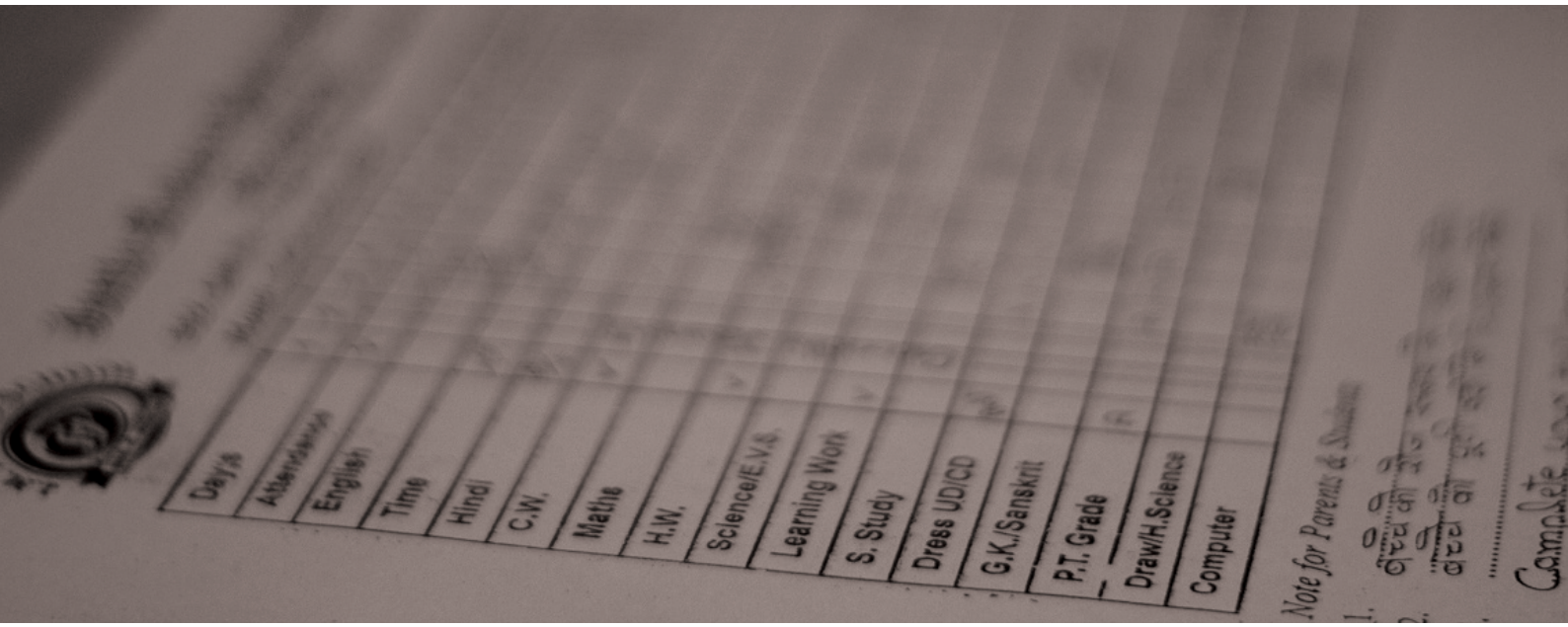

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A discussion on education outcomes in Budget Private Schools based on data from large-scale assessment studies

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The phenomenal growth in the size of the budget private schools (BPS) segment coupled with the decreasing student enrolment in government schools has been reported by many studies in recent years (e.g. World Bank 2009, Young Lives 2014, UDISE 2014-15). While various reasons such as lower teacher absence, lower pupil to teacher ratios, less cross-grade teaching, fewer holidays, longer school days and English-medium education in BPS are attributed to this large migration of poor students from government schools, one cannot rule out that this is also testimony to the common man's belief that private sector provides better quality education. Parents were poor clearly reveal their aspiration, preference and choice when they incur considerable expenditure to send their child to a private school. In a private school, parents spend money on various fees, uniforms and textbooks, all of which are free in a government school (Sarva Shiksha Abhiyan 2015).

But, do BPS live up to this promise?

Let us examine if children are learning better in these schools. A benchmarking study[1] in 2013 of

[1] *MSDF Benchmarking Study 2013. This study by Educational Initiatives covered GOV, BPS and HFP schools across 6 states. About 15,000 students each were tested from BPS and HFP in Delhi, Bangalore, Ahmedabad, Hyderabad, Dharwad and Rajkot. BPS were schools with a monthly fee of about Rs 1,000 while HFP schools had a fee range of Rs 2,000 to Rs 8,000.*

Large-scale assessment studies show that educational outcomes in BPS are slightly better than government schools, declining as one moves to higher classes. Recent data suggests that government schools are catching up, and it is therefore important for BPS to focus on quality of learning as their unique selling proposition moving from 'rote-learning' to learning based on understanding of concepts.

government (GOV), budget private (BPS) and high fee paying private (HFP) schools across 6 states in India shows that there are statistically significant differences in the average performance levels of the 3 school categories. The study tested students of classes 3-7 in Language (medium of instruction) and Mathematics. The results showed that students of *GOV perform the lowest compared to HFP, while BPS are ahead of GOV*. Average scaled scores across classes in Language ranged from 586-607 (HFP), 500-482 (BPS) and 470-473 (GOV), while in Mathematics they ranged from 574-615 (HFP), 501-491 (BPS) and 475-470 (GOV) (see Figure 1).

The learning gap between HFP and BPS was seen to widen as students moved to higher classes in both Mathematics and Language, with raising scores in HFP accompanied by falling scores in BPS for the respective classes.

However, a comparison of BPS with GOV revealed that the Language learning gap between these schools narrows as students move to higher classes, with falling scores in BPS accompanied by slightly rising scores in GOV. The Mathematics learning gap between BPS and GOV is consistent across classes with both showing similarly falling scores.

Figure 1: Language and Mathematics performance in classes 3-7

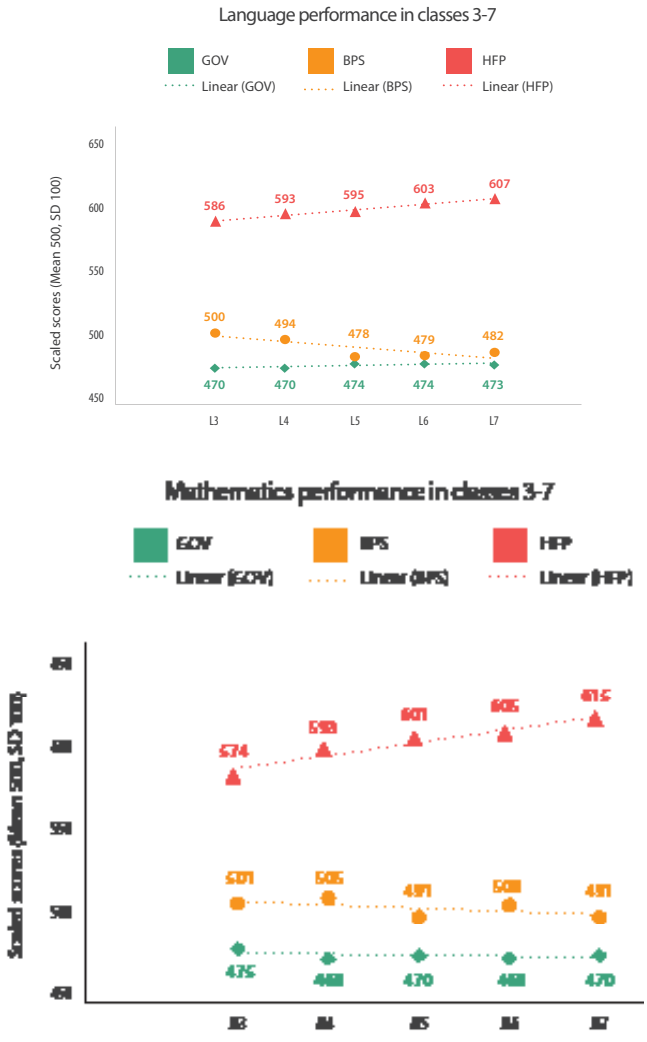
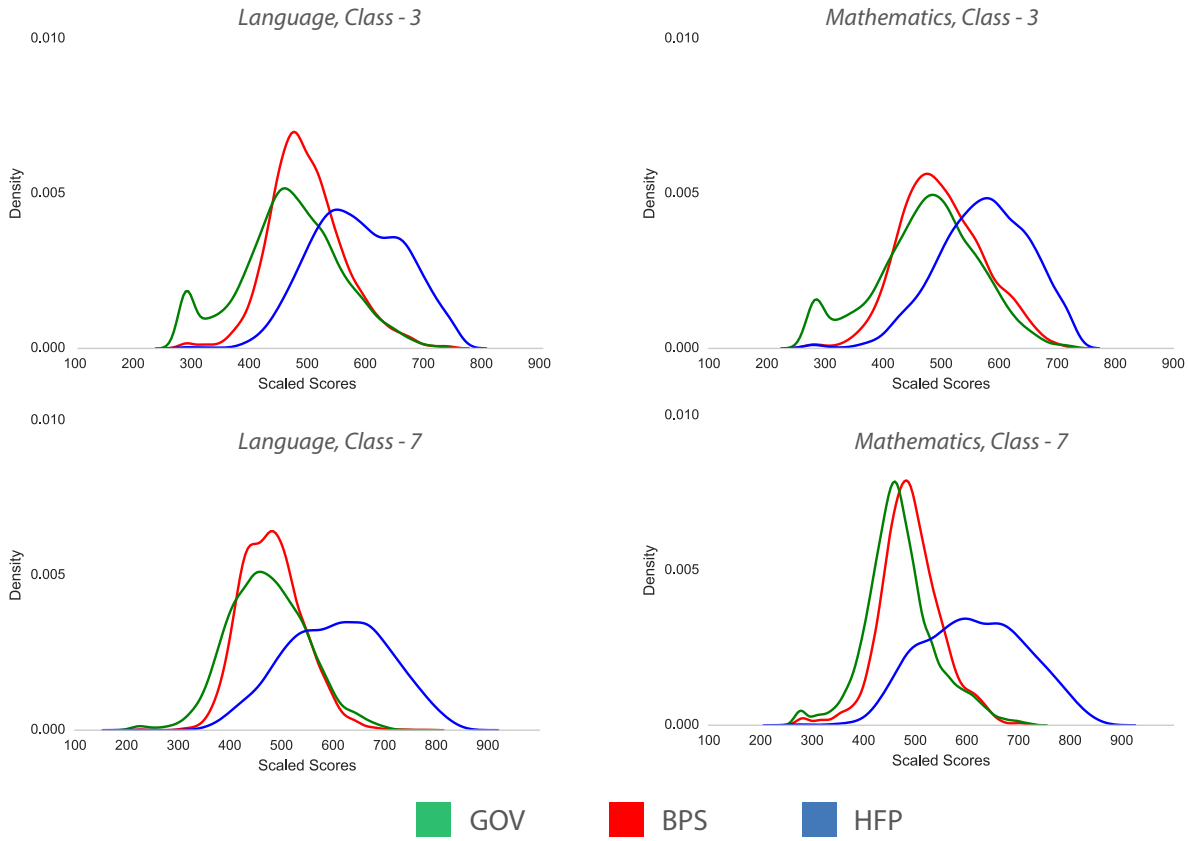


Figure 2 Student score distributions across school categories



The average performances of HFP and BPS were found to be different with effect sizes ranging from 1.0 to 1.5 standard deviations across all classes and subjects, while the average performances of BPS and GOV were found to be different with effect sizes ranging from 0.1 to 0.5 standard deviations across all classes and subjects.

The density plots of student score distributions (Figure 2) from the benchmarking study also reveal that student performance in BPS and GOV have a large overlap indicating that the learning levels for most of their students are similar and not as different as they are with students in HFP.

A large proportion of BPS and GOV student scores lie at the lower end of the scale in each class-subject where HFP students are hardly present which indicates that there is a significant difference in the minimum competency level of HFP students compared to BPS and GOV students in all classes.

The scores in BPS and GOV are more clustered than HFP which have a wider scatter of scores. This trend becomes stronger as students move from lower classes to higher classes. When read with overall performance, this means that as one moves to higher classes, more students are uniformly performing poorly in BPS and GOV, while in HFP some are progressing and some are being left behind.

What is the nature of student learning in BPS?

Research on student learning in Indian government and private schools have pointed out that the core problem in India is rote learning. Rote learning happens when students can recall facts and demonstrate routine skills without understanding their basis or when to use them. Students who rote learn will not be able to handle even routine problems if the questions are phrased in a slightly different form. Such students will also not possess higher order skills such as critical thinking or creativity and will not be able to apply what they learnt in the real-world context. National Curriculum Framework (NCERT 2005) notes that we have bartered away understanding for memory-based, short-term information accumulation.

This must be reversed and we need to give our children some taste of understanding.

Learning outcomes data in BPS from several large-scale assessment studies[2] show that students in these schools also practice rote learning. While there is some evidence of procedural learning or learning by rote, conceptual understanding is considerably weaker in these schools. Students also harbour several misconceptions in their understanding of concepts (see Table 1).

Analysis of student performance in question pairs testing procedural and conceptual understanding

Conceptual question	Rote/Procedural question
37 × 8 is the same as _____ A. 37 × 5 + 3 B. 30 + 7 × 8 + 7 C. 40 × 10 - 3 × 2 D. 37 × 5 + 37 × 3	*6 4* *× 4* _____ _____
Class 5: 4.6%; Class 6: 3.0%; Class 7: 9.1%; Class 8: 14.0%	Class 5: 59.8%; Class 6: 67.2%; Class 7: 76.1%; Class 8: 79.1%
This question checks for an understanding of the concept of multiplication.	*This is a straightforward multiplication question.*
The same number must be filled in both the boxes below: *25 ÷ (box) = 1 x (box)* *What is the number? Tick it.* *A. 5* *B. 1* *C. 0* *D. 6*	7 ⟌ 56 *Quotient =* _____ *Reminder =* _____
Class 5: 18.6%; Class 6: 19.8%; Class 7: 36.0%; Class 8: 40.4%	Class 5: 28.5%; Class 6: 41.5%; Class 7: 45.1%; Class 8: 49.8%
This question checks for an understanding of the concept of division as a reverse of multiplication.	*This is a straightforward division question.*

[2] *Data for question examples in table 1 are from EI assessment studies of budget private schools in Hyderabad.*

Examples of students' misconceptions

Class 3	A	B	C	D
GOV	33.6	15.0	11.8	15.6
BPS	25.3	31.8	14.5	16.4
HFP	49.1	24.3	9.3	14.8

'Habits' are some actions that _____. Tick the correct answer.

A. we do often

B. we do sometimes

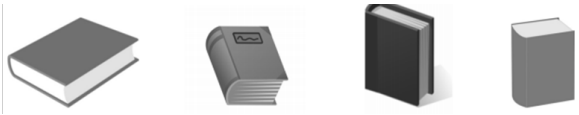
C. we do only once

D. we should not do

Misconception explanation: According to the results, apart from the GOV students where 33.6% chose the correct answer 'A' and around 18.4% did not attempt it, students from BPS and HFP were confused between the options A and B. The problem would have been due to the word 'often'. They might not have understood the meaning of this word and thus chose 'B' i.e.' sometimes'.

Class 7	A	B	C	D
GOV	60.0	21.0	7.0	5.0
BPS	70.0	15.0	7.0	4.0
HFP	45.0	44.0	4.0	6.0

Which of the following books is the heaviest?



2.19 kg A. | 2.3 kg B. | 2.08 kg C. | 2.2 kg D.

Misconception explanation: All the three categories' performance is very low in this simple decimal comparison question. Most of the students have chosen option A which is a prevalent misconception among all students where they take the digits after the decimal point as whole numbers. It is also possible that they may have treated the given numbers as whole numbers and compared them.

Are higher test scores in BPS compared to GOV due to teaching quality?

While one cannot dispute the fact that one of the key environmental factors associated with higher levels of learning is the student's higher socio-economic background, in the case of BPS these are likely to be accompanied by other factors such as increased teacher presence, lower pupil-teacher ratio, higher parental interest, self-selection, sorting of economically advantaged kids into private schools etc. The evidence that improved student performance in BPS is due to the schools themselves and the teaching it provides is yet to be conclusively proven.

Is the lead in student test scores that BPS have over GOV maintainable?

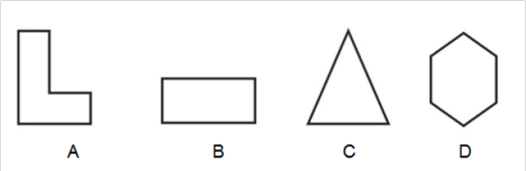
It may be worthwhile to note that the emptying of government schools and poor learning levels has spurred many states such as Rajasthan, Maharashtra, Delhi, Haryana and Andhra Pradesh to implement large intervention programmes in their government schools aimed at improving student performance. *India Today* (31st March 2013) in its article "Government schools outshine private schools in Delhi" stated that Delhi's government schools have outperformed private schools in the Central Board of Secondary Education class 10 results; government

schools had a pass percentage of 99.45 percent while the private unaided and aided schools stood at 99.17 and 97.26 percent respectively. ASER 2014 reported that Haryana has reversed its declining trends in literacy and numeracy with an improvement of five percent in the number of students who could do division and ten percent improvement in number of class five students who could read class two text. Similarly, a state-wide assessment study in Rajasthan by Centre for Science of Student Learning (CSSL) found that the student performances on several benchmarking test questions were higher compared to other studies.

ASER 2016 showed that government schools performed better as compared to private schools and states such as Maharashtra showed improvement in test scores in government schools compared to previous years. All this points out that the common belief that achievement of children from BPS is better than that of GOV may no longer hold true, as GOV are getting their act together to pull up their student learning outcomes.

Why is it important for BPS to focus on quality of learning as their unique selling proposition (USP)?

The mushrooming growth of the BPS segment is fuelled by the common man's frustrations the quality of government school education. This is coupled with the societal beliefs that private school education is elitist as paying a fee is prestigious and a symbol of upward mobility. Parents also feel that getting their wards admitted in such schools will provide a gateway to government jobs and secure their stake in the growing economy. While the initial growth of BPS in garnering percentage share of student enrolment has been propelled by these, it is worth pondering if the segment will continue to grow and remain relevant in a changing environment where government schools are showing signs of improving student learning outcomes.

Meena: _____ painted this picture? Naveen: Sneha painted this picture. A. How B. Who C. When D. Where	Which of the following figures is a rectangle? 
61% (Class 4, CSSL, Rajasthan, 2016-17)	*68% (Class 6, NAS); 76% (CSSL, Rajasthan, 2016-17)*
Question: _____ tore this paper? Answer: Srikant tore it. A. How B. Why C. Who D. How many	Which is the largest three-digit number using the digits 2, 3 and 4 only once? A. 234 B. 432 C. 444
National: 40%; State: 32% (Class 4, SLS, 2010)	*43% (Class 4, NAS), 46% (CSSL, Rajasthan, 2016-17)*

The USP of BPS has been to provide quality education at an affordable price. BPS compete with GOV to a large extent as the population it attracts are those migrating from the GOV. While BPS provide far better school facilities (more electricity, more computers, more toilets) and lower pupil-teacher ratios (17:1 rather than 26:1), it is important to note that many of these schools do not meet all the Right to Education norms on infrastructure (playground, classrooms etc). However, the schools operate at a third of what GOV spend per student. This is possible as BPS hire younger, less-educated teachers (who are more likely to be female and from the local community) and pay substantially lower wages. Private school teachers in Andhra Pradesh earn about one-sixth of what their GOV counterparts do (Muralidharan and Sundararaman 2013).

Any advantage that BPS so far has on better school facilities compared to GOV is likely to fade with successful implementation of national and state schemes like *Swachh Bharat Abhiyan* (that works towards clean and adequate number of school toilets) and promotion of digital literacy in schools. On the other end, if BPS would like to compete with the superior facilities that HFP provide their students, they will have to hike their fees which will push them out of the affordable school segment. Hence, it is prudent for BPS to use better quality learning rather than better facilities or infrastructure as their unique differentiator from GOV or HFP.

Which aspects require focus, to ensure quality of student learning in BPS?

Leverage the power of diagnostic learning assessment for gathering actionable insights into the learning problem.

The starting point to any improvement journey is to know where one stands in terms of learning through an assessment of student learning. However, unlike the traditional school exams or Board exams that provide information on "*how much the students scored*" and "*how many children passed*", BPS need to use diagnostic learning assessments that inform on "*what the students learnt*" and "*how well they learnt*". The data from such assessments empower the teacher to know student learning issues precisely. In the absence of such granular information on what students know and are able to do and where exactly are the learning gaps, even conscientious teachers who teach sincerely in classrooms will not be able to do much to improve learning, except teach the same way they usually do or provide more drill and practice to the students.

Teach for 'understanding' and not 'marks'.

While Board exams are seen as driving the rote nature of learning in our schools with their excessive focus on marks, one needs to understand that getting high marks in exams is not the same as good quality learning or learning with understanding. Our schools are full of examples of rote learning with students knowing how to calculate area but not really relate it to real life, who can recall definitions of gravity but not really understand or apply it, and who cannot use language functionally after studying it for many years. Rote learning is deceptive and gives an appearance that all is well as students score high in exams. Unless students learn with deep conceptual understanding, they will not be able to acquire higher order skills such as critical thinking, creativity and learning to learn. In this 21st century, which is touted as the knowledge century and the speed of innovation is faster than ever before, students' ability to evolve as thinkers depends on their learning with understanding, and hence the objective of teaching has to be toward understanding and not marks.

Enhance teachers' skills with training that targets the specific gaps they encounter in the classroom.

Teacher quality is closely related to student achievement, and teachers are also likely to have the same misconceptions as their students. Anecdotal evidence points out that for private schools, investing in teacher training is a double-edged sword. Teachers who get trained demand better pay or leave for other opportunities. On the other hand, if schools do not invest in teacher training, then improving student learning outcomes becomes a distant target. Hence, the answer is not to stop training but to come up with innovative models of teacher recognition and compensation that will retain trained teachers. Training can also be tuned for a higher ROI by being targeted to address specific gaps or misconceptions of teachers.

Orient school leadership for data driven decision making.

Ability of school leadership to use assessment data to set targets for learning achievement and to systematically monitor learning improvement is a key influencer on the

journey of a school in its 'poor-fair-good-great' continuum of school improvement. School leadership of BPS should be oriented for effective use of data in their decision making as these would be informed decisions and will have a larger potential to address the gaps effectively.

By prioritising learning, BPS could well ensure that they deliver on their promise of better quality education.

This is the way for these schools to grow and build on the goodwill they have received from the public so far.

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