

# Quality Education: Learning Community vs Learning Outcomes (Basic Numeracy and Literacy skills - Challenges and Solutions)

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## Abstract

*The paper presents the study of the challenges and solutions in implementation of learning outcomes in upper primary classes in respect of learning community of National Capital Territory (NCT) of Delhi, brief of learning outcomes offered by National Council of Educational Research and Training (NCERT), comparison of National Level Achievement with the achievement of Delhi NCT and challenges to achieve the Learning Outcomes. Also tries to explain the strategies to find the solutions to these challenges: Like Mission Buniyaad for strengthening of fundamental skills, level-appropriate assessment, capacity building of the teachers and awareness of all the stakeholders of a learning community of NCT of Delhi. The paper also presents the sample study conducted during Mission Buniyaad project for fundamental skills in languages and mathematics, reassessment of the students taught during Mission Buniyaad project in schools of Districts: East, South, West B, North West B and North of Delhi and deviation on the online data filled by these schools. Paper also explains the teaching strategies used during Mission Buniyaad project and tools used in the reassessment process.*

**Keyword:** learning outcomes, learning community, challenges, Mission Buniyaad, Fundamental Skills, NAS (National Achievement Survey), Annual Survey of Education Report (ASER)

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## Introduction:

In 2005, a Mumbai-based NGO Pratham began an independent national-level rural education status survey called ASER (Annual Survey of Education Report). According to Nehru and Regulate (2011), the latest ASER report shows that primary education standards have not shown many improvements in learning outcomes in reading and mathematics in spite of many innovations and changes brought about by the Sarva Shiksha Abhiyan since 2001. There have however been improvements in enrollments, reduction in the dropout rate and improvement of infrastructure facilities in schools during last few years but there has also been a reduction in already low standards in quality education due to the well-intended anti-retention practices followed by RTE Act 2009.

The need for clear delineation of learning outcomes and better pedagogy practices and assessment has been emphasized by educationists (kingdom, 2007, Yadav, 2007). Quality issues in our education system have been raised by many educationists (De et al, 1996; Kingdon, 2007; Yadav, 2007). These include poor infrastructure facilities, motivation, and commitment of teachers, respect for the child's time in school.

Lack of basic numeracy and literacy in primary school children has become a challenge to the implementation of the learning outcomes of NCERT.

*Learning outcomes for class III by NCERT***The learner:**

- Works with three digits numbers.
- Acquires understanding about 2 D shapes.
- Estimates and measures length and distance using standard units like centimeters of meters and identify relationships.
- Acquires an understanding of data handling.
- Compares the capacity of different containers in terms of nonstandard units.
- Weighs object using standard units: grams and kilograms using the simple balance.

**Challenges for the implementation of learning outcomes:**

How to implement these learning outcomes in the situation of the classroom where the learner lacks in basic numeracy and literacy skills is a big challenge for the educators.

**National Achievement Survey (NAS) Report card 2018: A snapshot of Delhi NCT vs National Average**

This report summarizes the findings of class III (cycle 3). Some important key features of this survey are highlighted below:

- Overall, class III children in 34 states/UTs were able to answer 64% of language items correctly and 66% of mathematics questions correctly.
- No significant difference in the performance of students of Delhi and National average in language. While it is significantly below the national average in Mathematics.
- The percentage of students able to listen and recognize words is higher than the national average, while lower in terms of reading comprehension ability.
- Students performed lower than the national average in most of the patterns and multiplication.
- Performance of both boys and girls in the state is lower than the national average in both language and mathematics.
- Performance of both rural and urban students is lower than the national average in both languages and mathematics.
- All social groups scored lower than the national average in both language and mathematics.

India has 6.5 lakh primary schools and 2.45 lakh upper primary schools out of which 87.98% primary and 79.06 % upper primary is located in rural areas and according to ASER96.5% all rural children (6 – 14) enrolled. Improved quantitative aspects with wide variations across regions affected the quality aspects declining mastery in basic skills points towards the setting of clear and measurable goals. For a healthy system tapping quality is a must. Which needs: large scale assessment for quality vs quantity, timely tracing, monitoring, and bridging gaps? All these issues are becoming hindrance/challenges in the path of implementations of learning outcomes and Directorate of Education in Delhi tried to find some solutions few of them are mentioned below.

**Solutions:****1. Project Mission Buniyaad**

Directorate of Education in Delhi launched Mission Buniyaad project to improve the basic skills in mathematics and language. Students of classes 3<sup>rd</sup> to 9<sup>th</sup> were enrolled who were below the advanced story level in first language and division in math. The period of the project was 2<sup>nd</sup> April to 30<sup>th</sup> June 2018: first Face from 2<sup>nd</sup> April to 10<sup>th</sup> May 2018 second phase from 11<sup>th</sup> May to 10<sup>th</sup> June 2018 and further extensions for the month of July 2018.

Training of heads of schools and teachers, who taught during the Mission Buniyaad project was organized from 11-04-2018 to 16-04-2018.

Instructional manuals for Head of Schools (HOS), teachers and copies of students' learning material were also shared with teachers and HOS during the training program. Delhi Bureau of Text Books (DBTB) distributed the material "**Kahani ka khajana and**



**HamaraGanit**” to all students, who were below advance story level in Hindi/Urdu and below division level in mathematics also were enrolled in Mission Buniyaad Project. Soft copies of all the materials were also available on the website [www.edudel.nic.in](http://www.edudel.nic.in).

**Schedule of Activities:** CAMal (Combined Activities for maximized Learning) approach was used to develop and strengthen the fundamental skills such as listening, speaking, reading, writing and doing. The newly acquired skills increased the children participate in the classroom after the project also. The CAMaL approach moves from simple to complex, easy to difficult, known to unknown and concrete to abstract.

Baseline, midline and end line assessments were administered to check the progress. Data compiled online on [www.edudel.nic.in](http://www.edudel.nic.in).

**Reassessment of Mission Buniyaad and Checking of Deviation in data filled on [www.edudel.nic.in](http://www.edudel.nic.in) .**

A team of 16 members of the Core Academic Unit visited in 6 different schools of different districts all over Delhi NCT. A thorough reassessment of students under Mission Buniyaad was meticulously completed by the team. The team reassessed the data filled by the respective schools on June 30<sup>th</sup>, 2018 regarding Learning levels of students at [www.edudel.nic.in](http://www.edudel.nic.in) .

*Report of Reassessment of Sampled Schools*

| S.N.  | Name and ID of Sampled School   | Total Enrolment in the School | Total Enrolment in Mission Buniyaad | District     | Number of students Reassessed for Sample Check |
|-------|---------------------------------|-------------------------------|-------------------------------------|--------------|--|
| 1     | GCoed.SSS Sector – XI (1413023) | 1658                          | 695                                 | North West B | 37   |
| 2     | Gargi SKV Green Park (1925032)  | 1240                          | 296                                 | South        | 19   |
| 3     | SKV Timarpur (1207034)          | 1743                          | 181                                 | North        | 34   |
| 4     | SV New Police line (1309004)    | 1684                          | 448                                 | Northwest A  | 27   |
| 5     | GSKV Tikri Kalan (1617012)      | 2100                          | 565                                 | West B       | 39   |
| 6     | RSKV Shankar Nagar (1003026)    | 1073                          | 155                                 | East         | 49   |
| Total | -----                           | 9498                          | 2340                                | ----         | 205  |

**Findings of reassessment were as follows:**

The total 2340 student of six sampled schools were enrolled in Mission Buniyaad project. The reassessment test was administered in July 2018 to check learning levels of the students (advance story level in Hindi languages and division in mathematics).

- 8.7 % of 2340 students of six sampled schools enrolled in Mission Buniyaad were reassessed.
- 1058 students crossed advance story level in the Hindi language, which is 45.12 % of the total number of students enrolled in Mission Buniyaad as on 30-06-2018.
- 1138 students crossed division level in mathematics, which is 48.6 % of the total number of students enrolled in Mission Buniyaad as on 30-06-2018.
- 1282 students could not cross advanced story level in Hindi, which is 54.88 % of the total number of students enrolled in Mission Buniyaad as on 30-06-2018.
- 1202 students could not cross-division level in mathematics, which is 51.4 % of the total number of students enrolled in Mission Buniyaad as on 30-06-2018.
- Final assessment data filled by the school was also assessed and it was found to be appropriately filled with a minor deviation of 5 % to 10 % on both the negative and the positive side.
- Learning Level of students was also assessed during End line assessment in the Mission Buniyaad Project to help the teaching-learning processes in the classroom and to prepare the level appropriate summative assessments, and students were divided into two groups Pratibha and Nishtha.
- In the end line assessment, the students who were below advance story level in Hindi language and division level in Mathematics were allotted “Nishtha Group.”

- In the end line assessment, the students who were above advanced story level in Hindi Language and division level in Mathematics were allotted “Pratibha Group”.

*Findings of reassessment*

|  |  |   |
|--|--|---|
| <p>Total 1282 no. of students who could not crossed advanced story level in Hindi is 54.88 % of total no. enrolled in mission Buniyaad as on 30-06-2018.</p>   | <p>Total 1138 no. of students crossed division level in mathematics is 48.6 % of total no. enrolled in Mission Buniyaad as on 30-06-2018.</p>              | <p>Total 1058 no, of students crossed advance story level in Hindi is 45.12 % of the total number in Mission Buniyaad as on 30-06-2018.</p>   |
| <p>8.7 % of the total students were reassessed of the total students enrolled in the Mission Buniyaad.</p>   | <p>Total 1202 no. of students who could not crossed division level in mathematics is 51.4 % of total no enrolled in mission Buniyaad as on 30-06-2018.</p> | <p>Final assessment data filled by the school was also assessed and it was found to be appropriately filled with minor deviation of 5 % to 10 % on both the negative and the positive side.</p> |
| <p>Among the total no. of 2340 students of six sampled schools enrolled in mission buniyaad, after the baseline test in April 2018 their progress to advance story level and division in mathematics was analyzed.</p> |  |   |

- Level Appropriate Summative / formative Assessment for classes VI to VIII to achieve Learning Outcomes:** Following are the sample questions in mathematics summative/ formative tests for level appropriate assessment.

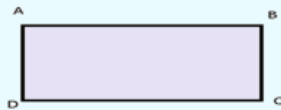
## MATHEMATICS CLASS VII (NEO NISTHA) WEEKLY TEST PAPER ( PRACTICAL GEOMETRY)

1. Choose and (✓) an example of parallel lines from below. (1)  
नीचे दिए गए चित्रों में कौन सी आकृति समांतर रेखाओं को दर्शाती हैं?



For PRATIBHA group: draw  $AB \parallel CD$ .

For NISHTHA group: Write two parallel lines in the given figure:



Learning outcome: Constructs a line parallel to a given line

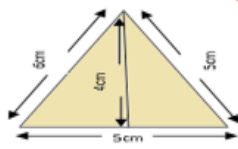
## MODEL TEST PAPER END TERM 2017-18

### CLASS VIII( NISTHA)

In the given figure while finding the area and perimeter Rajesh committed error in each part (i) and part (ii). What is the correct area and perimeter?

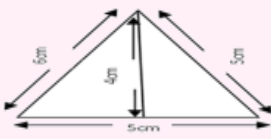
Part (i) Area of Triangle =  $\frac{1}{2} \times (\text{base} \times \text{height})$   
 $= \frac{1}{2} \times (5\text{cm} \times 6\text{cm})$   
 $= 15 \text{ cm}$

Part (ii) Perimeter of Triangle = Sum of length of three sides of triangle  
 $= 5\text{cm} + 5\text{cm} + 4\text{cm}$   
 $= 14\text{cm}^2$



**For PRATIBHA group: Find the area and perimeter of the given figure.**

For NEO NISHTHA group: Shade the area of the triangle in the given figure whose sides are 5cm, 5cm, 6cm.



**Learning Outcome: Find out area of closed shapes**

#### Conclusion/ Suggestions:

Findings of the Study shows: only 50% of students enrolled in Mission Buniyaad of Directorate of Education GNCT of Delhi has achieved fundamental skills. More initiatives like Mission Buniyaad and level appropriate Assessment are required by the state for the sustainable growth in quality Education. More awareness and capacity building programs are also required for all the stakeholders of the learning community like parents, teachers, educators, and students to achieve/ implement the desired learning outcomes.

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#### References:

- [1]. Website : <https://mhra.gov.in/nas>
- [2]. <http://www.asercentre.org/p/51.html?p=61>



**Appendix:**

| Analysis of the Level of the students for Literacy and Numeracy during the Mission Buniyaad and reassessment process. |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |
|---|------|----|---------------|--------------------|---|--|--|----------------------------------|----------------------|---|--|--|----------------------------------|--------|
| Name of school and ID -   |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |
| Name of HOS and Emp. ID -   |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |
| Total number of students -  |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |
| Number of students enrolled in Mission Buniyaad -   |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |
| S. N.   | Name | ID | Class/section | Literacy in Hindi  |   |  |  |                                  | mathematics          |   |  |  |                                  | Remark |
|   |      |    |               | Level in 2016-2017 | The level at baseline assessment (April-2018) | The level at final assessment (30 <sup>th</sup> June 2018) | Current level on 5 <sup>th</sup> July 2018 | Deviati on (change in the level) | Level in 2016 - 2017 | Level at baseline assessment (April-2018) | Level at final assessment (30 <sup>th</sup> June 2018) | Current level on 5 <sup>th</sup> July 2018 | Deviati on (change in the level) |        |
| 1.  |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |
| 2.  |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |
| 3.  |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |
| ...   |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |
| ...   |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |
|   |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |
|   |      |    |               |                    |   |  |  |                                  |                      |   |  |  |                                  |        |

*The tool used for Reassessment*