LEARNING OUTCOMES OF
GANITHA KALIKA ANDOLANA
PHASE-1
INTRODUCTION

Akshara Foundation and Sarva Shiksha Abhiyan had begun the implementation of Ganitha Kalika Andolana (GKA) in the Hyderabad Karnataka Region with the key objective of improving the learning outcomes of children in grade 4 and 5 in math. The baseline assessment for this initiative was the ASER 2014 score in math.

The core assets that were developed for GKA included the following:

1. Akshara Ganitha Math kit was supplied to all the Government Primary schools of the six districts in the Hyderabad Karnataka region.
2. 1280 Resource Persons of the state and 7827 teachers from all the schools were trained.
3. On-site support was provided to teachers through Akshara Foundation’s Field Coordinators.

To measure the defined objective of the programme, Akshara Foundation developed a tech-based assessment tool. Assessments were carried out using a Android based App which had test items built into it. Test tools were similar to ASER test tools; however there were some additional questions to test other grade appropriate competencies. Data collected through this assessment is analysed in the note below.

LEARNING OUTCOMES

ASER 2014 math score is considered to be the baseline score for the purpose of this analysis. Since the Class 5 students in the academic year 2016-17 were exposed to Ganitha Kalika Andolana pedagogy for two years, most of the analysis is based on Class 5 data points.

SUBTRACTION

Children were tested for 2-digit subtraction problems with carry over. A child must solve two problems correctly to be considered as a ‘Child can do subtraction’.

At the end of the academic year 2016-17, 62% of children in Class 5 were able to do subtraction while the corresponding numbers in the ASER 2014 and ASER 2016 surveys were 34% and 38% respectively. (See Chart:1)

DIVISION

Children were tested for division problems with a 3-digit dividend with single digit divisor with remainder. A child has to be able to solve two division problems correctly to be considered as a ‘Child can do division’.

According to ASER 2016 and 2014 survey, 17.2% and 16.7% of Class 5 government school children were able to solve division problems. In the GKA assessment, there was an increase of 13.3 percentage points in division learning outcomes compared to ASER-2014 and an increase of 12.8 percentage points compared to ASER-2016. (See Chart:2)

Across the HK Region, learning outcomes were the highest in Koppal district with 32% of children solving the problem, whereas it was least in Gulbarga with only 5% of children solving the division problem.
RELATIONSHIP BETWEEN CHILDREN’S FAMILIARITY WITH TEACHING LEARNING MATERIAL (TLM) AND DIVISION LEARNING OUTCOME IN DIVISION COMPETENCY:

One of the test items in the GKA assessment was designed to measure the child’s familiarity with TLM. The percentage of children who can identify the TLM was compared to learning outcomes in the division competency.

Based on this comparison, it was evident that learning outcomes across the region were better in the districts where children were able to identify the TLMs. However, in Bellary and Yadgir the learning outcome was more despite the number of children who could not recognise the TLM. (See Chart: 3)

RELATIONSHIP BETWEEN THE CHILD’S FAMILIARITY WITH TLM AND LEARNING FRACTIONS:

Teaching as well as learning fractions is generally considered as complicated. In the present analysis (See Chart: 4), it was evident that child’s familiarity with TLM has a direct influence on learning outcomes for fractions across all the districts.

CONCLUSION

Overall, there has been a considerable amount of increase in learning outcomes of children. Data has also shown the effect of good TLM on learning outcomes.
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