SCHOOLNET

LEARNING FOR LIFE

Effectiveness of Smart Classroom, Uttar Pradesh
An Impact Assessment Report

CREATING A SUSTAINABLE IMPACT THROUGH TRANSFORMATIVE SOLUTIONS

Project Overview

Smart Classroom initiative was introduced by the Schoolnet India Ltd. at Uttar Pradesh in a phased manner during September – November 2017 under the aegis of the Department of Social Welfare, Government of Uttar Pradesh.

The solution core is the K-Yan (Knowledge Vehicle) - a Group Learning device; an educator's tool that makes learning engaging and interactive; designed on a teacher centric approach to support blended and participatory teaching methodologies.

The Initiative aims to use technology in classroom teaching to transform teaching-learning at schools from a didactic format to a more participatory mode, leading to quicker learning, longer retention, and better expression by students.

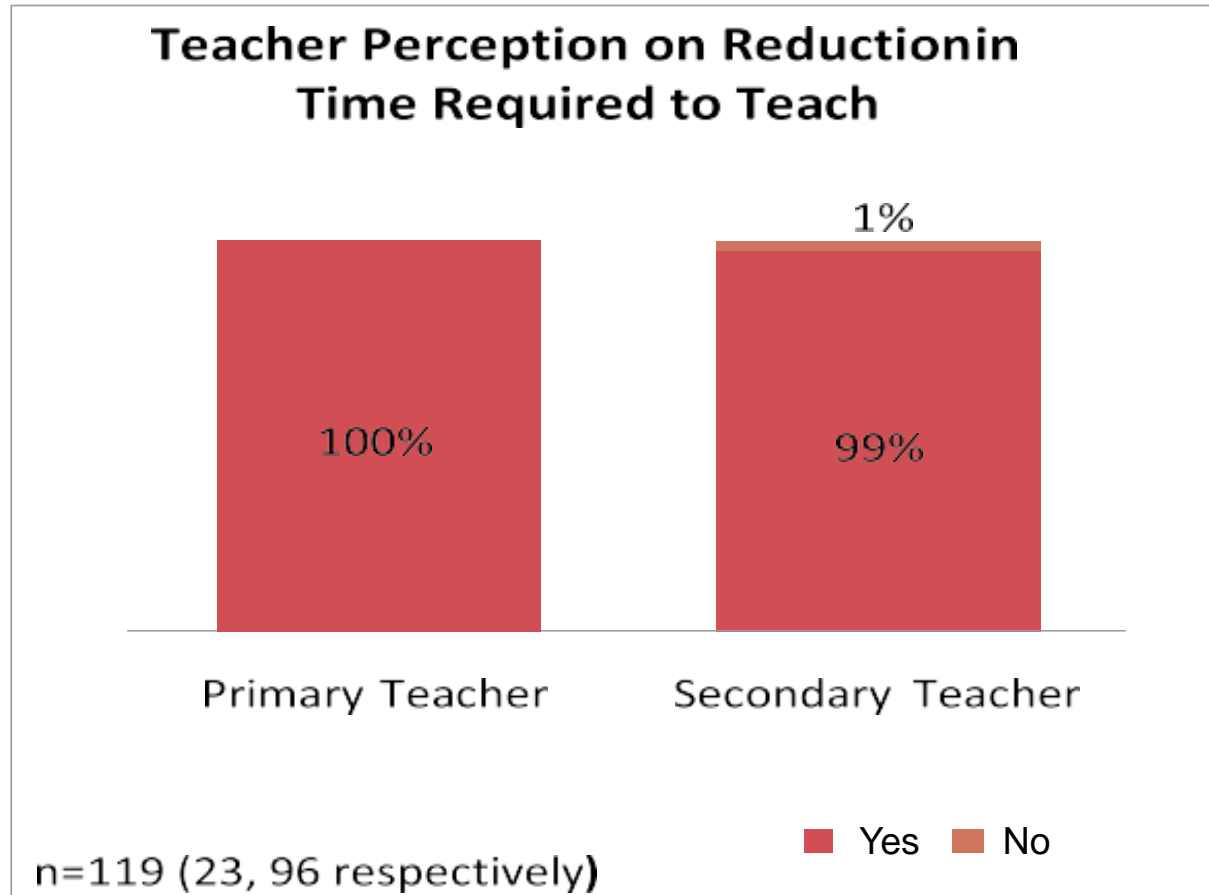| No.	Project Duration		Districts	Schools	Grades
	From	To			
1	September 2017	August 2018	14	19	4-12
2	November 2017	October 2018	9	11	4-12

The Methodology

The universe of the study was 30 schools across Uttar Pradesh; wherein 9570 students of Grades 4-12 were the primary beneficiaries. To ensure that each school profile is well-represented in the study sample, multi-stage random sampling was done to select 50% schools. The data was collected from the 15 principals, 119 teachers, 587 students (grades 4-12), 15 school coordinators and 15 service technicians about their 'Smart Classroom' experience.

Findings

Factual data on K-Yan sessions conducted during project duration was acquired from the Smart Classroom Registers maintained at 13 of the 15 schools surveyed. Over the period of one year, teachers up-scaled their skills to achieve overall **211% increment in Smart Classroom usage;** increment was **maximum for Science** and **Social Studies** followed by Maths.
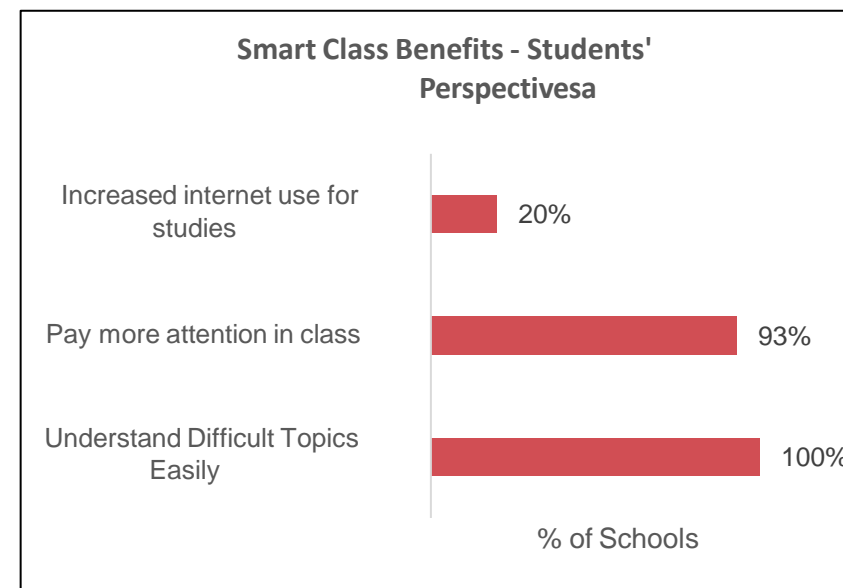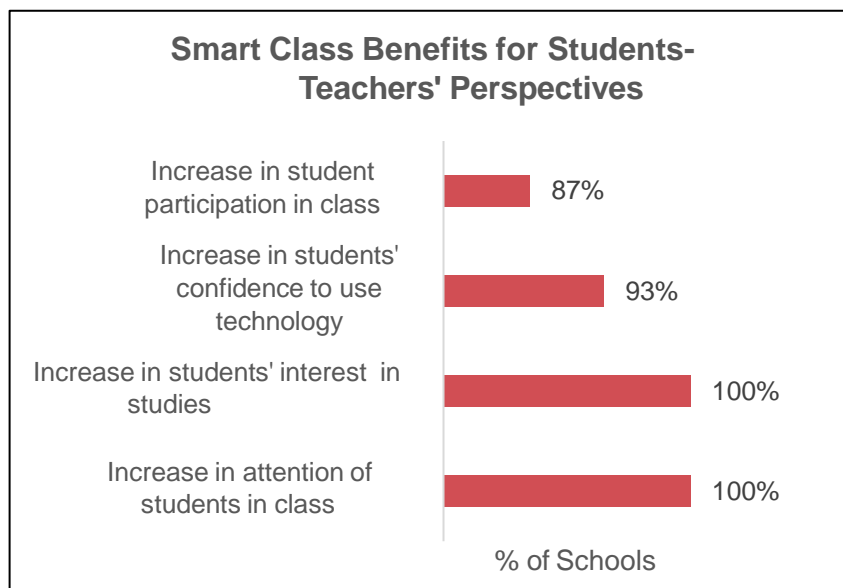
Smart Classroom was efficiently utilized to teach students across the grades.

Reduction in Time Required to Teach during Smart Classroom

Teacher Perception on Reductionin Time Required to Teach

Primary Teacher: 100%
Secondary Teacher: 99%, 1%

Yes ■ No

n=119 (23, 96 respectively)

Almost all the teachers surveyed across schools (99%) shared experiencing reduction in time required to teach a concept during Smart Classroom Sessions.

Smart Class Benefits for Students

Smart Class Benefits for Students- Teachers' Perspectives

	% of Schools
Increase in student participation in class	87%
Increase in students' confidence to use technology	93%
Increase in students' interest in studies	100%
Increase in attention of students in class	100%

Smart Class Benefits - Students' Perspectivesa

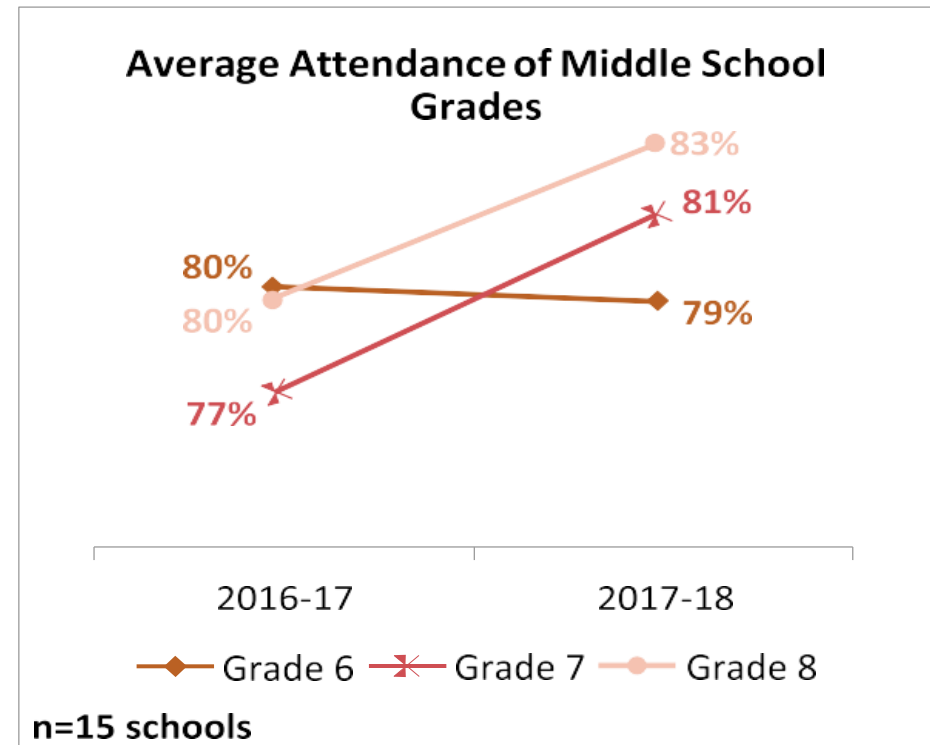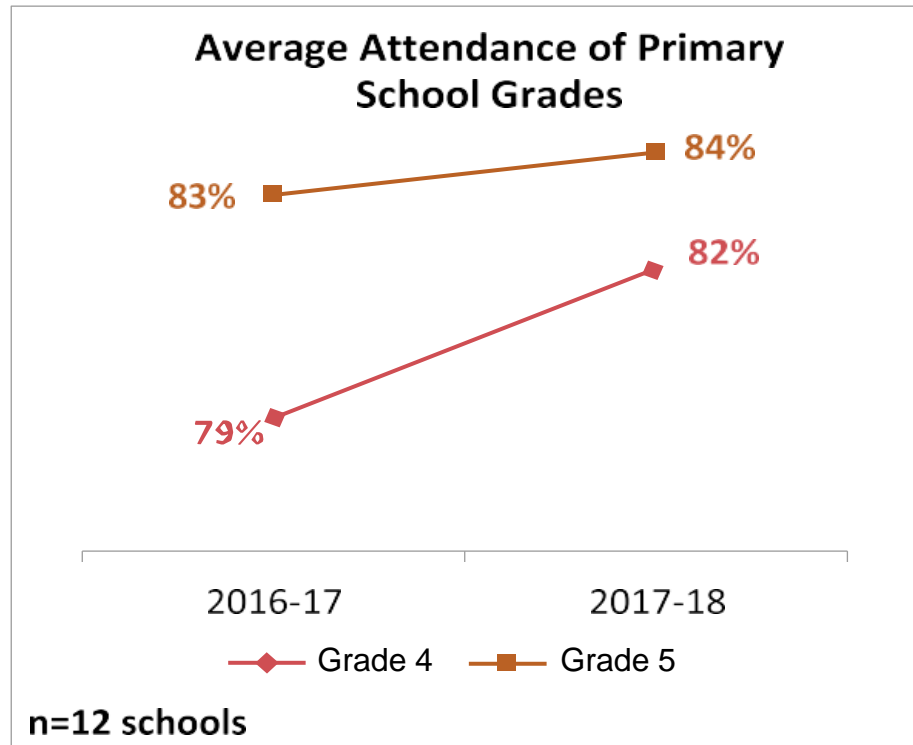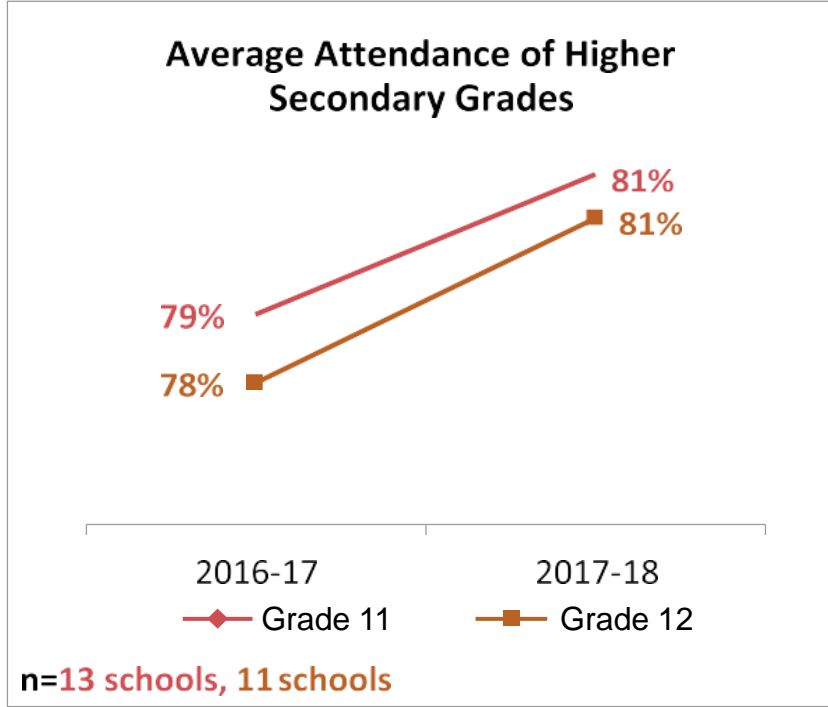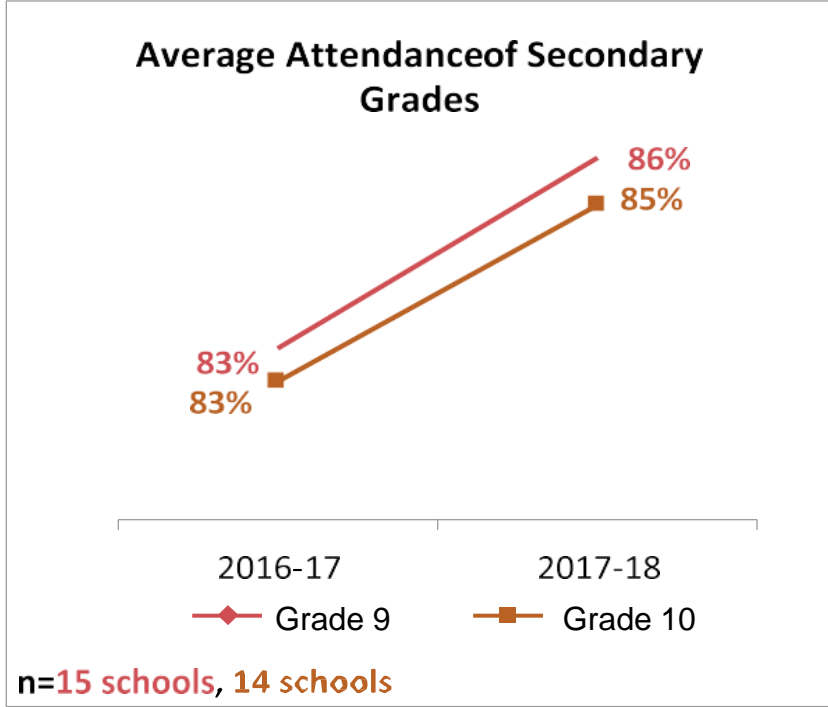|	% of Schools
Increased internet use for studies	20%
Pay more attention in class	93%
Understand Difficult Topics Easily	100%

Teachers had a positive experience of Smart Classroom. Across all the schools surveyed a large majority of teachers believed that Smart Classroom initiative helped in increasing student attention in class as well as interest in studies. At 93% of the schools, majority of teachers perceived that Smart Classroom initiative helped students improve confidence to use technology. Teachers at 87% schools shared improvement in student participation in class.

Students at all the schools surveyed shared that learning through ***K-Yan*** in Smart Classroom ***helped them understand difficult concepts.*** This is likely to reflect in the academic performance of students. ***Students at 93% schools*** also shared that K-Yan helps them retain attention in class. In addition, students at 20% schools shared increased use of internet for studies.

Smart Classroom Effectiveness for Student Attendance

Overall*, an average gain of 3% in student attendance was noticed across grades 4 to 12 within a year of Smart Classroom initiation.* In absence of any other significant intervention at the project schools, it appears *that Smart Classroom successfully transformed teaching-learning environment at the project schools and thereby lead to overall improvements in student attendance.*

Average Attendance of Primary School Grades

- 83% → 84% (Grade 5)
- 79% → 82% (Grade 4)
- 2016-17 / 2017-18
- Grade 4 Grade 5
- n=12 schools

Average Attendance of Middle School Grades

- 80% → 83% (Grade 8)
- 80% → 79% (Grade 6)
- 77% → 81% (Grade 7)
- 2016-17 / 2017-18
- Grade 6 Grade 7 Grade 8
- n=15 schools

Average Attendance of Secondary Grades

86%
85%
83%
83%

2016-17   2017-18

Grade 9   Grade 10

n=15 schools, 14 schools

Average Attendance of Higher Secondary Grades

81%
81%
79%
78%

2016-17   2017-18
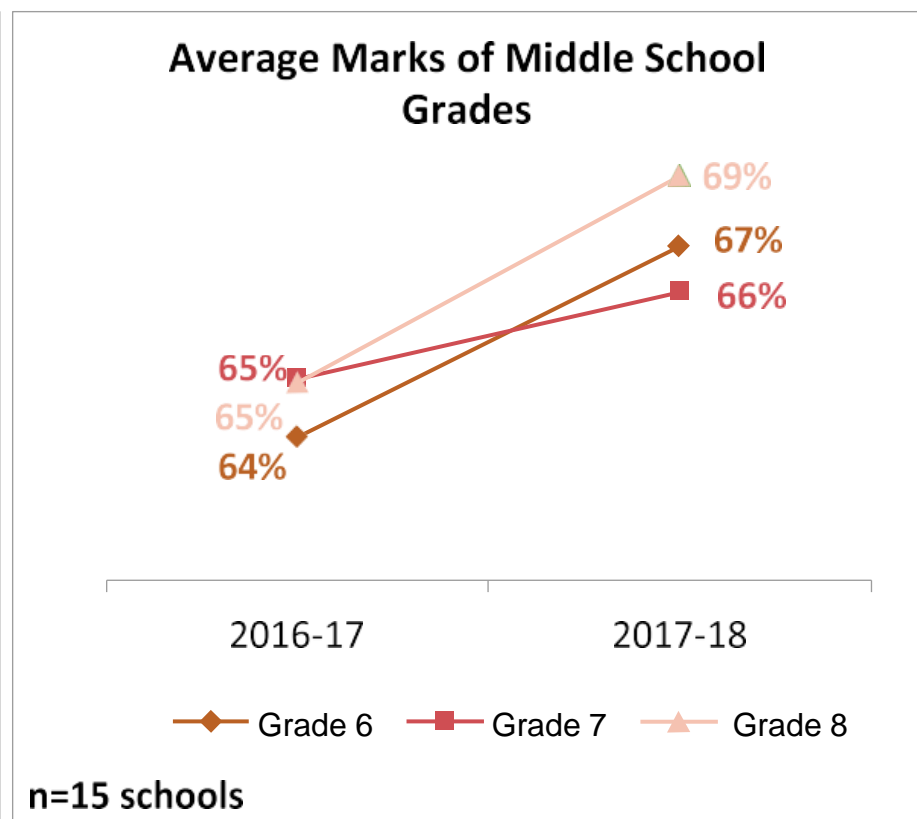
Grade 11   Grade 12

n=13 schools, 11 schools

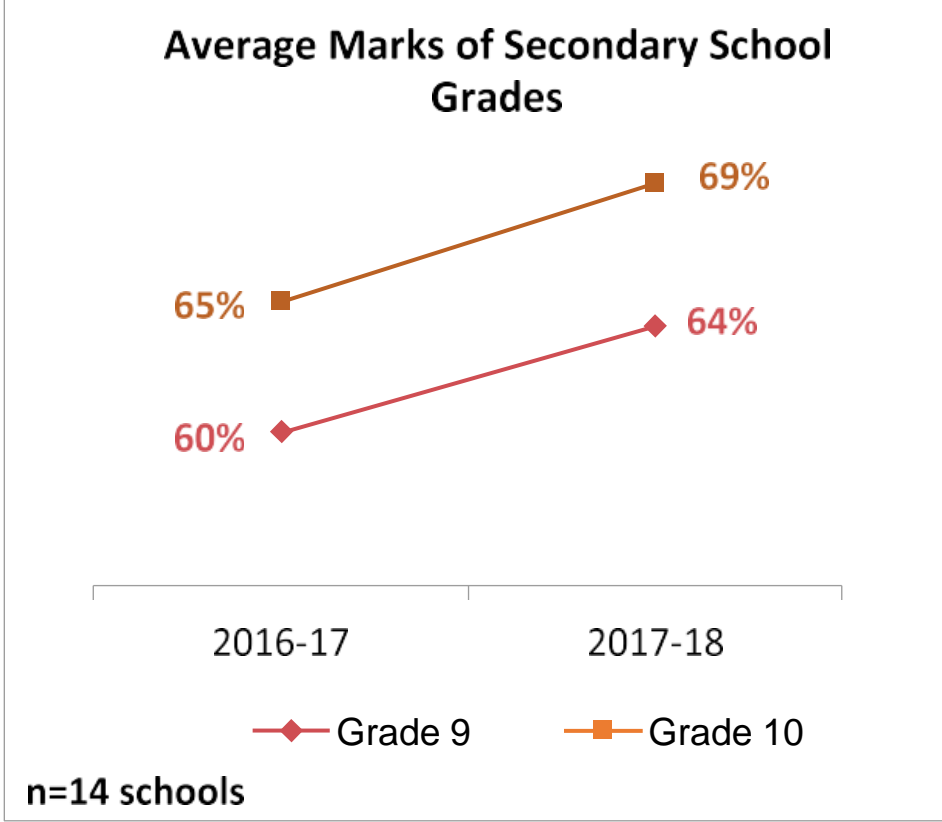| Percentage Gain in Average Student Attendance From Academic Year 2016-17 to 2017-18			
Primary Grades	2%	Grade 4	**4%**
		Grade 5	**1%**
Middle School Grades	3%	Grade 6	**0%**
		Grade 7	**5%**
		Grade 8	**4%**
Secondary Grades	3%	Grade 9	**3%**
		Grade 10	**3%**
Higher Secondary Grades	3%	Grade 11	**3%**
		Grade 12	**3%**

Smart Classroom Effectiveness for Academic Performance of Students

Factual data on annual average student scores prior to Smart Classroom implementation (academic year 2016-17) were compared with post-implementation data (academic year 2017-18) to determine effectiveness of the initiative for improvements in student performance. Overall, **an average gain of 4% in student scores was noticed across grades 4 to 12 within a year of Smart Classroom initiation.**

Average Marks of Primary School Grades

70%
69%
68%
67%

2016-17   2017-18

Grade 4   Grade 5

n= 11 schools

Average Marks of Middle School Grades

69%
67%
66%
65%
65%
64%

2016-17   2017-18

Grade 6   Grade 7   Grade 8

n=15 schools
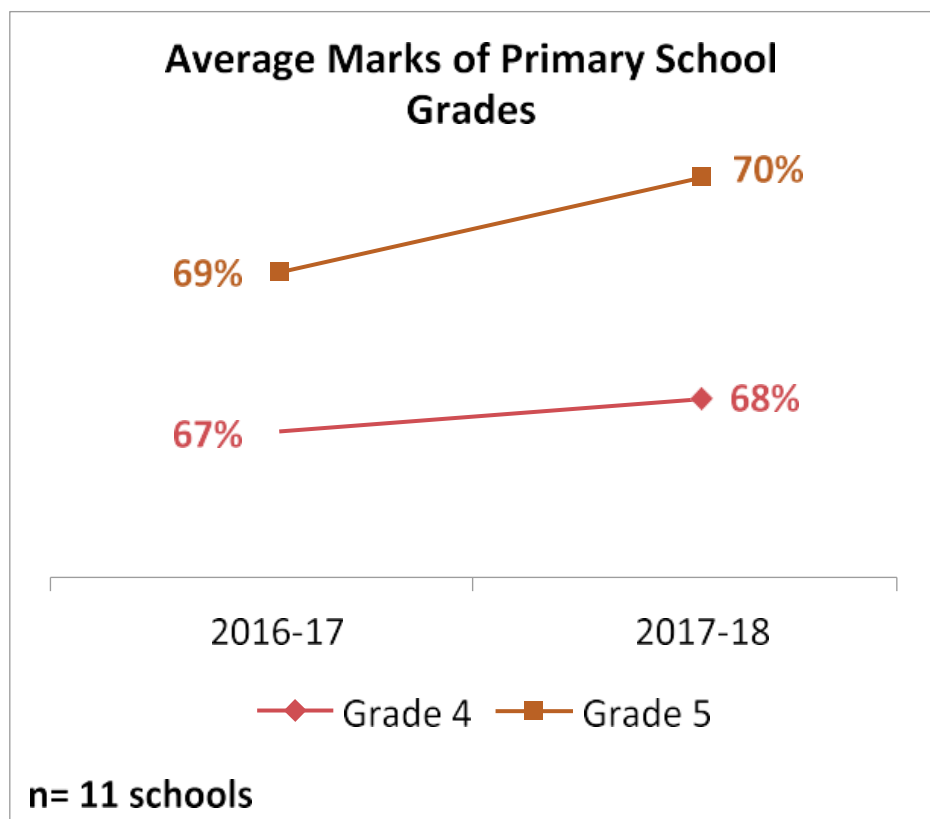
Smart Classroom Effectiveness for Academic Performance of Students
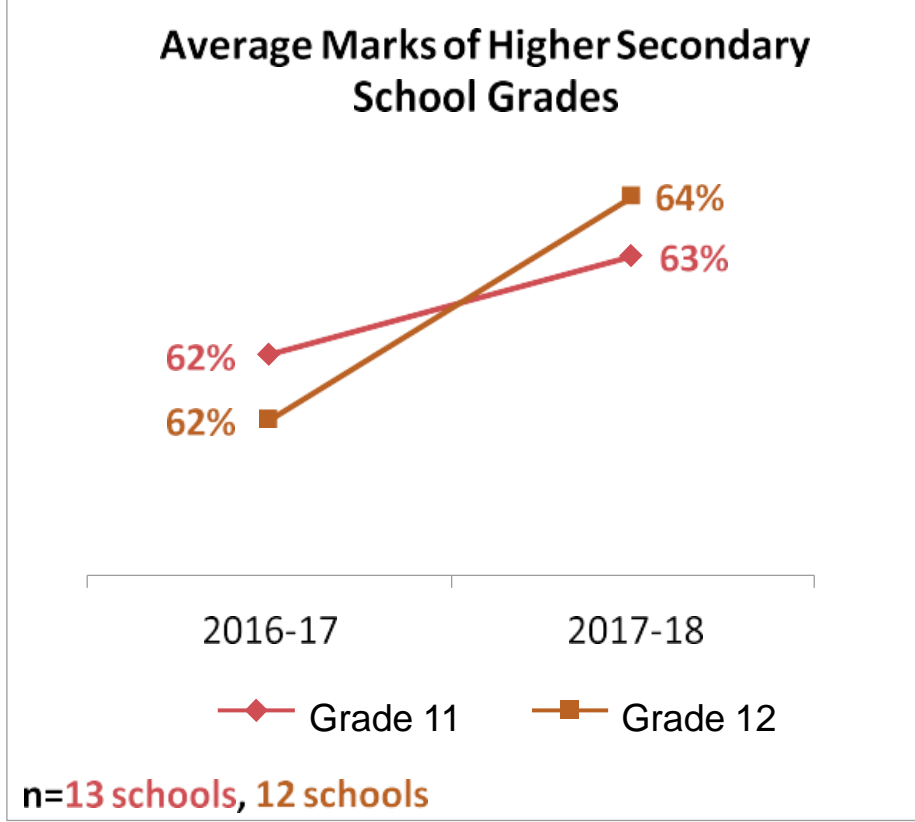
Percentage Gain in Average Student Scores From 2016-17 to 2017-18			
Primary Grades	1%	Grade 4	1%
		Grade 5	2%
Middle School Grades	5%	Grade 6	6%
		Grade 7	2%
		Grade 8	6%
Secondary Grades	7%	Grade 9	7%
		Grade 10	7%
Higher Secondary Grades	2%	Grade 11	1%
		Grade 12	3%

In absence of any other significant intervention at the project schools, it appears that **Smart Classroom successfully transformed teaching-learning environment at the project schools, improved student attendance and thereby lead to improvements in student performance.**

Key Conclusions

- Use of K-Yan for teaching almost all the subjects indicate utility of K-Yan for project schools. Apart from the use of Smart Classroom for teaching Math and Science, it is also used for teaching Social Studies, English and other subjects.

- All the teachers experienced teaching-time reduction when using Smart Classroom. Teachers affirmed 25%-50% teaching-time reduction and most Principals backed this claim by confirming reduction in time-to-task for teachers

- Almost all Principals and Teachers confirmed that the Smart Classroom project has improved student attendance; and enhanced academic performance by students is also a huge benefit

- Students at all the schools confirmed that Smart Classroom enhanced their understanding and most affirmed it helps them retain attention in class

- At the end of the academic year, 3% gains in student attendance and 4% gains in student performance are visible across the schools surveyed. Gains in performance were maximum (7%) for middle school students (grades 6-8)

Thank You!