



BGA International



CAMI Pilot Program

SUMMARY OF THE ASSESSMENT REPORT

BharatiyaVidyapeeth English Medium School, Pune
VidyaPrabodhiniPrashala, Nashik
Neeri Modern School, Nagpur

22-Nov to 12-Dec 2011



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1. INTRODUCTION

CAMI is an international high performance skills and knowledge transfer system. A unique system developed through years of continuous improvement and evolution to instantly diagnose and remediate any student.

CAMI is capable of boosting a user's performance and academic results in the shortest possible time. CAMI equipped schools are empowered with the ability to assist teachers and students efficiently when facing a range of learning and educational challenges.

In India the CAMI Pilot Assessment & Training Program has been conducted to measure the overall impact of the CAMI high performance system on all key stakeholders- students, teachers and administrators, in a limited time without any structural changes in the existing school environment.

More specifically the Pilot Program aims to measure the impact of the 'CAMI learning program' in improving student's learning, reducing teacher's burden and assisting administrators in ensuring quality outcome based education in only 12 short sessions across three very different districts within the state of Maharashtra.

2. ASSESSMENT INFORMATION

Participants	CAMI Assessment		PAPER Assessment			
	CAMI Group		CAMI Group		Non-CAMI Group	
	5 th Std	8 th Std	5 th Std	8 th Std	5 th Std	8 th Std
Pune	13	15	14	15	10	8
Nashik	17	9	18	10	17	11
Nagpur	19	17	20	13	23	13
Subjects	Maths, English and Perceptual Skills					
Training Duration	12 sessions of 30 minutes (approx.) for all subjects.					
Methodology	A control group and experimental group methodology of classic design without randomisation was followed. In each school, students from both standards were divided into two groups: CAMI Group (experimental group) and Non-CAMI Group (control group). Both groups were given pre-tests and then CAMI Group was given CAMI training and finally both groups took post-tests. A comparison of pre-tests (which provided baseline data as a benchmark) and post-tests is carried out to assess the impact of CAMI training.					
Assessment	Pre-test and post-tests included two types of tests: (1) Paper based test and (2) CAMI assessment. In addition we also conducted a pre and post attitude Survey to measure students' change in attitude due to CAMI intervention.					
Other Information	(1) Assessment topics were taken from CBSE curriculum and NCERT textbooks. (2) Paper assessment of Pre-tests and Post-tests were of the same level. (3) Comparative analysis of experimental and control groups was done based on their performance in Paper Assessment. (4) To increase the validity, the attitude survey had a mix of questions that required positive and negative responses. (5) The attitude survey was also included the first language (mother tongue) translation to facilitate right understanding of questions. (6) Analysis of marks was done by calculating average scores and using percentage and percentage improvement index and statistical analysis.					

3. OUTCOME SUMMARY

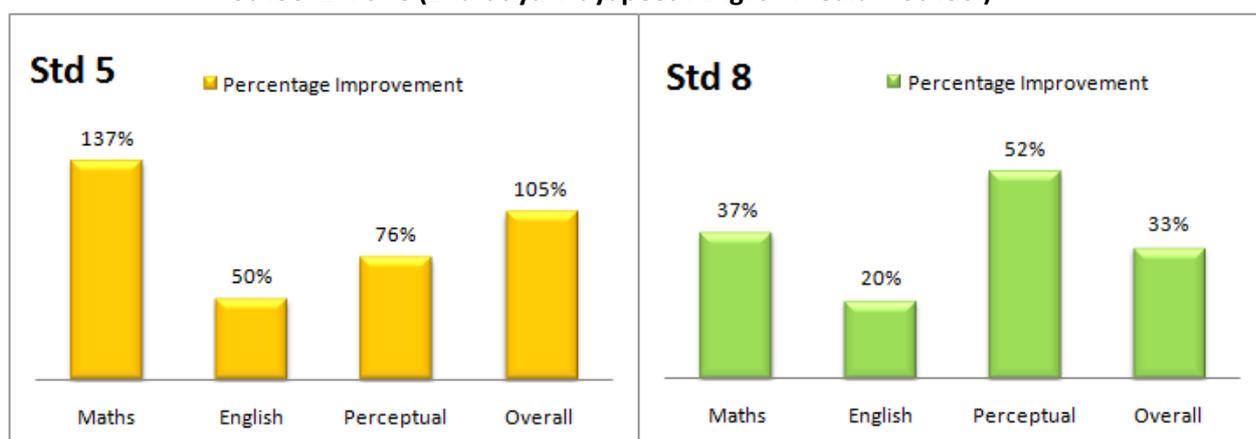
1. CAMI training has made a significant difference in the academic marks of CAMI group vis-à-vis Non-CAMI group in both paper and CAMI assessments.
2. CAMI training has impacted a positive learning attitude among the CAMI group vis-à-vis Non-CAMI group.

4. KEY ASSESSMENT ANALYSIS

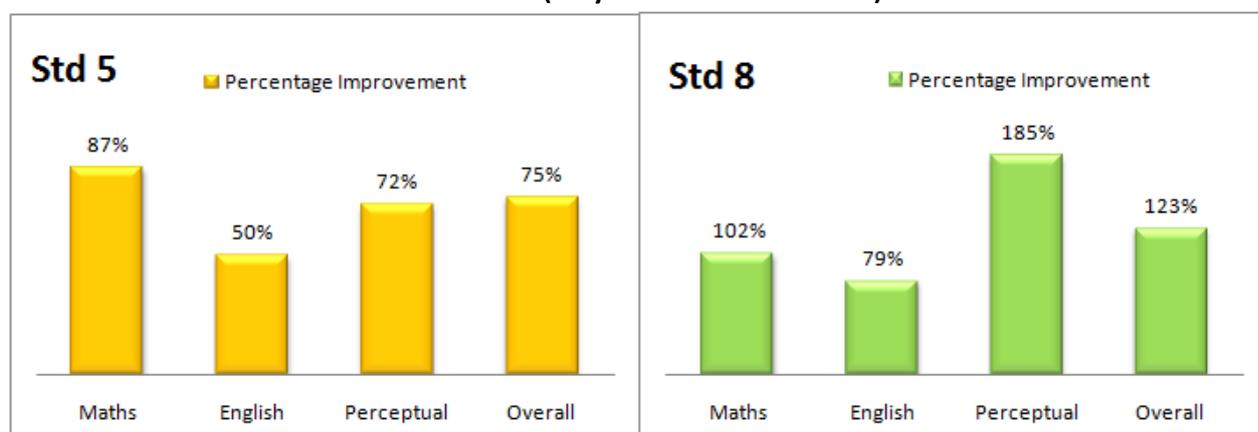
(a) CAMI Group Outperforms Non-CAMI Group

First and foremost, we wanted to measure the impact of the CAMI system on students' performance after only 12 sessions. We used the established benchmarking process for each student in both CAMI and Non-CAMI groups, and compared the final test results to determine what impact CAMI delivered in each school. The results from all three district schools are represented in the chart below, clearly demonstrating that the CAMI groups for standards 5 and 8 scored more marks and clearly outperformed the non-CAMI groups.

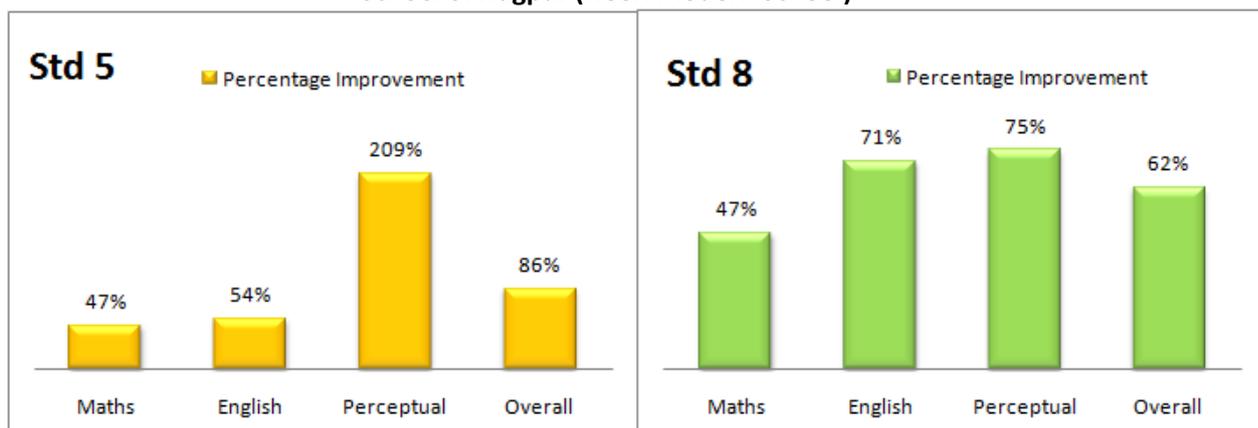
School 1: Pune (Bharatiya Vidyapeeth English Medium School)



School 2: Nashik (Vidya Prabodhini Prashala)



School 3: Nagpur (Neeri Modern School)

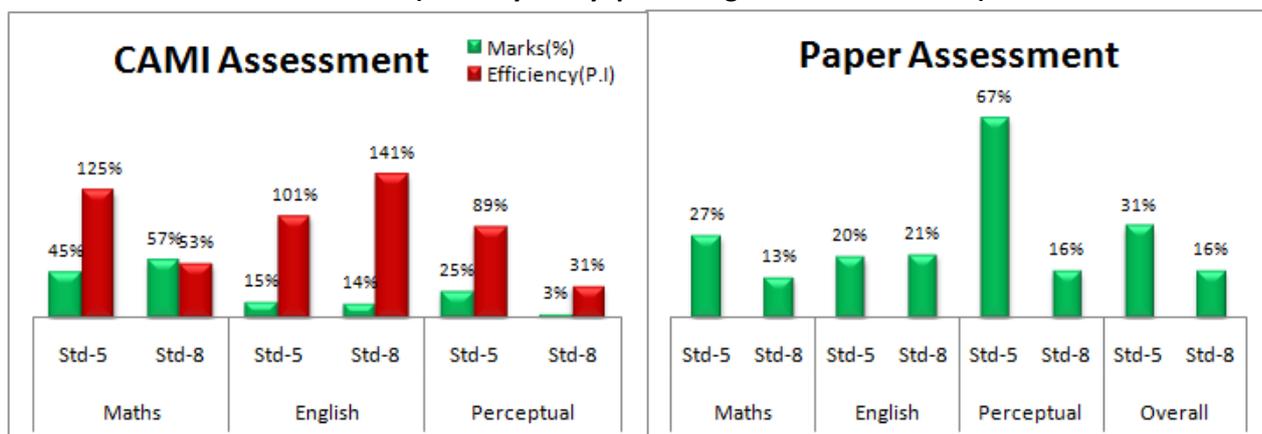


(b) CAMI is a 'results program' that rapidly drives success

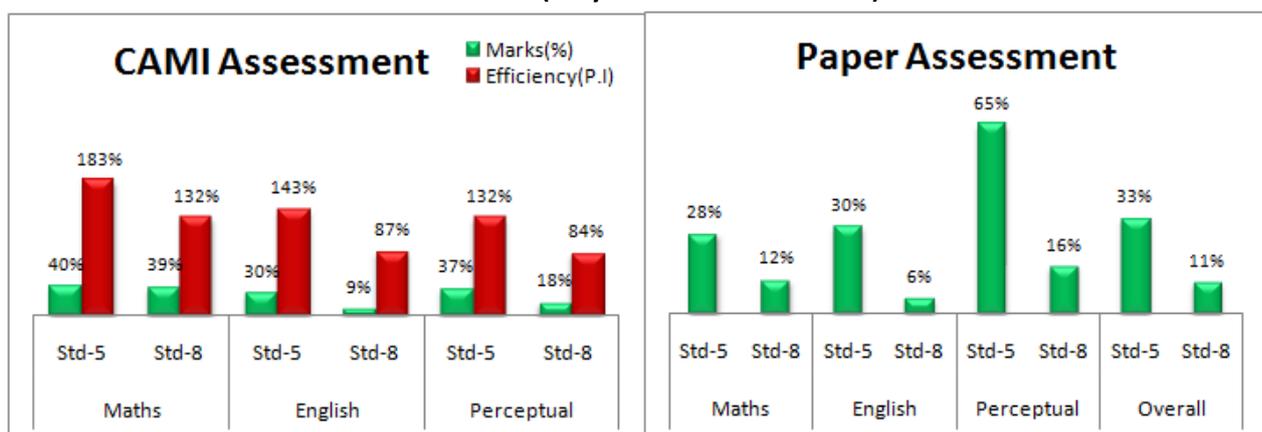
The main reason for the demonstrated performance increase of CAMI students lies in the core philosophy as a "RESULTS PROGRAM" driving success quickly whilst creating confident learners. The CAMI methodology quickly transfers knowledge and skills to students makes it easy to apply those skills into conventional paper based assessments and produce great results.

To understand this rapid success and the significant improvement in the conventional paper based assessment it is essential to focus on the performance Index (P.I) not marks alone. The marks and efficiency throughout the 12 sessions of CAMI relative to paper assessment outcomes are listed below

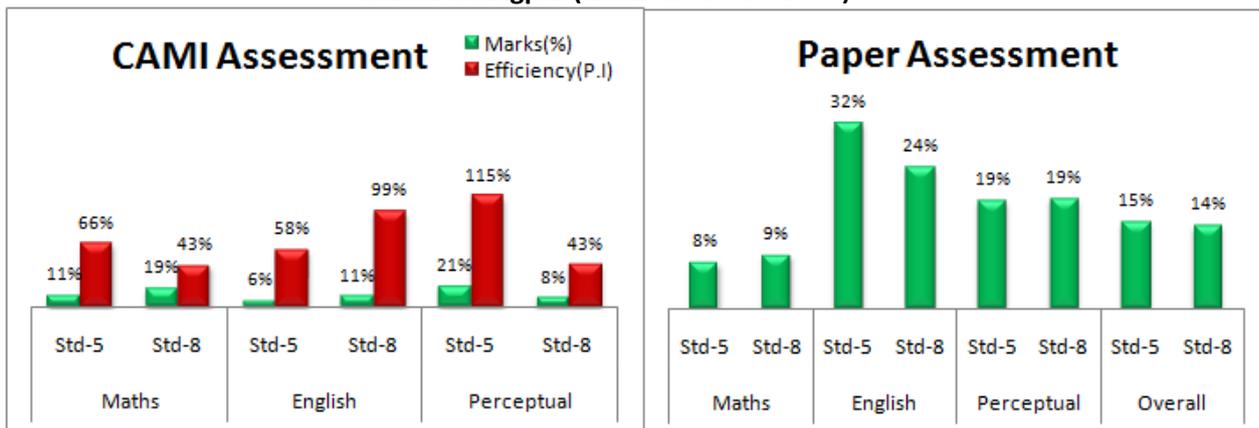
School 1: Pune (Bharatiya Vidyapeeth English Medium School)



School 2: Nashik (Vidya Prabodhini Prashala)



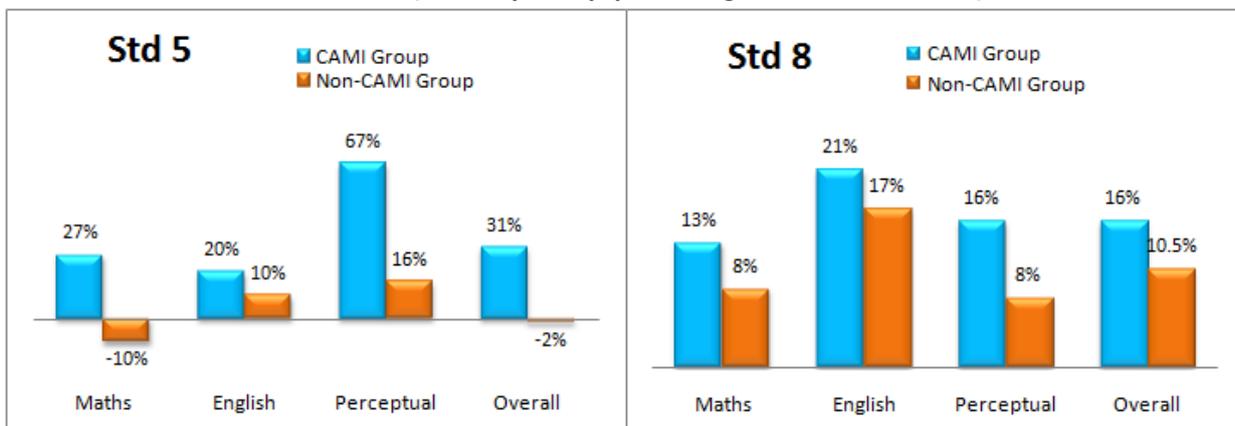
School 3: Nagpur (Neeri Modern School)



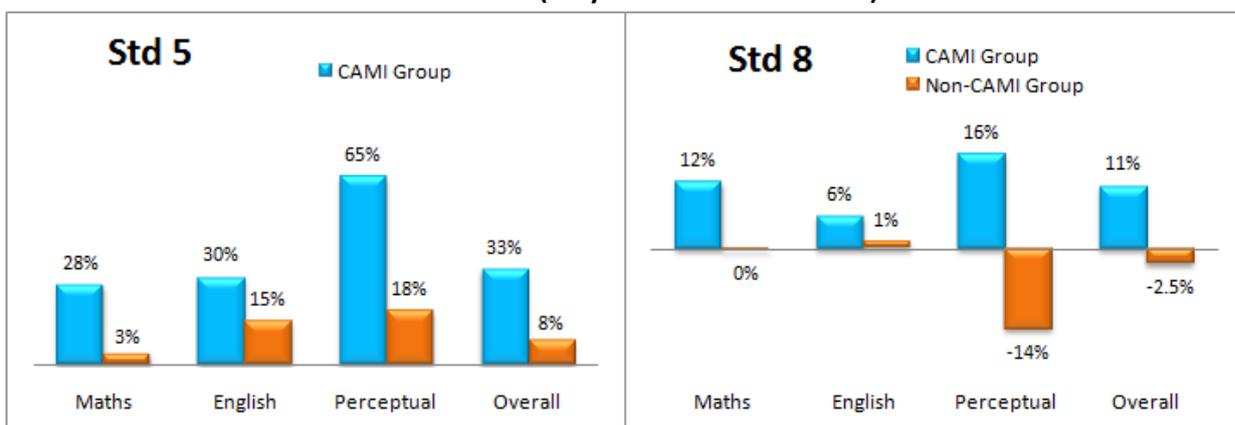
(c) CAMI produces 'confident learners'

While it is proven that CAMI students have an advantage over non-CAMI students, it is worthwhile to analyse the performance variation for each subject. The charts below represent the average improvement in marks from benchmarking to final testing for both CAMI and non-CAMI groups. It becomes clear that CAMI groups have shown significant and consistent improvement over non-CAMI groups. CAMI practice creates confident learners igniting their drive to excel though efficient use of the program.

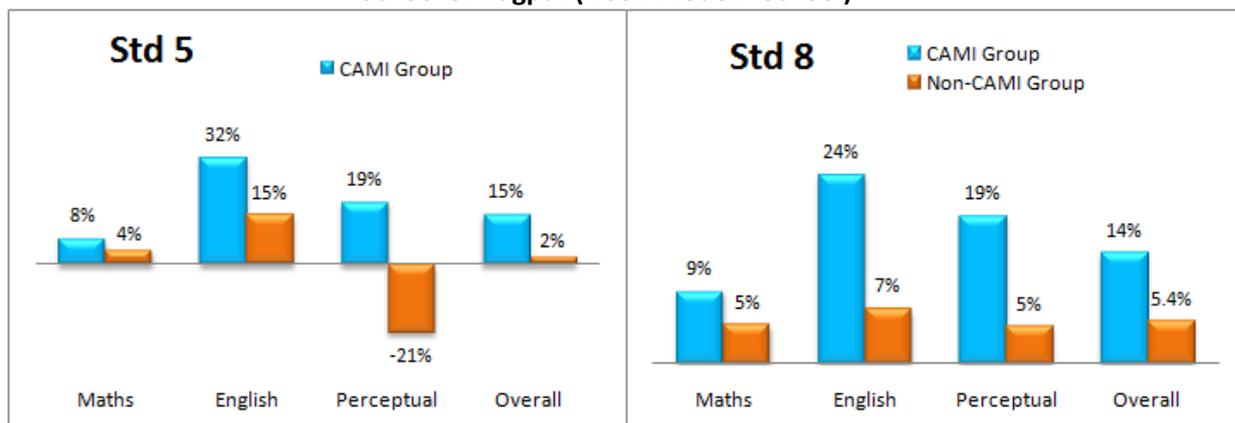
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School 2: Nashik (Vidya Prabodhini Prashala)



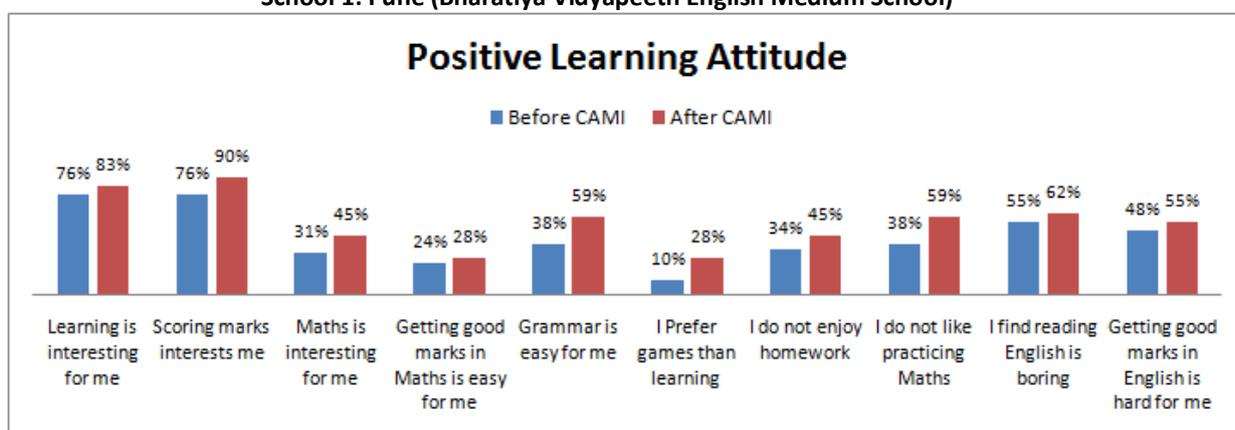
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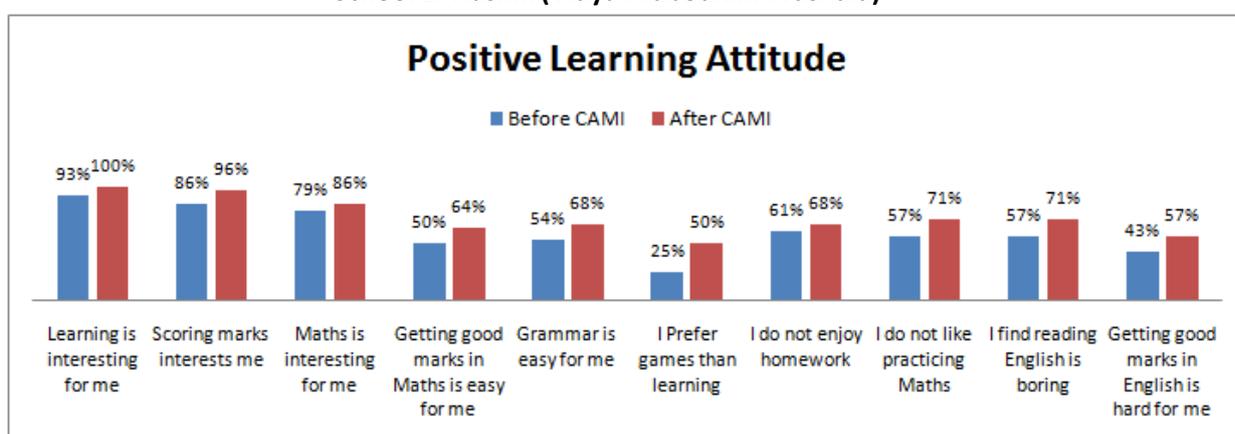
(d) CAMI learners are 'creative thinkers'

For learning to happen, a student has to cooperate in the process. A student's cooperation largely depends on his/her attitude towards learning. Over the years, CAMI has developed a niche in addressing this crucial area. Importantly, CAMI's user interface and game like methodology motivates children to challenge themselves in the learning process and develop a positive learning attitude towards difficult subjects. The below charts substantiate students' change in attitude before using CAMI and after using CAMI. This clearly explains the underlying attitudinal reason behind the massive improvement the CAMI group has shown in the tests.

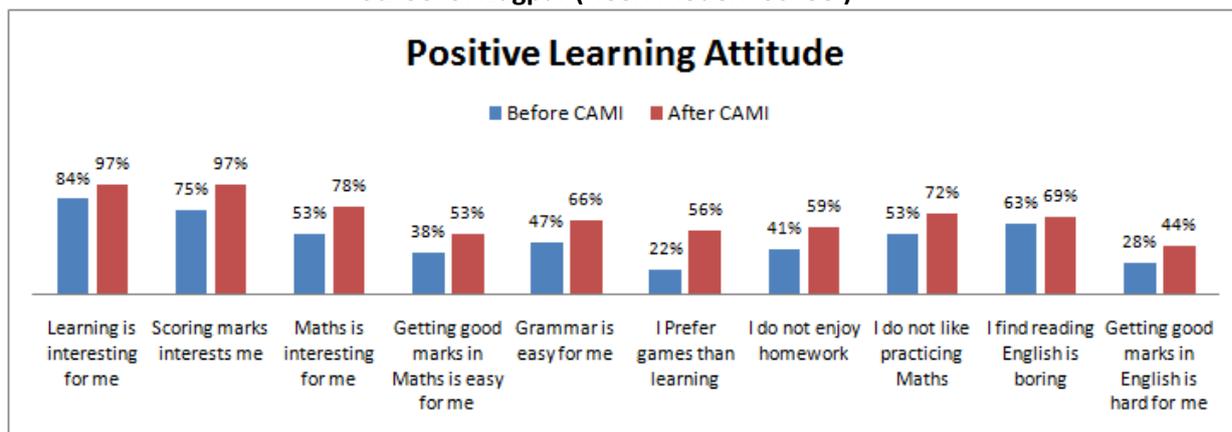
School 1: Pune (Bharatiya Vidyapeeth English Medium School)



School 2: Nashik (Vidya Prabodhini Prashala)



School 3: Nagpur (Neeri Modern School)



5. STATISTICAL ANALYSIS OF STUDENTS' PERFORMANCE

A simple Analysis of Variance (ANOVA) test has been carried out to determine the statistical significance of the student marks belonging to CAMI and Non-CAMI groups in both pre-test and post-test. The findings for both these groups presented below highlight the impact of CAMI training.

As seen in the tables below, the average marks of Non-CAMI groups are fairly similar in pre-test and post-test. At the same time, the marks obtained by CAMI group in pre-test and post-test are significantly different. The results of the ANOVA test are listed below in three tables representing each school and group within a Maharashtra district.

School 1: Pune (Bharatiya Vidyapeeth English Medium School)

Std	CAMI Group			Non-CAMI Group		
	Pre-test	Post-test	Significance	Pre-test	Post-test	Significance
Std 5	25.8%	33.6%	Significant at 95%	28.2%	28.7%	Not Significant
Std 8	30.6%	35.3%	Significant at 95%	27.8%	31.7%	Not Significant

School 2: Nashik (Vidya Prabodhini Prashala)

Std	CAMI Group			Non-CAMI Group		
	Pre-test	Post-test	Significance	Pre-test	Post-test	Significance
Std 5	25.4%	33.7%	Significant at 95%	32.6%	35.3%	Not Significant
Std 8	34.6%	38.3%	Significant at 95%	34.0%	33.1%	Not Significant

School 3: Nagpur (Neeri Modern School)

Std	CAMI Group			Non-CAMI Group		
	Pre-test	Post-test	Significance	Pre-test	Post-test	Significance
Std 5	29.5%	33.9%	Significant at 95%	34.9%	35.6%	Not Significant
Std 8	32.2%	36.8%	Significant at 95%	36.8%	38.8%	Not Significant

Key Analysis:

1. The difference in performance in pre-test and post-test for CAMI group of 5th and 8th are 'significant at 95%'. That is, the CAMI group of 5th and 8thstd have done significantly better from pre-test to post-test.
2. The difference in performance in pre-test and post-test for the Non-CAMI group of 5thstd and 8thstd are 'not significant'. That is, the Non-CAMI group of 5th and 8thstd did not show significant improvement from pre-test to post-test.

Conclusion: Exposure to CAMI training has contributed to improvement in marks in paper based pre-test to post-test than the Non-CAMI group who did not go through CAMI training.

6. CONCLUSION

As a result of CAMI Training,

- a) The CAMI group has improved in marks and efficiency (speed) in computer based CAMI assessment and in paper based assessment.
- b) The CAMI group has performed better than the non-CAMI group in Math, English and Perceptual Skills in Paper assessment.
- c) The CAMI group has shown significant percentage improvement than the non-CAMI group in Math, English and Perceptual Skills in Paper assessment.
- d) The CAMI group of students have developed positive attitude towards general learning and subjects like Math and English.
- e) The overall positive attitude change acquired by the CAMI group is significant than the non-CAMI group.

In Summary:

The results of the pilot program confirm that the Schools that use CAMI computer learning in their specific curriculum can improve student's learning significantly while reducing teacher's burden and assisting administrators in ensuring quality education. Overall, in the community CAMI produces confident learners who make parents happy and delivers brand equity to those schools that use CAMI program. In short schools that use CAMI outperform non CAMI schools not only academically, the learning environment is enhanced in those schools.