. The selection of these chapters is determined by the curriculum guidelines.	Formative assessment involves taking a written test after each chapter. These marks are added to the final exam scores, but only scores from five selected chapters are include	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Mariam Khatoon: The systematic evaluation or continuous evaluation method is beneficial, but students are accustomed to the old way of evaluation, which they prefer. The absence of exams might make some students less attentive, and parents are generally more responsive to traditional exams.	Continuous evaluation is beneficial, but students prefer the old way and might be less attentive without exams.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and adaptation to new curriculum
		Shahida Ahmed: I prefer it because it provides individual feedback to each student, which was lacking in the previous group assessment system. However, we still need more training to fully implement it.	I prefer individual feedback, but more training is needed to fully implement it.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and adaptation to new curriculum
		Salma Khatun: Yes, I like this method. It helps students learn better and reduces the traditional pressures of learning. We adapt teaching to each student's capacity, making learning enjoyable.	I like the method because it helps students learn better and reduces stress. We adapt teaching to each student.	Theme: Teachers' perspectives on formative assessment tools

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
				Subtheme: Benefits of formative assessment
6	How have you adapted to this transition?	Sujan Chandra Shaha: We are gradually transitioning from summative to formative assessment. With formative assessment, students stay more engaged as they have to be attentive daily, not just during annual exams.	Students stay more engaged with formative assessment.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Parimol Chandra Das: We are transitioning to this new curriculum gradually.	The implementation is gradual.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Fatima Akhtar: We are currently in a transitional phase. While class one follows summative assessment, we have introduced formative assessment alongside summative assessment in class two. We anticipate a full transition to formative assessment in the future.	We are in a transitional phase.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and adaptation to new curriculum
7	Do you think students benefit from this shift?	Sujan Chandra Shaha: Yes. In the new system, students experience less examination pressure and more of a learner-centric environment. They interact with peers, receive teacher feedback, and enjoy learning without the fear of exams.	Students experience less pressure and enjoy learning without exams.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
				formative assessment
		Lubna Naznin: Yes, it benefits both students and teachers, helping with teacher-student interaction.	The new system benefits both students and teachers.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Afroza Sultana: In this approach, students learn through practical, hands-on experience. They engage with materials by touching, observing, and learning directly from them.	Students learn through practical experience, engaging with materials.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
8	Do you prefer this new method?	Afroza Sultana: Yes, Initially, it was a summative assessment, but now it's a formative, constructive assessment. We need to assess every subject, every chapter, and every lesson. This approach emphasizes continuous assessment rather than relying solely on one-time exams.	It's now a formative assessment, emphasizing continuous assessment.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Continuous Assessment
		Salma Akhtar: Yes, I favor this new curriculum and assessment method. Unlike the summative assessment system, where students wait for six months or a year for an exam, the new method compels them to engage with real questions daily. This keeps them on their toes, and they study at home. Peer pressure also plays a role, as students realize that others have already mastered the topic.	I favor the new curriculum because it encourages daily engagement.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment



SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Tania Akhtar: Yes, I do. It allows us to understand the students' learning progress effectively.	Formative assessment allows us to understand students' progress effectively.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Fatima Akhtar: Yes, I like the formative assessment system. We have shifted our focus to it under the new curriculum. While class one doesn't have a formative assessment system, it offers immediate feedback after each chapter. This is beneficial for both teachers and students as it allows for timely corrections and improved learning.	I like the formative assessment system, which provides immediate feedback.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Ruhi Salma: Yes, I appreciate the formative assessment method because it allows me to gauge how well students have grasped the topics after each chapter. It provides valuable insights into their understanding and helps identify areas where they may need more support.	The formative assessment method allows me to gauge students' understanding.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Methods for gauging student understanding
		Mariam Khatoon: The systematic evaluation or continuous evaluation method is beneficial, but students are accustomed to the old way of evaluation, which they prefer. The absence of exams might make some students less attentive, and parents are generally more responsive to traditional exams.	The continuous evaluation method is beneficial, but students prefer the old way.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and adaptation to new curriculum

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Shahida Ahmed: The continuous assessment system in the new curriculum is crucial for fostering deep and lasting learning. However, adapting to it is challenging, especially in schools with a large number of students. The cost of implementing continuous assessment can also be a challenge.	Continuous assessment is crucial but challenging to implement.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and Adaptation to New Curriculum
		Salma Khatun: Yes, I like this method. It helps students learn better and reduces the traditional pressures of learning. We adapt teaching to each student's capacity, making learning enjoyable.	I like this method because it reduces stress and adapts to each student.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
9	Why do you believe formative assessment is important?	Sujan Chandra Shaha: Formative assessment fosters deep, durable learning. It allows students to apply their learning in real-life situations, which wasn't possible in the traditional exam-based system. It's more practical and applicable.	Formative assessment fosters deep, durable learning. It's more practical and applicable.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Parimol Chandra Das: Yes, I do. It shifts away from the traditional examination system, allowing us to assess students more frequently after each chapter. This reduces the learning pressure on students and encourages a deeper understanding of the subjects.	Formative assessment shifts away from traditional exams and encourages a deeper understanding.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Jahoratun: The new curriculum focuses on practicality and creativity rather than rote memorization. We aim to create context around each lesson to help students understand topics more precisely. Group work, individual work, and reflection activities play a significant role in this.	The new curriculum focuses on practicality and creativity, using group work, individual work, and reflection activities.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Afroza Sultana: This method is crucial for learning. It allows students to actively engage with the subject matter, fostering a deeper understanding and retention of knowledge.	Active engagement leads to deeper understanding and retention.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Tania Akhtar: It is important because it helps students understand topics in detail. We implement this method by ensuring that students start a new topic after finishing the previous one, creating a linkage. Assessing each chapter is crucial to ensure that students grasp all the consecutive chapters.	It helps students understand topics in detail and ensures they grasp all concepts.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Ruhi Salma: Formative assessment is essential for assessing students' understanding after each chapter. However, it may take time for some students, especially those not accustomed to frequent testing or who faced disruptions due to events like the COVID-19 pandemic, to adapt to this assessment method. Nevertheless, it helps students become familiar with the exam format and questions, contributing to their overall improvement.	It helps students become familiar with the exam format and contributes to their overall improvement.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Salma Akhter: This method is important because it serves the purpose of learning and reduces the pressure on students. It emphasizes the mental development of young students.	It reduces pressure and emphasizes mental development.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
10	What teaching and learning tools do you use in your class?	Sujan Chandra Shaha: We utilize various materials aligned with our lessons.	Sujan Chandra Shaha: We utilize various materials aligned with our lessons.	Theme: Formative assessment tools  Subtheme: Interactive Materials, Group Work and Peer Learning
		Parimol Chandra Das: We use assessment tools like group work, individual work, and question-answer sessions.	We use group work, individual work, and question-answer sessions.	Theme: Formative assessment tools  Subtheme: Group Work and Peer Learning, Interactive Questioning
		Lubna Naznin: I use charts, pictures, real-life examples, objects, and role-play.	I use charts, pictures, real-life examples, objects, and role-play.	Theme: Formative assessment tools  Subtheme: Pictures and Charts, Practical Materials, Role-Play
		Jahoratun: We use various tools, including pictures and charts, to engage students.	We use various tools, including pictures and charts, to engage students.	Theme: Formative assessment tools  Subtheme: Pictures and Charts

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Afroza Sultana: We bring materials based on the lessons. We also teach through multimedia.	We bring materials based on the lessons and teach through multimedia.	Theme: Formative assessment tools  Subtheme: Practical Materials Multimedia
		Salma Akhtar: We use multimedia tools, prepare lessons, and use appropriate tools based on the lessons and topics. We also incorporate small questions to test students' learning outcomes.	Utilizes multimedia & quizzes for learning assessment.	Theme: Formative assessment tools  Subtheme: Practical Materials Multimedia, Interactive Questioning
		Tania Akhtar: I use various tools, including pictures, charts, paper, and multimedia materials.	I use pictures, charts, paper, and multimedia.	Theme: Formative assessment tools  Subtheme: Pictures and Charts, Practical Materials Multimedia
		Fatima Akhtar: I use various teaching materials, such as graphical posters and items from the school's environment. These materials engage students and draw their attention. I try to use them frequently for effective teaching,	I use posters and items from the school environment to engage students.	Theme: Formative assessment tools  Subtheme: Pictures and Charts
		Ruhi Salma: Yes, we use various learning materials and tools in our classroom teaching.	We use various learning materials and tools in our classroom teaching.	Theme: Formative assessment tools  Subtheme: Practical Materials and Interactive Materials

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Mariam Khatoon: I utilize various learning materials, including poster paper with large fonts and pictures drawn in advance. These days, we also make use of multimedia. Multimedia is particularly effective as it captures students' attention and enhances their learning experience.	I use poster paper, pictures, and multimedia to capture students' attention and enhance their learning experience.	Theme: Formative assessment tools  Subtheme: Pictures and Charts, Multimedia
		Shahida Ahmed: Yes, we use various teaching tools based on the topic we're covering.	We use various teaching tools based on the topic.	Theme: Formative assessment tools  Subtheme: Interactive Materials
		Salma Khatun: We use materials and tools according to the lesson plan and topic.	We use materials and tools according to the lesson plan and topic.	Theme: Formative assessment tools  Subtheme: Interactive Materials
11	Can you provide some examples of these tools?	Sujan Chandra Shaha: Certainly. For instance, in a science class about water pollution, we use drawings and questions to illustrate the water pollution process. We also show polluted water to help students understand the source of pollution.	We use drawings, questions, and polluted water to illustrate water pollution.	Theme: Formative assessment tools  Subtheme: Pictures and Charts, Practical Materials, Interactive Questioning,
		Afroza Sultana: For instance, in our science class when we measure weight, we bring balloons. In physics, we bring materials like a Claire-rectangle, water for measurement, and glass. We also use sugar for making solutions, emphasizing real-life materials for rapid learning and to reinforce lesson. For example, when teaching about a balanced diet, we utilize charts, real food, vegetables, and so on. We also teach through multimedia. It helps us. It is to speed up the learning. It is attractive to students. And it draws attention to students.	We use real-life materials and multimedia to reinforce lessons and make learning faster and more attractive.	Theme: Formative assessment tools  Subtheme: Practical Materials Multimedia

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Tania Akhtar: Multimedia is a daily part of our lessons, along with posters, chart paper, and pictures from textbooks. We also incorporate practical examples, like using sticks for counting in math or bringing fruits and vegetables for science lessons.	Multimedia, posters, chart paper, pictures from textbooks, and practical examples are a daily part of our lessons.	Theme: Formative assessment tools  Subtheme: Pictures and Charts, Practical Materials Multimedia Practical Examples
		Ruhi Salma: For instance, in science classes, we employ experimental items like balloons to conduct experiments that demonstrate scientific concepts, such as the presence of air. We encourage students to bring these materials and also organize science fairs to stimulate their interest in the subject.	We use experimental items, organize science fairs, and encourage students to bring materials.	Theme: Formative assessment tools  Subtheme: Practical Materials and Interactive Materials
		Shahida Ahmed: Certainly. For instance, when teaching about birthdays, we use related pictures and sometimes even arrange birthday celebrations in class. We also use practical materials like word cards and wall clocks for specific subjects. At times, we create our own drawings to explain concepts.	We use related pictures, arrange birthday celebrations, use word cards, wall clocks, and create our own drawings.	Theme: Formative assessment tools  Subtheme: Pictures and Charts, Practical Materials Interactive Materials, Practical Examples
		Salma Akhter: For example, in mathematics class, for the lesson on number processes, we use different symbols and write numbers on paper.	We use different symbols and write numbers on paper.	Theme: Formative assessment tools  Subtheme: Interactive Materials
12	How frequently do you use these teaching and learning tools?	Sujan Chandra Shaha: I use them regularly in every class because they are effective in conveying new concepts to students.	I use them regularly in every class because they are effective.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Use of teaching and learning tools

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Parimol Chandra Das: I use these tools in every class, every day, and more frequently to aid student learning.	I use them in every class, every day, and more frequently.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Use of teaching and learning tools
		Lubna Naznin: I use them frequently to help students understand complex topics.	I use them frequently to help students understand complex topics.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Use of teaching and learning tools
		Jahoratun: I use them regularly to assess students' existing knowledge, their ability to relate lessons to practical life, and to maintain their interest and attentiveness	I use them regularly to assess students' knowledge, relate lessons to practical life, and maintain their interest.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Use of teaching and learning tools
		Afroza Sultana: In our school we regularly use learning tools for each class.	We regularly use learning tools for each class.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Use of teaching and learning tools
		Salma Akhtar: We use teaching and learning tools frequently.	We use teaching and learning tools frequently.	Theme: Teachers' perspectives on formative assessment tools



SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
				Subtheme: Use of teaching and learning tools
		Tania Akhtar: I use them regularly.	I use them regularly.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Use of teaching and learning tools
		Mariam Khatoon: I use multimedia more frequently. The main reason for using multimedia is its convenience. It saves time, especially when I'm busy with administrative tasks. Students also find multimedia more engaging, which contributes to better learning outcomes.	Use multimedia frequently for convenience, better engagement, and learning outcomes.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Use of teaching and learning tools
		Shahida Ahmed: We use them regularly, aligning them with our lesson plans. They're effective in capturing students' attention and improving the educational outcome	Use tools regularly to capture attention and improve learning outcomes.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Use of teaching and learning tools
		Salma Khatun: We use tools as needed, and some tools are used daily. They help students stay attentive and concentrated, improving their learning.	We use tools as needed or daily to enhance student attention and learning.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Use of teaching and learning tools
13	How do these tools enhance student learning?	Sujan Chandra Shaha: These tools capture students' attention and encourage active participation. They promote critical thinking and reduce the need for memorization.	Use tools to capture attention, encourage active participation, and reduce memorization.	Theme: Teachers' perspectives on formative assessment tools

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
				Subtheme: Benefits of formative assessment
		Parimol Chandra Das: These tools are effective in capturing students' interest and engagement. They encourage active participation and enhance the learning experience.	Use tools to capture interest, encourage participation, and enhance learning.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Lubna Naznin: Tools help students learn more easily by relating lessons to their real lives, reducing the need for memorization.	Use tools to help students learn more easily and reduce memorization.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Jahoratun: Tools make learning more enjoyable and interactive for students. They become more attentive and motivated when we use these tools, which ultimately enhances their learning outcomes.	Use tools to make learning more enjoyable and interactive, leading to better learning outcomes.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Afroza Sultana: Tools help to make understanding complex concepts easier. Multimedia helps students to speed up learning. It is attractive to students, and it draws attention to students.	Use tools to make understanding easier, speed up learning, and attract students' attention.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Salma Akhter: Tools enhance students' learning and make the lessons more attractive. They help students remember the topics more easily, making their learning more permanent and deeper.	Use tools to enhance learning, make lessons more attractive, and improve memory retention.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Tania Akhtar: These tools are very helpful. They capture students' attention and make complex topics easier to understand. For example, during a math class, we use sticks for counting, and in our science class, we bring in vegetables and fruits for practical demonstrations. These tools engage students and make learning more effective.	Use tools to capture attention, make complex topics easier, and engage students for more effective learning.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Fatima Akhtar: Classroom tools are essential in making complex topics easier to understand. For example, in a science class, when discussing renewable and non-renewable energy, we use pictures and examples to help students visualize these concepts. Maps, pictures, and practical materials enhance their learning experience.	Classroom tools visualize complex topics, enhancing learning.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Mariam Khatoon: Learning tools have significantly improved the learning environment in my class. Students respond positively, and their academic performance has improved. For instance, I've seen a notable improvement in a student's reading skills due to the use of learning tools and follow-up	Learning tools improve the learning environment, academic performance, and reading skills.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
		Shahida Ahmed: They help students learn and retain information better.	Tools help students learn and retain information better.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of formative assessment
14	Do you create these pictures yourself?	Fatima Akhtar: Yes, we do prepare these materials ourselves. It saves us from the effort of explaining complex topics extensively. Preparing visuals in advance and showing them in class significantly eases the understanding of various topics for our students. It reduces my workload by 50% in the classroom.	Fatima Akhtar: Preparing visual materials in advance significantly eases students' understanding and reduces workload.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Use of Teaching and Learning Tools
		Mariam Khatoon: Yes, we create most of the learning materials ourselves. We follow guidelines provided by the government and tailor our lessons accordingly. This ensures that we cover the required topics within the specified time frame.	We create most of the learning materials ourselves, following government guidelines.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Use of Teaching and Learning Tools
		Salma Khatun: When students see materials in front of them, it piques their interest and draws their attention, which enhances their learning.	Materials pique students' interest and enhance their learning.	Theme: Teachers' perspectives on formative assessment tools

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
				Subtheme: Use of Teaching and Learning Tools
15	Do you believe every teacher should use these tools?	Sujan Chandra Shaha: Yes, I think every teacher should employ these tools because they significantly improve students' understanding and make learning more engaging.	Every teacher should employ tools to improve understanding and engagement.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of teaching tools
		Parimol Chandra Das: Yes, I think every teacher should utilize these tools as they significantly aid students' understanding and contribute to effective learning.	Every teacher should utilize tools to aid understanding and effective learning.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of teaching tools
		Lubna Naznin: Yes, it helps teachers cover more content within a shorter time. Tools make lessons more engaging and help students become more attentive.	Tools help teachers cover more content, make lessons more engaging, and improve student attentiveness.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of teaching tools
		Afroza Sultana: Yes, these tools assist us to explain the lessons easily in the classes. They are easy to arrange for every class and lesson, and they contribute to better learning outcomes.	Tools assist in explaining lessons easily, are easy to arrange, and contribute to better learning outcomes.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of teaching tools

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Salma Akhter: Yes, I do. We use multimedia tools, prepare lessons, and use appropriate tools based on the lessons and topics. We also incorporate small questions to test students' learning outcomes. We use teaching and learning tools frequently.	We use various tools frequently to test students' learning outcomes.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of teaching tools
		Tania Akhtar: Of course, using tools is more effective than just delivering lectures. I find that students learn more clearly and easily when we incorporate tools into our teaching methods.	Using tools is more effective than just delivering lectures and makes learning clearer and easier.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of teaching tools
		Shahida Ahmed: Absolutely. They make it easier for us teachers to deliver lessons effectively, especially when we need to demonstrate concepts physically.	Tools make it easier for teachers to deliver lessons effectively, especially when demonstrating concepts physically.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of teaching tools
		Salma Khatun: Using tools requires less effort from teachers. They make learning easier to understand, which speeds up the learning process. It also helps maintain students' attention.	Using tools requires less effort from teachers, makes learning easier to understand, speeds up the learning process, and maintains students' attention.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of teaching tools
16	Can you share an example of when these tools were particularly effective in your class?	Sujan Chandra Shaha: Certainly. In a science class where we learned about how oxygen supports fire; I brought a candle to class. When students saw the candle, they became enthusiastic and were eager to learn about oxygen's role in combustion.	Bringing real-life objects to class makes students enthusiastic and eager to learn.	Theme: Formative assessment tools  Subtheme: Practical Materials, Practical Examples

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Jahoratun: Digital devices have certainly accelerated the learning process. They are more engaging for students and make lessons more interactive. Multimedia and digital boards have made teaching more efficient and effective.	Digital devices have accelerated the learning process and made lessons more engaging and interactive.	Theme: Formative assessment tools  Subtheme: Multimedia, and Interactive Materials
		Afroza Sultana: In some geographical places, we use multimedia, for example, Paharpur. Multimedia helps us show pictures in a larger size, allowing students to better understand and remember topics. Multimedia is more useful than simple pictures because we can zoom in and out.	Multimedia helps us show pictures in a larger size, allowing students to better understand and remember topics.	Theme: Formative assessment tools  Subtheme: Multimedia, Practical Examples
		Salma Akhtar: Certainly. Using tools in the class makes students engage with the lessons and piques their interest. Some students complete their lessons in the class, and we engage in small discussions. We then provide feedback based on their level of understanding. We review previous lessons and ask questions from previous lessons.	Using tools in the class makes students engage with the lessons, piques their interest, and facilitates discussions and feedback.	Theme: Formative assessment tools  Subtheme: Interactive Materials, Interactive Questioning
17	What do you like about using these tools?	Lubna Naznin: I like using these tools because they are helpful for both students and teachers. They simplify complex topics and connect learning to real-life objects and situations.	Using tools is helpful for both students and teachers, simplifying complex topics and connecting learning to real-life objects and situations.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of teaching tools
		Salma Akhtar: Using tools is essential because they contribute to deep learning. In the past, tools weren't used extensively, but nowadays, tools are making learning more durable and easier for students.	Salma Akhtar: Using tools is essential because they contribute to deep learning and make learning more durable and easier for students.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of teaching tools

SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
		Salma Khatun: Yes, I do. I like this method because it yields better results, improves students' learning outcomes, and fosters lasting learning.	The new method yields better results and fosters lasting learning.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Benefits of teaching tools
18	Is there a teaching tool you dislike or cannot use?	Sujan Chandra Shaha: In some cases, it's challenging to bring real-life situations into the classroom. In such instances, we rely on virtual tools like pictures to convey concepts.	We use virtual tools to convey concepts when real-life situations are not possible.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and Adaptation to New Curriculum
		Afroza sultana: We can use learning tools for all learning contents of our textbooks. When we can't use learning tools, we use multimedia. In some geographical places, we use multimedia, for example, Paharpur. Multimedia helps us show pictures in a larger size, allowing students to better understand and remember topics. Multimedia is more useful than simple pictures because we can zoom in and out.	We use learning tools for all learning contents in textbooks. Multimedia helps students understand and remember topics better.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Methods for gauging student understanding  Teaching Methods and Tools, Challenges and Concerns
		Tania Akhtar: Our choice of tools is always related to our lessons. We select tools based on the specific topics we're teaching. We avoid bringing unnecessary tools into the class.	We select tools based on the specific topics we're teaching.	Theme: Teachers' perspectives on formative assessment tools  Subtheme:



SL	Interview questions	Respondent Answers	Extracted Code	Theme/ Subtheme
				Teaching Methods and Tools
		Shahida Ahmed: Not really. We choose tools based on our lesson plans, so they all have their purpose. However, sometimes there might be limitations in the availability of certain materials.	We choose tools based on our lesson plans, but sometimes there are limitations in availability.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Teaching Methods and Tools
19	Do you have any final thoughts on the new evaluation method?	Afroza Sultana: In many schools, contemporary tools like multimedia are not used. This deprives students of modern technology. Our school is different in this regard. However, class size is a significant factor. With 100 students in a class, it's challenging to provide individual attention, especially when some students come from low socioeconomic backgrounds and lack support at home. These students may fall behind in their studies.	Many schools don't use multimedia, depriving students of modern technology. Our school is different, but class size is a challenge.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and Concerns
		Mariam Khatoon: The systematic evaluation method has its merits, particularly in promoting continuous learning. However, adapting to this new curriculum will take time. The absence of traditional exams may require additional support to ensure students remain motivated to learn.	The systematic evaluation method has its merits, but adapting to it will take time.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and Concerns
		Shahida Ahmed: Yes, we've recently started using diaries to track each student's daily progress. It allows parents or guardians to monitor their child's academic activities and progress effectively.	We've recently started using diaries to track each student's daily progress.	Theme: Teachers' perspectives on formative assessment tools  Subtheme: Challenges and Concerns

## 2. Observations Codebook

<b>Observation Checklist</b>	CO-1 (Eng, G-IV) 13/06/23	CO-2 (Math, G-IV) 13/06/23	CO-3 (Sci., G-III) 13/06/23	CO-4 (Eng, G-III) 13/06/23	CO-5 (Math, G-IV) 13/06/23	CO-6 (Math, G-III) 20/06/23	CO-7 (Sci., G-V) 21/06/23
<b>a) Frequency of use of tools</b>							
1. During the class how often does a teacher use the formative assessment tool?	More frequently	More frequently	More frequently	More frequently	More frequently	Frequently	Frequently
2. Do the formative assessments take place at different times throughout the learning process such as beginning, middle or end of class?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. How frequently do students engage in formative assessment activities during the class?	More frequently	More Frequently	More Frequently	Frequently	More frequently	Frequently	Frequently
<b>b) Types of formative assessment tools</b>							
1. What type of formative assessment tools does a teacher use in the classroom?	Poster, role-play (waiter-customer), feedback	Poster, pen and papers, board work, feedback	Poster, pen and papers, group work, questioning, feedback	Multimedia, questioning	Multimedia, flash cards, questioning, real life examples	Marbles, board work, pen and papers, questioning, feedback	Bottle, book, real life examples involving students, questioning, feedback
2. Which tool is more responsive?	Role-play, questioning	Pen and papers, feedback	group work, questioning	Multimedia, questioning	Flesh cards, real life examples	board work, pen and papers, questioning	real life examples involving students, questioning,
3. Do the formative assessment tools align with the learning objectives and instructional strategies as written in the teacher's instructional guidebook?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>c) Implementation of tools</b>							

<b>Observation Checklist</b>	CO-1 (Eng, G-IV) 13/06/23	CO-2 (Math, G-IV) 13/06/23	CO-3 (Sci., G-III) 13/06/23	CO-4 (Eng, G-III) 13/06/23	CO-5 (Math, G-IV) 13/06/23	CO-6 (Math, G-III) 20/06/23	CO-7 (Sci., G-V) 21/06/23
1. How do teachers implement/execute the formative assessment tool such as using learning material, games, pen and papers?	Role-play, poster, pen-paper (students write their favorite food)	Poster, board work (few students do some math), pen paper (individual work)	Poster, group work, questioning, feedback (individual and group)	Multimedia, questioning	Flesh cards, Multimedia, questioning, group work	Board work (few students do some math), pen paper (individual work)	Games
2. Are students provided with clear instructions and expectations for participating in formative assessments?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. How effectively does the teacher implement formative assessment strategies?	Very effective, teacher explains in Bangla too	Very effective, teacher explains all the steps clearly by using poster and showing examples on the board	Very effective, Teacher explains the topics by using the poster, asks related questions and give real life examples	Sufficient, teacher repeats the activity, asks related questions	Very effective, teacher explains all the mathematical symbols with examples and real-life examples involving students	Sufficient, teacher repeats the activity, asks related questions,	Sufficient, teacher explains the topics by showing real-life examples and games
<b>d) Feedback</b>							
1. Do teachers provide any feedback to students?	Yes	Yes	Yes	Yes, but not so much	Yes	Yes	Yes
2. How does the teacher provide feedback to students based on formative assessments?	Oral feedback	Oral feedback	Oral feedback	Oral feedback	Oral feedback	Oral feedback	Oral feedback
3. Do you give your students the chance to use comments to enhance their performance or understanding?	Yes	Yes, frequently	Yes, frequently	Yes	Yes	Yes	Yes
4. Is the feedback specific, constructive, and personalized to individual student needs?	Yes	Yes	Yes	Not so much	Yes	Yes	Not so much

<b>Observation Checklist</b>	CO-1 (Eng, G-IV) 13/06/23	CO-2 (Math, G-IV) 13/06/23	CO-3 (Sci., G-III) 13/06/23	CO-4 (Eng, G-III) 13/06/23	CO-5 (Math, G-IV) 13/06/23	CO-6 (Math, G-III) 20/06/23	CO-7 (Sci., G-V) 21/06/23
<b>e) Student Involvement</b>							
1. How much of the formative assessment process are students participating in proactively?	Very enthusiastic	Very enthusiastic	Very enthusiastic	Students who seat front desks in three columns participate in proactively	Very enthusiastic	Students who seat front desks in three columns participate in proactively	Students who seat front desks in three columns participate in proactively
2. Who participate more (male students or female students, back bencher, or front bencher)?	All students eagerly joined the class activities	All students eagerly joined the class activities accept few back bencher	All students eagerly joined the class activities and group work	Front bencher	All students eagerly joined the class activities and group work	Front bencher	Front bencher
3. Do students have opportunities to reflect on their strengths, areas for improvement, and set goals based on formative assessments	Yes, students have opportunity express their interest, can change the pair, sometimes teacher make pairs	Yes, students have opportunity express their interest, learning by peer discussion	Yes, students have opportunity express their interest, learning by peer discussion, can answer the questions	Yes, students have opportunity express their interest, can answer the questions	Yes, students have opportunity express their interest, learning by peer discussion	Yes, students have opportunity express their interest, can answer the questions	Yes, students have opportunity express their interest, learning by peer discussion, can answer the questions

### 3 Focus Group Discussion Codebook

SL	FGD questions	Respondent Answers	Extracted Code	Theme/Research Questions
1	What are some of the challenges faced when implementing formative assessment tools in the classroom?	One challenge is a lack of materials. Teachers may not have enough materials to provide to all their students. Additionally, students may take materials home, which	Lack of adequate materials for all students, hindering hands-on learning opportunities	Theme: barriers to implementing formative assessment tools

SL	FGD questions	Respondent Answers	Extracted Code	Theme/Research Questions
		can lead to a shortage of materials in the classroom.		Subtheme: Student-related challenges
2	What are some of the challenges faced from the parents' perspective?	Parents may not be aware of the tools that are being used in the classroom. Additionally, parents may be concerned about the teaching methods that are being used, especially in subjects like English and Math.	Lack of awareness about the tools being used and their benefits.	Theme: barriers to implementing formative assessment tools  Subtheme: Parent-related challenges
3	What kind of technological support do teachers have access to?	Teachers have access to computers, projectors, and multimedia. This technology can be used to make teaching more engaging and effective. But they have lack of those technologies.	Limited access to technological tools such as computers, projectors, and multimedia	Theme: barriers to implementing formative assessment tools  Subtheme: Resource-related challenges
4	Have teachers received training on how to use formative assessment tools?	Yes, teachers have received many training sessions on how to use formative assessment tools. This training has helped teachers to effectively implement these tools in their classrooms. But online training is not enough for implementing new assessment.	Teachers trained well but need more than online for new assessments.	Theme: barriers to implementing formative assessment tools  Subtheme: School environment-related challenges
5	How do teachers seek help or support when they face problems using formative assessment tools?	Teachers can contact their sub-cluster union officer, inform their head teacher, or first inform their head teacher. Additionally, teachers can seek help from their colleagues. These bureaucratic chains make the process delayed.	Teachers report via heads teachers, union, or colleagues; bureaucracy causes delays.	Theme: barriers to implementing formative assessment tools  Subtheme: School environment-related challenges
6	Do teachers feel pressure to use formative assessment tools?	Yes, teachers do feel pressure to use formative assessment tools. Teachers are facing time pressure due to extended working hours and administrative duties. However, this pressure does	Teachers are facing time pressure due to extended working hours and administrative duties.	Theme: barriers to implementing formative assessment tools

SL	FGD questions	Respondent Answers	Extracted Code	Theme/Research Questions
		not hamper the use of tools in the classroom.		Subtheme: School environment-related challenges
7	Is class size a problem when implementing formative assessment tools?	Yes, class size can be a problem when implementing formative assessment tools. Teachers may have difficulty providing individualized attention to all of their students in a large class.	Large class sizes make it difficult to provide individualized attention and support.	Theme: barriers to implementing formative assessment tools  Subtheme: School environment-related challenges
8	Is the syllabus a problem when implementing formative assessment tools?	No, the syllabus is not a problem when implementing formative assessment tools. Teachers can adjust the annual plan based on the situation. However, teachers are facing time pressure due to extended working hours and administrative duties.	Teachers are facing time pressure due to extended working hours and administrative duties.	Theme: barriers to implementing formative assessment tools  Subtheme: School environment-related challenges
9	Do students depend on private tutoring?	Yes, to some extent, students depend on private tutoring. Low qualified guides or teachers (who are grade-5 or 6 passed) try to help their students covering all the lessons at school, it creates conflicts between teachers and private tutors as they follow different methods for teaching. It also creates a burden for schoolteacher to repeat the same lessons.	Conflict of schoolteacher and private tutor.	Theme: barriers to implementing formative assessment tools  Subtheme: School environment-related challenges
10	Do teachers conduct parent meetings?	Yes, teachers conduct parent meetings every month. During these meetings, they discuss the issue of private tutoring and food behavior with parents. Since breakfast is important to draw student's attention into the class lesson.	Teachers address tutoring, food behavior, and stress breakfast's importance in capturing students' attention during monthly parent meetings	Theme: barriers to implementing formative assessment tools  Subtheme: Parent-related challenges

<b>SL</b>	<b>FGD questions</b>	<b>Respondent Answers</b>	<b>Extracted Code</b>	<b>Theme/Research Questions</b>
11	Do parents ever express concerns about the teaching methods used?	Yes, parents sometimes express concerns about the teaching methods used, especially in subjects like English and math.	Parental concerns on teaching methods in English and math.	Theme: barriers to implementing formative assessment tools  Subtheme: Parent-related challenges
12	Are class test results included in the final exam?	Class test results are included in the final exam according to govt. decision. But it changes frequently as it is under pilot. So, parents do not pay good attention to formative assessment.	Govt. policy is not yet stable.	Theme: barriers to implementing formative assessment tools  Subtheme: Policy related challenges
13	Do teachers face any problems with parents misunderstanding their seating plan for students?	Sometimes teachers face problems with parents not understanding their seating plan for students. Teachers explain that they organize students based on height and sight.	Lack of awareness about the tools being used and their benefits.	Theme: barriers to implementing formative assessment tools  Subtheme: Parent-related challenges