

Doing Formative Assessment in Classrooms

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Introduction

A growing body of research evidence across the world shows that formative assessment is one of the most effective classroom strategies for improving student learning (Black & William, Inside the black box: Raising standards through classroom assessment, 1998). Classroom assessments can be educative when they are used not merely as instruments to judge student performance but also to measure students' learning levels for scaffolding and directing their subsequent learning. Such ongoing formative assessments that are seamlessly integrated with the teaching-learning process play a nurturing role in students' lives. Formative assessments also take away the undue stress and anxiety caused by high-stakes summative testing.

Ever since the term “formative assessment” was coined in 1967 by Michael Scriven, academicians have associated it with a specific kind of assessment that enables educators to evaluate the efficacy of their teaching methods by providing ongoing direction to the teaching-learning process (Black & William, 2005). Besides enabling the educator with the necessary input for improving classroom strategy, one of the other distinctive aspects of formative assessments is also to enable students to be in charge of their learning process. The role of feedback is paramount in making this possible as educators provide ongoing and credible feedback to the learner to support their learning (Sadler, 1989). Due to these aspects of formative assessments, classrooms where educators follow formative assessments are likely to provide more meaningful opportunities for learners to actively engage with the curriculum and demonstrate their learning without the threat or fear of being judged (Shepard,2017).

In this context, all policy documents have suggested a radical shift in the assessment practices of schools. The National Education Policy 2020 (NEP 2020), the latest policy reform, also recommends a shift from summative assessments to more regular and formative assessments. The NEP 2020 has the following recommendation for assessments:

The primary purpose of assessment will indeed be for learning; it will help the teacher and student, and the entire schooling system, continuously revise teaching-learning processes to optimize learning and development for all students. This will be the underlying principle for assessment at all levels of education (MHRD, 2020, para. 4.34).

Unpacking the Definition of Formative Assessment

Black and William (2009) have defined the conditions for assessments to be considered formative:

Practice in the classroom is formative to the extent that evidence about student achievement is elicited, interpreted and used by teachers, learners or their peers to make decisions about the next steps in their instructions that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited (p. 5).

The definition points out to at least four distinct aspects of formative assessment:

1. Eliciting evidence of student learning
2. Interpreting the evidence (of student learning)
3. Involving teachers, students, and peers in using the evidence to make decisions
4. Using the analysis of the evidence in the instructional process

The First Part of the Definition of Formative Assessment

The first part of the definition says “Practice in the classroom is formative to the extent that evidence about student achievement is elicited” (Black & William, 2009, p. 5). **Eliciting multiple pieces of evidence of student learning** in the classroom is paramount for formative assessments. This could be in any form: through the student responding to an oral question posed by the teacher, questions raised by students in the class, students’ undertaking a task for e.g. participating in a group activity, a project, a science laboratory experiment, a skit or a debate or in doing their homework, etc. Classroom activities can provide various observable evidences of student learning- for instance in a task of developing a poster on a particular theme, the teacher can observe the students for their initiative in doing the task, their interest in doing specific aspects of the task for instance in thinking through the theme, making the illustrations, their ability to discuss and take decisions collaboratively, and so on.

These pieces of evidence form the basis of a teacher’s repertoire of information about the student and helps her in making meaningful and accurate estimates about the student’s learning. In scenarios where classroom instructions are one-sided with minimal participation from students, the teacher does not have any reliable evidence to gauge student learning. As a consequence, it is likely that when she moves on to the next topic, there could be several students in the class who may not possess the pre-requisite understanding for engaging with the new topic. In the absence of any ongoing tracking of student learning, there could be a massive backlog of unlearnt concepts. Beyond a point, the learner may find it practically impossible to engage with what is being transacted in the classroom. Therefore, it becomes necessary to provide students with multiple opportunities to demonstrate their learning.

The Second Part of the Definition of Formative Assessment

The second part of the definition emphasises that “**evidence about student achievement** is elicited, interpreted and used” (Black & William, 2009, p. 5). **Analysis and interpretation of evidence of student learning** is the other important aspect of formative assessments. On the basis of a student’s response in the classroom, the teacher is likely to predict the possible conceptual gaps in her understanding. For instance, a teacher poses the problem “ $24 + 48 = ?$ ” and a few children in the class respond 612. What does this tell the teacher about the students’ learning? It is likely that the students have added the ones digits and tens digits of each number separately ($8 + 4 = 12$ and $2 + 4 = 6$) and generated the answer 612. On examining this response closely, the teacher can make a few predictions about what students may and may not know.

What may the students know?	What may the students not know?
Recognizes the symbol of addition Performs the procedure of adding ones	Concept of place value Procedure of carry over Estimating quantity when two numbers are added

She may also discuss this with the students to understand why they may have given this response. Once the teacher is able to summarize this, she is better informed about the next course of actions to be taken in the classroom.

The Third Part of the Definition of Formative Assessment

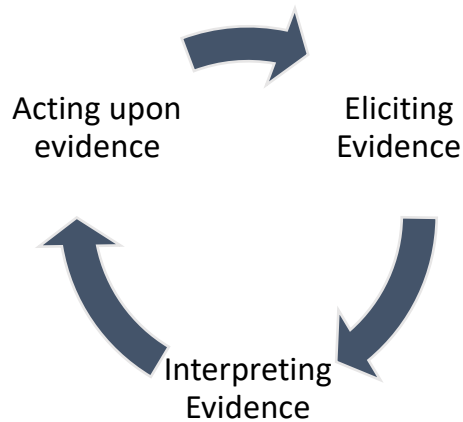
The third part of the definition emphasises that "evidence about student achievement is elicited, interpreted and used by teachers, learners or their peers..." (Paul & Black, 2009, p. 5). **There are multiple actors in the practice of formative assessment** in a classroom. The definition suggests that the evidence of student learning must not only be analysed and interpreted by the teacher but also by the students and their peer groups. Quite understandably, this means that students should be empowered to take charge of their learning process and be capacitated to analyse their learning along with that of their peers. We will discuss strategies of doing this in the next section.

The Final Part of the Definition of Formative Assessment

The final part of the definition draws attention to the following aspect: “make decisions about the next steps in their instructions that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited” (Paul & William, 2009, p. 5).

Decision making in formative assessment should be linked back to the teaching-learning process. This is one of the most critical components of formative assessment practice. Once the evidence is analysed, the teacher systematically plans to do additional tasks with children based on the analysis of the evidence. She may also decide to provide personalized attention to some students who are lagging behind in their understanding. What is important is to note that any decision that the teacher takes after the exercise of eliciting and analysing evidence will be more reliable and appropriate than decisions taken in the absence of evidence. This forms the core of formative assessment practices in the classroom and makes it an integral part of the teaching-learning process.

Acting upon evidence: Imagine that you were a teacher in this class, what decisions will you take to help the child learn the concepts? How do you think this process was better than summative assessment?



Eliciting Evidence: A teacher poses a question $24+48=?$ Few children respond 612.
How is the teacher eliciting (prompting) the evidence here? What do you think is the evidence of student achievement/learning in this scenario?

Interpreting Evidence: As a teacher how will you interpret the student’s response of 612? Can you make a list of what the child may know or may not know by seeing this response?

Strategies for doing Formative Assessment in Classrooms

The practice of formative assessment in classrooms demands attention to specific strategies (Azim Premji Foundation, 2015). These strategies are described below.

I. Developing a shared understanding of outcomes and indicators among teachers, peers and learners

The foremost step in the teaching learning process is to be well aware of 'what to teach'. Most often, textbooks may be seen as the default syllabus; however, it is well documented that over dependence on only textbook content leads to rote memorization. Therefore, a good starting point for any classroom transaction is an awareness and understanding about the learning outcomes (LO) of the curriculum. This understanding should be available to the teacher for every subject and grade. In India, NCERT has suggested LO for every subject and grade, both at the primary and secondary levels (NCERT, 2017; NCERT, 2019). Students and teachers can use these documents as reference points for their own learning. Alternatively, a school can also design its own set of learning outcomes on the basis of the suggested national-level outcomes.

Besides the teacher, it is also important for the students to be aware of the LO. Several attempts have been made to develop child-friendly posters to communicate the LO of the curriculum. One such poster is shown below. If the students are also clear about the LO, they will be able to meaningfully engage with the curriculum.

CLASS 1



Dear Children,
This is your 1st year in school! We are very excited to have you in our school. Let us see all that you will learn to do this year.



KANNADA



Sing songs and tell stories



Describe pictures from textbooks and school walls



Make new words of different sounds



Start writing



Ask questions from stories and answer them

ENGLISH



Greet teachers and friends



Recite rhymes with actions



Describe things and pictures around you



Speak about self



Write A-Z and read simple words

VALUES AND ATTITUDES



Be sensitive and caring to all around you



Respect people around you including friends, elders and people who help you



Keep yourself and surroundings safe, clean and hygienic



Participate in class & school activities and ask questions



Work with friends in groups and help each other

MATH

1 2 3 4...18,19,20



Count objects upto 20 and write 1-20.

Use addition and subtraction of numbers upto 20 in daily life



Makes combinations upto 20 using coins and notes



Identify objects that are near-far, top-bottoms. Measure short length using hand-span and footsteps



Compare and arrange objects according to size and weight



Identify shapes like circle and triangle. Make patterns using simple shapes

EVS



Talk about sun, moon and stars



Discuss about uses of water



Identify food products around you



Identify different modes of transport



Talk about your daily needs like food, safety, clothing



Based on the outcomes, the teacher develops the criteria for success which are often referred to as descriptive indicators.

Illustratively,

Learning Outcome	Indicators
Recites simple rhymes with action.	Repeats the rhymes after the teacher
	Recites attempting intonations and variations
	Recites/sings rhymes with others in the group and individually with actions
	Recites/sings additional rhymes in groups with actions and expressions

These indicators help the teacher to know where the learner is with respect to the goal and how she/he will get there. Most often, teachers' conception of quality is typically held, largely in unarticulated form, as tacit knowledge (Sadler, 1989). On many occasions, we find teachers expressing their opinions about the abilities of students. This implies that teachers evaluate learners based on criteria that may not necessarily be documented. The practice of formative assessment presupposes these criteria are articulated in the form of descriptive indicators by the teacher.

Sharing them with learners brings transparency in the expected outcomes. In instances where there are multiple parameters for evaluation (such as creativity), creating specific indicators and sharing it with learners gives a sense of direction to teachers and sets clear expectations for learners.

Along with the teacher and the learner, the peers or the entire class should be aware of the learning outcomes and the indicators. When the entire class is aware of the outcomes, they tend to focus more on the purpose of learning than the mere completion of the tasks. It also gives them an opportunity to analyse and reflect on their own learning. Over time, this may also develop in learners the ability to evaluate their own work and develop the skills of metacognition. (Paris & Winograd, 1990)

Strategy 1: Developing common shared understanding of outcomes and indicators among teachers, peers and learners

2. Engineering effective classroom strategies (discussions and other learning tasks) that are constructively aligned to outcomes and elicit evidence of student's understanding

While defining and sharing descriptive indicators based on the LO is one of the pre-conditions for formative assessment, it is important to engage learners in learning experiences that enable the fulfilment of these outcomes. Alignment of the task with the outcomes is paramount, and designing tasks that will lead to surfacing of students' belief and misconceptions is equally necessary. These strategies should be "constructively aligned" to the outcomes (Biggs, 1996). Very often, a teacher may end up doing several activities in a classroom, but those may not be aligned to the outcomes and indicators. For e.g. a teacher may want students in her classroom to recite poems and rhymes with understanding. However, her classroom activities may only include repeated recitation by students with no attention paid to the meaning of the words in the rhymes. As a result, students may only be able to imitate the teacher's actions without understanding the meaning of the rhymes/poems. If a majority of the students are merely copying each other with no understanding of the rhymes and poems, the teacher will be unable to move to the next level of instruction. She may have to modify her strategy to give more attention to comprehension.

The classroom strategies should also accommodate diverse learner needs in order to elicit evidence of their learning and identify gaps in their understanding. By using a variety of authentic assessment tasks such as project work, oral presentations, collaborative assignments, portfolios, etc. the teacher will be able to garner evidence of learning in various dimensions. The elicited evidence must also be recorded suitably. Teachers may use portfolios comprising of students' performances on oral presentations, classroom participation, observation, written assignments, tests and other modes to understand learners and track their progress over a period of time. Accumulating and recording the evidence also makes the assessment more reliable as the results from these methods can be cross checked to see if they corroborate.

Strategy 2: Engineering effective classroom strategies (discussions and other learning tasks) that are constructively aligned to outcomes and elicit evidence of student's understanding

3. Providing feedback that moves learners forward

Feedback is a very important component of formative assessment. Constructive feedback assists learner in understanding where their current learning and provides specific guidance on their next steps towards the learning goal. It is essential for this feedback to be timely so that the necessary steps to

enhance learning can be taken right away. In the current form of assessment, feedback is mostly provided as scores/marks or grades. Allocating marks neither conveys anything about the specific area that requires attention nor provides guidance on ways of improving learning. Thus, the earlier style of assessment has little relevance in the system of formative assessment. Instead using worksheets giving descriptive qualitative feedback about the strengths, specific areas of improvement, suggestions for improvement and strategies for attaining the desired learning helps students in reflecting on their learning. (Chomal, 2022). The results/feedback can be communicated through words, pictures, illustrations, examples, and many other means to convey description of students' performances.

Self-reflection prompts	Students' Responses	Teachers' feedback about students'
<ol style="list-style-type: none"> 1. Was I able to attempt all the questions in this worksheet? 2. What tasks/questions did I like the most and why? 3. Which question was I unable to answer and would need more help to answer? 		

Strategy 3: Providing feedback that moves learners forward

4. Activating students as instructional resources for one another

Formative assessment demands a classroom culture that is collaborative. Teachers, learners and their peers actively work with each other to achieve learning goals. This can be enabled through well-designed group tasks where each student is provided with a specific area of contribution. This way, the group works together to achieve the desired goals, and, at the same time, it is ensured that every member actively participates. The teacher can also encourage students to provide peer feedback. This can be achieved through collaboratively designed checklists where students are mentored on how to review each other's work. With older students, teachers could also use strategies such as 'two stars and

a wish'. This is a very popular approach quoted in the literature where students are expected to list two positive aspects of a task and one aspect that can be improved further.

An advantage of involving peers in the formative assessment process is that it reinforces the learning outcomes, makes them more aware of the expected levels of performance and more responsible towards their learning. Asking students to provide feedback to others can also improve their own work as they internalize standards of excellence (Li et al., 2010).

Strategy 4: Activating students as instructional resources for one another

5. Activating students as the owners of their own learning

One of the last and most critical components of formative assessment is to nurture “assessment as learning” (Earl, 2012). This approach of assessment empowers learners to think and reflect about their process of learning. When they engage in this process, they are able to monitor their progress, analyse their learning against outcomes and take control over their learning (Earl, 2012). Hence encouraging learners towards self-assessment is an integral component of formative assessment (Black and William, 2008).

Strategy 5: Activating students as the owners of their own learning

SUMMARY: STRATEGIES OF FORMATIVE ASSESSMENT

Teacher	1. Developing common shared understanding of learning outcomes and indicators	2. Engineering effective classroom strategies (discussions and other learning tasks) that are aligned to outcomes and elicit evidence of student's understanding	3. Providing feedback that moves learners forward
Peers	Understanding and sharing of outcomes and indicators		
Learners	Understanding of outcomes and indicators	4. Activating students as instructional resources for one another	
		5. Activating students as the owners of their own learning	

Conclusion

Doing formative assessments calls for a complete overhaul of traditional classroom practices that are teacher directed and primarily governed by textbook teaching and succeeding in summative tests. In order to do formative assessments successfully, the following enabling conditions will be necessary:

1. Agency of the teacher: Formative assessments demand education systems to reduce the overdependence on standardized or centralized forms of assessments and rely more on teacher led assessments. This is only possible in scenarios where there is agency of the teacher. She should have the flexibility and autonomy to plan and design lessons, design her own tools and instruments and decide what, when and how to assess to make informed decisions about the progress of the learner. In order to enable this, the teachers could be provided capacity building programs on formative assessments and how to use it in classroom teaching and learning. She would need be provided opportunities to develop her own indicators of assessment and record observations in her own ways instead of being restricted only to prescribed formats.
2. Shifting the culture of assessment from *assessment of learning* to *assessment for and as learning*: Doing formative assessments also demands recognizing that assessments can play a constructive role in helping the teachers understand her learner better. This can only happen if

the teacher elicits adequate evidence of student learning while teaching and integrates it back into the teaching process. Doing this over time will make her teaching more reflective and aligned to the needs of her students. This would also lead to assessments becoming low stakes and non-threatening for students.

3. Agency of the learner: Formative assessments can take place in classrooms where students have adequate opportunity to express their views, demonstrate their learning, voice their opinions. They need to play an active role in steering the learning process and are regularly consulted for classroom decisions.
4. Collaborative Classroom and School Culture: Formative assessments demand classrooms that are participative and dialogic with a more dynamic approach to teaching-learning where lesson plans are modified, basis the needs of the students. Such a classroom nurtures collaboration rather than competition. There is no undue stress of succeeding in high stakes assessments. At the same time, it also demands that teachers across subjects and classes work together. School leadership should foster a culture of collaboration and sharing of innovative ideas among teachers, discussing about issues and concerns in implementing formative assessments to enable peer learning.
5. Strengthening Pre-Service and In-Service Teacher Education on Assessment: Analysis of various policies on teacher education reveals there is a need for the student teachers to be prepared for practising formative assessments as part of their teacher preparation programmes. Similarly, teachers should be oriented toward formative assessment practices through ongoing mentoring, onsite support and scaffolding by teacher educators and other academic support systems to implement formative assessments in the classrooms.

Understanding formative assessments conceptually is at the core of its implementation. This understanding is foundational to addressing some of the issues confronting the appropriate implementation of formative assessments in classrooms. It is also important that it is not only adequate for teachers to build their understanding on formative assessments but also to use it consistently in their classrooms. Along with teachers, other stakeholders such as policy makers, government functionaries, teacher educators, head teachers, personnel who support teachers, parents and others also need to believe in the transformative role of formative assessments in improving student learning.

References

- Azim Premji Foundation. (2015). *CCE Approach Paper*. Bangalore: Azim Premji Foundation.
- Biggs, J. (1996). Constructive alignment in university teaching. *HERDSA Review of Higher Education*, 1, 5-22.
- Black, P., & William, D. (1998). Inside the black box: Raising standards through classroom assessment. *Phi Delta Kappan*, 139-148.
- Black, P., & William, D. (2005). *Inside the black box: Raising standards through classroom assessment*. London: GL Assessment.
- Black, P., & William, D. (2009). Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability*, 21(5), 5–31. doi:<https://doi.org/10.1007/s11092-008-9068-5>
- Chomal, A. (2022). Designing Worksheets for Meaningful Student Learning. *Learning Curve*(12), 6-12. Retrieved from <https://azimpremjiuniversity.edu.in/publications/2022/magazine/learning-curve-issue-12weblink>
- Earl, L. (2012). *Assessment as learning: Using classroom assessment to maximize student learning*. California: Corwin.
- Li, L., Liu, X., & Steckelberg, A. L. (2010). Assessor or assessee: How student learning improves by giving and receiving peer feedback. *British Journal of Educational Technology*, 41(3), 525-536. doi:<https://doi.org/10.1111/j.1467-8535.2009.00968.x>
- MHRD. (2020). *NEP 2020*. New Delhi: MHRD.
- NCERT. (2017). *Learning outcomes at the elementary stage*. New Delhi: NCERT.
- NCERT. (2019). *Learning outcomes at the secondary stage*. New Delhi: NCERT.
- Paris, S., & Winograd, P. (1990). How metacognition can promote academic learning and instruction. *Dimensions of thinking and cognitive instruction*(1), 15-51.
- Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*, 119–144. doi:<https://doi.org/10.1007/BF00117714>

Shepard, L. (2017). Formative assessment: Caveat emptor. In C. A. Dwyer (Ed.), *The Future of Assessment*. New York: Routledge.

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