



Improving Teacher Professional Development

Assessing Impact

This issue focuses on the findings of a key study commissioned by the Kusuma Trust UK on the impact of a teacher professional development programme on student attainment in secondary schools that are part of the Kusuma Schools Partnership Initiative (KSPI)¹. The study informs Kusuma's strategic objective to enhance children's life chances through improved access to quality secondary education.

Evidence shows that most children in India leave primary school without having mastered basic literacy and numeracy skills (ASER, 2012). This results in significant knock-on effects at secondary level when schools struggle to cope with the lag in students' basic knowledge and skills. There may also be problems with the quality of teaching, supply of teachers, pedagogy and curriculum design in secondary schools (Banerjee et al, 2013).

Against this background, Kusuma developed the Udbhav programme (meaning 'source' or 'creation' in Sanskrit) to promote the professional development of Science, English and Mathematics teachers in secondary schools in Sambalpur and Hardoi districts in order to improve student attainment.

The Udbhav Programme

Udbhav is delivered by the Kusuma Foundation in Hardoi and by Agranee Jana Kalyan Anusthan (AJKA)² in Sambalpur. KSPI schools in Hardoi and Sambalpur receive an *intensive level of support*. This includes written teaching and learning materials in English, Science and Maths tailored to the needs of Classes 9 and 10; training for teachers using an interactive approach and the use of subject-specific teaching materials; regular mentoring support for teachers delivered by a District Resource Group (DRG) of experienced educators; and access to relevant audio-visual and digital materials to support teaching and students' independent learning.

Light touch support is provided to the remaining 67 government schools in Hardoi and 103 government schools in Sambalpur. This includes training in interactive teaching methods; one set of subject-specific teaching materials per school; access to subject-specific teaching materials at Kusuma Resource Centres in each district; and one mentoring visit from a DRG member. A further 25

government schools in Sambalpur serve as *controls* and receive no support.

Baseline Assessment

The purpose of the evaluation is to answer two key questions: to what extent does the implemented model of teacher training and mentoring lead to change in classroom practices? Do changes in teaching practice produce gains in student attainment?

To answer these questions, a baseline assessment of student learning levels in Classes 9 and 10 in English, Maths and Science, and observations of teaching practice were conducted by EduLever, an independent consultancy based in India, with the support of Dr Radhika Iyengar at the University of Columbia. The evaluation was undertaken in all 50 KSPI (25 in Hardoi and 25 in Sambalpur) schools receiving intensive support, 25 schools receiving 'light touch' support (in Hardoi), and 25 schools receiving no support (in Sambalpur).³ A total of 12,388 students from Classes 9 and 10 took part in learning assessments, representing 62% and 67% of students enrolled in the school sample. A total of 255 lessons across both districts were observed. The evaluation was conducted between October 2014 and January 2015. Follow-up evaluations will be conducted annually to track change in student attainment and teaching practice.



A teacher training session at the Kusuma Resource Centre in Sambalpur
Photo: Sam Strickland

¹ KSPI includes 25 government schools each in Hardoi and Sambalpur districts.

² AJKA is a voluntary organisation based in Odisha that specialises in education.

³ For more detailed information on the Udbhav evaluation, please see the research summary at <http://www.kusumatrust.org/about-us/publications>

What is the impact of Udbhav on teaching practice?

There is promising evidence that the Udbhav programme has a positive impact on teaching practice. Overall, *teacher quality* (measured on the three key domains of lesson preparation, student participation, and facilitation skills) was higher in KSPI schools compared with *light touch* or *control* schools.

More top-scoring teachers were in KSPI schools than *light touch* or *control* schools. However, at the lower end of scores, there is little difference between teachers who have or have not participated in Udbhav. This suggests that the programme may have limited or no impact on the poorest performing teachers.

In interviews, key stakeholders (e.g. teachers, DRG members, Kusuma staff and district education officials) cite examples of students becoming more actively involved in classroom activities as a result of Udbhav. Evidence from interviews with students gives strong support for this view: a far higher proportion of students in KSPI schools said they were actively involved in lessons compared with their peers in *light touch* and *control* schools.

“We now do experiments in the classroom during Science classes. Similarly, we are given words to actively make stories and play ‘word antakshari’⁴ during our English lessons”

A student from a KSPI school, Hardoi

Does Udbhav lead to improved student attainment?

In Hardoi, student scores in English, Maths and Science are lower in KSPI schools compared with *light touch* schools. In Sambalpur, student scores are similar for KSPI schools compared with *control* schools.

In both districts, students in all schools (KSPI, *light touch* and *control*) have performed better in Science than in Maths and English and Class 9 students performed better than Class 10 students. There was no or low positive correlation between teacher performance and student test scores.



Students participating in a practical science experiment with their class teacher
Photo: Sam Strickland

Various factors were identified as having an impact on student learning outcomes irrespective of the teaching methods utilised or participation in teacher professional development. Absence due to student engagement in agricultural work, other paid work or unpaid domestic work, and a lack of parental support, were identified as key constraints to improving student performance. In schools, the practice of automatic progression, a lack of time for providing remedial support to bring students up to the required learning level, and the need to complete the syllabus were identified as significant barriers.

“Group activities are central to the programme but there are certain constraints like limited space in the classroom and overcrowded classrooms. The teachers are then advised to conduct activities outside the classroom.”

A District Resource Group member

Attributing impact

There are difficulties in directly attributing variation in student scores and teacher performance to Udbhav. Teacher professional development training courses are also provided under Rashtriya Madhyamik Siksha Abhiyam⁴ to KSPI, *light touch* and *control* schools. Other components of KSPI interventions, such as remedial education, may also have an impact on teaching practice and student performance. The composition of KSPI and comparison school (i.e. *light touch* and *control*) samples also needs to be taken into account. In Hardoi, a higher number of single-teacher and poorly performing schools were selected for inclusion in the KSPI sample compared with the sample of *light touch* schools. In Sambalpur, schools were randomised to control and intervention groups. Differences in student scores or teacher performance in this district may be more justifiably attributed to Kusuma interventions.

“We have to wait for the new methods to work...they have long term benefits. In the beginning, we feel that the activity method takes time...investment is more in the beginning but the benefits are in the long term.”

Teacher Focus Group, Sambalpur

References

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- Banerjee, A., Glewwe P., Powers, S., and Wasserman, M. (2013) Expanding Access and Increasing Student Learning in Post-Primary Education in Developing Countries: A Review of the Evidence. J-PAL Review Paper. www.povertyactionlab.org/publications
- Cresswell, J. W. (2013) Research Design: Qualitative, Quantitative and Mixed Methods Approaches, London: Sage Publications Ltd.

⁴ A popular game in India, in which participants take turns to say a word or sing a song, in such a way that the word has to begin with the last letter of the word uttered by the previous participant.

⁵ Rashtriya Madhyamik Siksha Abhiyam is India's national scheme for improving the quality of secondary education