

# Assessment on the progression with phases in early elementary classes through Formative and Summative Evaluation based on the Primary Curriculum in West Bengal, India.

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## Abstract:

A comparative study was conducted on the progression of the learners with phases in early elementary classes through Formative and Summative Evaluation based on the Primary Curriculum in West Bengal. This experimental study was done in *Barasarsa Adivasi Nimna Buniyadi Vidyalaya* in Pandua Block in Hooghly district without reflecting the content, the compulsory or elective status of the subjects or the length of time for which the subjects were studied. The Assessments consisted of a range of multiple-choice and free-response questions. For the multiple-choice questions, students were asked to choose the best answer from the four possible options. For the free response questions, students were asked to write the answers in the boxes provided. The questions were carefully graded to cater to a wide range of student abilities using contexts that stimulate students' interest and engage their attention. Students at all levels of competency stood to benefit from participation in the competitions. The assessed skills are embedded in the syllabus documents of all the key learning areas and are meant to be taught in context.

The subjects offered were Bengali, English, Mathematics and Science. The study aimed to monitor and compare student performance within the school; identify student potential for growth and follow up with revision; discover students' latent potential and compare students' performance with those of the rest in the class taking strategies of Right to Education as challenges. It has remarkably been noticed that the learners assessed through both Formative and Summative Evaluation have achieved mastery level.

## Introduction:

Assessment is a huge topic that encompasses everything from statewide accountability tests to district benchmark or interim tests to everyday classroom tests<sup>[1]</sup>. In order to grapple with what seems to be an over use of testing, educators should frame their view of testing as assessment and that assessment is information. The more information we have about students, the clearer the picture we have about achievement or where gaps may occur.

Formative evaluation is aimed at personal teaching improvement; it is designed to provide a teacher with information he/she can use in current and future classes. This type of evaluation is confidential and not used for purposes of tenure or promotion decisions. It is conducted as a conversation with peers who are interested in helping the teacher reach his/her teaching goals.

Summative evaluation is an after-the-fact assessment of a course. End of course evaluations which are used primarily for performance review, are summative. Summative forms should always include these two items: "This is one of the best courses" and "This is one of the best instructors" or some variation of these two items (Indiana University Teaching Handbook).

Formative assessment is typically contrasted with summative assessment. The former supports teachers and students in decision-making during educational and learning processes, while the latter occurs at the end of a learning unit and determines if the content being taught was retained by the learners. Ainsworth p.23 (2006) <sup>[2]</sup> Formative assessment is not distinguished by the format of assessment, but by how the information is used. The same test may act as either formative or summative. However, some methods of assessment are better suited to one or the other purpose. <sup>[3]</sup> So the influence of Formative Evaluation over the Summative could not be ignored. In the present study, information were collected and assessed with a view to find out the progression of learners in summative evaluation followed by formative to compare the data generated in direct summative assessment.

#### **The objective of this programme:**

The study aimed to monitor and compare learners' performance within the school; identify student potential for growth and follow up with revision; discover students' latent potential and compare students' performance with those of the rest in the class taking strategies of Right to Education as challenges.

#### **Methodology used:**

##### **Formative Assessment:**

This mode of assessment was used for getting information about the next steps of learning. Formative Assessments was used as a tool to make decisions based on data. It occurred to feed information back to students in ways that enabled them to learn better, or when students could engage in a similar, self-reflective process. The evidence shows that high quality formative assessment does have a powerful impact on student learning. Black and Wiliam (1998) reported that studies of formative assessment show an effect size on Standardized Tests of between 0.4 and 0.7, larger than most known educational interventions. (The effect size is the ratio of the average improvement in test scores in the innovation to the range of scores of typical groups of pupils on the same tests; Black and Wiliam recognized that standardized tests are very limited measures of learning.)<sup>[4]</sup>

In math classes, thought revealing activities such as model-eliciting activities (MEAs) and generative activities provided good opportunities for covering these aspects of formative assessment. Model-eliciting activities are based on real-life situations where students, working in small groups, present a mathematical model as a solution to a client's need (Zawojewski & Carmona, 2001). <sup>[5]</sup> MEAs were ideally structured to help students build their real-world sense of problem solving towards increasingly powerful mathematical constructs. In a generative activity, students are asked to come up with outcomes that are mathematically same. Students can arrive at the responses or build responses from this sameness in a wide range of ways. The sameness gives coherence to the task and allows it to be an "organizational unit for performing a specific function." (Stroup et al., 2004) <sup>[6]</sup>

Other activities were also used as the means of formative assessment as long as they ensure the participation of every student, make students' thoughts visible to each other and to the teacher, promote feedback to revise and refine thinking. Additional complementary to all of these was to modify and adapt instruction through the information gathered by those activities. However, "Student Evaluation of Teaching" (SET) and the accompanying consultation was not used as a kind of formative evaluation.

According to Boston, Carol (2002)<sup>[7]</sup> teachers are able to determine what standards students already know and to what degree in formative evaluation. They can decide what minor modifications or major changes in instruction they need to make so that all students can succeed in upcoming instruction and on subsequent assessments. Teachers can also create appropriate lessons and activities for groups of learners or individual students and inform students about their current progress in order to help those set goals for improvement.

In the present study five indicators were taken into consideration as suggested by West Bengal Board of Primary Education<sup>[8]</sup>. These are (i) Participation, (ii) Questioning and Experimentation, (iii) Interpretation and Application, (iv) Empathy and Co-operation & (v) Aesthetic and Creative Expression. Each Indicator has four Rubrics and accordingly four-point Rating Scale was used for Formative Assessment. At least one third of the total questions were framed as Open-ended questions to increase the free thinking and retention level of the learners. Each class was divided into two sections: A and B. All students of each section were again divided into groups: 'Treated' and 'Controlled'. The Treated batch (FS) of each class was assessed through Formative and Summative Evaluation. The controlled batches (DS) were directly allowed to Summative Evaluation.

#### **Summative Assessment:**

Classroom Assessment Techniques (CATs) in Summative Assessments consisted of a range of multiple-choice and free-response questions. For the multiple-choice questions, students were asked to choose the best answer from the four possible options. For the free response questions, students were asked to write the answers in the boxes provided. The questions were carefully graded to cater to a wide range of student abilities using contexts that stimulate students' interest and engage their attention. Students at all levels of competency stood to benefit from participation in the competitions.

#### **Results and Discussion:**

The terms "formative" and "summative" do not have to be difficult, yet the definitions have become confusing in the past few years<sup>[1]</sup>. This is especially true for formative assessment. In a balanced assessment system, both summative and formative assessments are an integral part of information gathering. Depending too much on one or the other, the reality of student achievement in the classroom becomes unclear. One distinction is to think of formative assessment as "practice." We should not hold learners accountable in "grade book fashion" for skills and concepts they have just been introduced to or are learning. We must allow them for practice. The result of the present study reveals that the batch of students who were allowed to practice more through formative evaluation performed better than those allowed to appear directly in summative evaluation. Regarding English, all of the Primary teachers of the district received Capacity Building Training based on the primary level syllabus and an impact of this training was noticed in the performance of the children particularly in the development of their oratorical skill<sup>[9]</sup>.

Teaching for successful learning cannot occur without high quality assessment. Assessment, therefore, needs to be integrated with the process of teaching and learning<sup>[10]</sup>.

**Table: 1. Performance of FS students in Formative Evaluation.**

B+E = Mean percent value of Bengali (First Language) & English (Second Language); M+Sc =Mean percent value of Mathematics and Combination of Social & Natural Science. Grading Scale for Formative Assessment was A= 75-100%, B= 50-74%, C= 25-49% and D= Below25%.

Class	Student No.	Rubrics of Formative Evaluation									
		Participation		Questioning and Experimentation		Interpretation and Application		Empathy and Co-operation		Aesthetic and Creative Expression	
		B+E	M+Sc	B+E	M+Sc	B+E	M+Sc	B+E	M+Sc	B+E	M+Sc
IA	09	72	78	67	69	64	72	74	75	74	82
IB	10	66	69	65	66	64	71	73	76	72	74
IIA	09	65	76	68	69	55	72	36	69	52	67
IIB	09	58	65	54	68	59	73	64	70	64	66
IIIA	14	60	74	57	60	46	60	41	66	34	67
IIIB	14	57	62	57	60	43	60	59	78	64	74
IVA	13	56	76	50	75	41	72	45	72	55	82
IVB	12	64	65	53	54	50	50	63	65	61	61

**Table: 2. Performance of FS and DS students in Summative Evaluation.**

Class	Summative Assessment followed by Formative (FS)								Summative Assessment without Formative (DS)							
	Multiple-choice questions				Free-response questions				Multiple-choice questions				Free-response questions			
	B	E	M	Sc	B	E	M	Sc	B	E	M	Sc	B	E	M	Sc
IA	96	94	92	93	93	89	97	90	64	67	87	81	83	79	84	82
IB	83	84	90	90	73	84	83	88	69	72	83	80	65	76	78	79
IIA	80	61	89	94	91	73	82	93	63	60	78	81	79	67	74	84
IIB	75	85	74	90	88	72	67	85	58	74	69	78	79	64	59	80
IIIA	75	74	71	79	93	76	71	74	50	65	62	66	81	65	61	66
IIIB	71	76	73	72	69	72	70	71	52	49	65	55	60	57	58	63
IVA	74	64	56	64	68	66	60	61	48	45	52	58	59	57	52	54
IVB	62	67	65	69	58	67	67	65	51	56	49	49	50	58	60	58

Grading Scale for Summative Assessment was A+= 90-100%, A= 80-89%, B+= 70-79%, B=60-69%, C+= 45-59%, C= 25-44%, and D= Below25%. Data represents Mean percent value.

**Conclusion:**

Formative assessment is particularly effective for learners who have not done well in school, thus narrowing the gap between low and high achievers while raising overall achievement. The present study leads to the conclusion that summative assessments tend to have a negative effect on student learning which also supports the research examined by Black and Wiliam.

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