

# IMPACT BRIEF

## DIGITAL EQUALIZER

Bridging the educational and digital divide by bringing technology to under-resourced government schools across India, transforming teaching and learning, leading to improved student performance.

### REACH



- **4,126,691** CHILDREN EMPOWERED with interactive STEM learning experiences



- **152,644** TEACHERS TRAINED in STEM and technology-focused pedagogy



- **15,056** SCHOOLS TRANSFORMED through innovative teaching and learning practices



- **15** States

### IMPACT

**10%**

Overall improvement in Learning Outcomes of students from Grades 6-8 in DE schools as compared to non-DE schools

**13%**

Students shifted from Basic to Near Grade or Grade Level competency

**80%**

Teachers reported being comfortable in using the computer to teach

**94%**

Teachers stated that computer use in class improves students' understanding of science and math

**97%**

Students participate in computer/smart classes in DE schools

DE is aligned to the UN's SDG 4



## THE CONTEXT

AIF's Digital Equalizer (DE) initiative leverages the use of technology in bridging the educational as well as digital divide in India and preparing students to compete in the 21st century economy. DE is a three-year intervention targeting students in Grades 6 to 8 (the age range with maximum dropout rates) and three subjects viz. Science Mathematics and Social Studies. It focusses on transforming teaching learning process through student engagement activities and project-based learning. Along with the technology enabled support, the model also identifies students who are below grade level competencies and ensures they get the required remedial support.

## THE DIGITAL EQUALIZER APPROACH

- Enabling teachers in digital lesson-planning and digital content
- Handholding support to schools through DE Core model
- Beyond smart classrooms towards hands-on learning and creating interest in the four fields of STEM
- Leveraging existing Government resources and building capacities of teachers, Block Resource Coordinators (BRC), Cluster Resource Coordinators (CRC) and other officials
- Remedial support to improve students' performance and learning outcomes

## RESEARCH METHODOLOGY:

Considering the intervention evaluation as a baseline-midline and end-line model, a quasi-experimental design was used where log frame indicators have been calculated at baseline and midline stages and statistical significance of differences between these stages have been obtained. Student Learning Outcomes (for grade 6, 7 and 8) were assessed using a self-administered tool and students' competencies were assessed. Each subject included 14 multiple-choice questions, and 1 mark was awarded for each question correctly answered.

Marks Obtained (Max Obtainable 42)	Competency Level
Up to 18	Basic Level
19 to 33	Near Grade Level
34 to 42	Grade Level

## EVIDENCE

The key findings of mixed-methods external evaluation conducted in February 2020 through learning assessment tests among students and interviews with teachers in Amreli, Gujarat show:

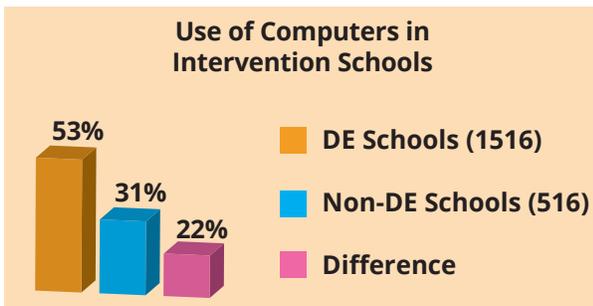
### STUDENTS

#### ➤ Proportion of Students at Near Grade or Grade level (All Subjects, All Grades) :-

- Percentage of students at near grade or grade level competency from intervention schools increased by 13 percentage points since baseline for all three subjects and three grades combined. In the case of comparison schools, the percentage declined by almost 6 percentage points.

### Use of Computers in Intervention Schools

- The regularity of access to computers has increased from 32% to 53%. Now, every second student of intervention schools had accessed the computer in last two days before the assessment.



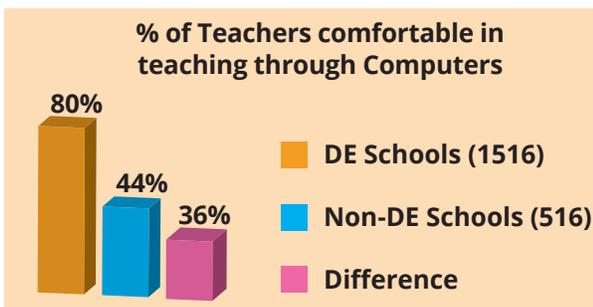
### Participation of Students in Key School Activities in DE Schools

- 97% of students participate in computer/smart classes against 90% in Non-DE schools
- 23% of students participate in remedial classes against 6% in Non-DE schools

As part of the intervention, the project also identified 20 students from each of the intervention schools whose total score was lowest. These students were provided with additional remedial support to improve their performance and learning outcomes. There was a 7.3% increase in average score of remedial students in midline and that is close to all students combined. This further underscores the effectiveness of the remedial intervention carried out by the project.

### TEACHERS

- 83% of teachers acknowledged that computer as a teaching aid has been included in their school within the last one year, which is during the course of the intervention. In the case of Non-DE Schools, this figure is 56%



- 73% agreed that computer-aided learning provide opportunity to express ideas among students and

- 60% of DE teachers believed that computer aided learning increases the confidence among students

## CONCLUSION

Evidence from the external evaluation shows a definite improvement in students' learning outcomes in DE schools over those in comparison schools, and this difference is statistically significant. This is a strong indication towards the effectiveness of the intervention. Furthermore, programmatic interventions have also played a key role in motivating teachers to adopt technology in pedagogy. Teachers were using the new Teaching-Learning methods in classes as well as while preparing for lessons, thus raising the quality of learning discourse in school and making school more attractive for the students.

## WAY FORWARD IN COVID-19 SCENARIO

In the current Covid-19 scenario and its associated school closures, DE classes have pivoted to virtual methods. These include virtual training for teachers, live online sessions for students, integrating online worksheets and online activities on STEM, reaching out to cent percent students (those who have access to smart phones and even those who do not) for remote learning during and post lockdown. One tutor is assigned for each school/community. They cover visits to 10 - 12 students' homes daily, to provide direct support to the students without smart phone access. Learning materials, assignment copies and track record of student progress is maintained by them. This is aimed at minimizing the learning deficits of students arising from indefinite school closures.

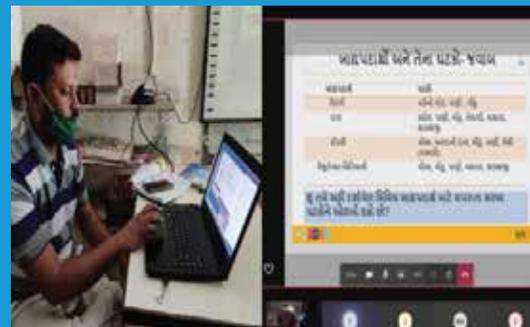
<sup>1</sup>Midline has been conducted after 1 year of the intervention. All the Impact findings are first year of intervention.  
<sup>2</sup>Evaluation Report on DE Program supported by DSF in Amreli- Gujarat, IMPACT, 2020  
 Base- Students: 4286 (Program 2220; Comparison: 2066); Teachers 125 (Program: 81; Comparison: 44) of 30 schools

## IMPACT STORIES



**Hardik Jagubhai Chandu, 14 years, Grade 8 at Adsang Primary School, Amreli, Gujarat**

"We never thought that learning remotely would be possible. During this pandemic, the AIF DE team connected us through WhatsApp groups. We started learning through virtual classes and content videos. We have also started attending tests through Google Forms, we immediately get our test results too. In the evenings, any study-related queries are answered by teachers on WhatsApp or phone. It is a completely new experience to learn through digital devices under the Remote Learning initiative. Now I am sure that there will be no learning gap in my studies."



**Bhadresh Gaudani, Math & Science teacher, Meriyana Primary School, Amreli, Gujarat**

"During COVID-19 pandemic, the AIF team trained us on Remote Learning tools and strategies. It becomes very easy to teach by taking live classes on Microsoft Teams, and it also helps to get immediate reflection using Google assessment forms. The content provided is also very effective to engage the students in remote learning. We are very thankful to AIF and DS Foundation for supporting us in this COVID-19 time."

## AIF IMPACT BRIEFS

This Impact Brief is part of a suite of Impact Briefs which provide evidence about the impact of AIF's programs, available at

[www.AIF.org/our-work/knowledge-center/](http://www.AIF.org/our-work/knowledge-center/)