

EVALUATION OF THE UDBHAV PROGRAMME EXECUTIVE SUMMARY

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I. Introduction

kusuma

trust

The Udbhav programme (meaning 'source' or 'creation' in Sanskrit) aims to improve the quality of teaching in government secondary schools in order to raise student attainment in science, mathematics and English. The programme is funded by the Kusuma Trust UK and delivered by the Kusuma Foundation in selected government secondary schools in Hardoi (in Uttar Pradesh) and Sambalpur (in Odisha) in India.

This report summarises key findings from an evaluation of the Udbhav programme undertaken by New Concept Information Systems (NCIS) one year after a baseline assessment of student learning levels and teaching practice was conducted in 2015. It should be noted that the baseline assessment covered selected schools in Hardoi and Sambalpur districts, whereas the evaluation in 2016 focuses on schools in Hardoi district only.²

The Udbhav programme addresses key concerns about the quality of secondary education in India and its potentially negative impact on the life chances of students and on economic growth. National surveys of student learning levels (see ASER 2014 and earlier reports) show that, despite the Right to Education Act (2009) and a drive to improve secondary education under the Rashtriya Mdhyamik Shiksha Abhiya (RMSA) policy, most children leave primary school with very low learning levels. This has a significant knock-on effect on students' ability to benefit from secondary education. Teachers in secondary schools therefore face the challenge of teaching students who lack basic literacy and numeracy skills. Problems have also been identified with the quality of teaching, supply of teachers and curriculum content at secondary level (Banerjee et al, 2013)³. The Udbhav programme seeks to address these issues by targeting the professional development needs of teachers in government secondary schools and improving the availability of quality teaching and learning resources.

A report on the baseline assessment is available on the Kusuma Trust website at <u>www.kusumatrust.org</u>.

 $^{^2}$ The evaluation could not be conducted in Sambalpur due to the early closure of schools following extremely high temperatures and difficulties in obtaining permission from the district education authority for the research to proceed.

³ Banerjee A., Cole, S., Duflo, E., Lindon, L. (2007) Remedying Education: Evidence from two randomized experiments in India, Quarterly Journal of Economics: 1235-1264.

I.I The Udbhav programme

The Udbhav programme is delivered by the Kusuma Foundation in government schools in the districts of Hardoi (in Uttar Pradesh) and Sambalpur (in Odisha) to varying levels of intensity. An intensive level of support is provided in 50 schools that form the Kusuma Schools Partnership Initiative (KSPI)⁴ comprising:

- teaching and learning materials in English, Science and Maths for students in Classes 9 and 10;
- training teachers in interactive teaching methods and subject-specific teaching materials; and
- regular mentoring support for teachers delivered by a 'District Resource Group' (DRG) of experienced teachers.

A 'light touch' level of support is provided to a further 67 government schools in Hardoi district and 103 government schools in Sambalpur district, comprising:

- training teachers in interactive teaching methods (but not subject-specific training);
- one set of subject-specific teaching materials per 'light touch' school;
- access to subject-specific teaching materials at Kusuma Resource Centres in each district; and
- one annual visit from a DRG member to offer support in the use of interactive teaching methods.

In Sambalpur, 25 government schools receive no support and serve as controls. The underpinning pedagogic principles of the Udbhav programme focus on promoting activity-based learning and student engagement appropriate to the learning needs of young adolescents.

2. Research Questions

The evaluation aims to answer the following research questions:

- I. To what extent does the implemented model of teacher training and mentoring support lead to change in classroom teaching practice?
- 2. Do improved teaching practices contribute to improved student attainment?
- 3. What are the implications of the findings for policy and practice?

2.1 Research methods

To answer these questions, a mixed methods approach was adopted, comprising:

- Learning assessments of students in Classes 9 and 10 in English, Maths and Science in 25 KSPI and 24 'light touch' schools⁵ in Hardoi. 2130 students in KSPI schools and 2710 students in 'light touch' schools participated in learning assessments;⁶
- Observations of teaching practice (n=15) in 9 KSPI schools to assess the quality of teaching practice; and
- Interviews and focus groups with key stakeholders, including Kusuma staff (2), teachers (81), students (196), DRG members (12) and the District Education Officer (DEO). Interviews explored their views about the delivery and impact of the Udbhav programme.

3. Key Findings

3.1 To what extent does the Udbhav model of teacher training and mentoring lead to change in teaching practice?

Researchers experienced some challenges in assessing the impact of the Udbhav programme on teaching practice in KSPI schools⁷. Few government teachers were present on the days that fieldworkers visited schools to observe lessons⁸. The main reason given for their absence was that little regular teaching takes place in government schools in the run up to end-of-year and Board exams. Nevertheless, Kusuma-appointed volunteer teachers were present in schools and, as a result, 11 of the 15 observations of teaching practice were of volunteer teachers.

⁴ 25 government schools in each district.

⁵ One comparison school refused permission for the survey to proceed.

⁶ Compared with the baseline assessment, 8% fewer KSPI students took part in learning assessments in 2016. The drop in participation was more marked among students in comparison schools: approximately 50% fewer students took part in learning assessments in 2016 compared with the baseline (n=5436).

⁷ Please note: no observations were made of teaching practice in 'light touch' schools.

⁸ Fieldwork was conducted in late January and early February 2016.

The assessment framework rates teachers as operating at one of three levels (where I indicates a basic level of competence and 3 indicates a high level of competence) and across several domains, including the use of (i) questions to promote thinking and discussion, (ii) group work, (iii) peer learning, (iv) local resources (e.g. natural or man-made materials) to illustrate key concepts, (v) students' own experiences, (vi) effective classroom management, and (vii) inclusive teaching methods.

As might be expected, teachers tended to be more competent in some domains than others. For example, teachers were more likely to reach level 3 in the use of questions to promote learning, but to remain at level 1 in the use group work, peer learning or drawing on students' own experiences in the classroom. That said, some teachers demonstrated a high level of competence across several domains.

Examples of good and poor teaching practice observed in KSPI schools are shown in the following table:

Table I: Examples of good and poor teaching practice observed in Hardoi KSPI schools

Good teaching practice	Poor teaching practice
Students are divided into groups of four to discuss a	The use of the science laboratory is restricted to
question posed by the teacher. Each group has a	students in Class 10 for a limited number of sessions.
designated leader who responds on behalf of the group.	
The teacher is very friendly and calls on students by name	The teacher asks questions but seldom responds to
to answer questions.	students' queries. S/he uses questions to test the
	understanding of students only.
Poetry is taught through songs. Quizzes and games are	The teacher writes on the blackboard and teaches in
used to promote learning. Paper cut outs are used to	lecture mode. S/he does not give examples to explain
teach geometry.	concepts or use questions to promote discussion.
Students are encouraged to participate in lossons	The teacher focuses only on these students sitting at the
regardless of gonder or casto	front of the class
regardless of gender of caste.	I One of the class.
The teacher is creative in the use of local resources and	The blackboard was not visible to students. The teacher
has started to conduct lessons outdoors.	makes no effort at all to make the lesson interesting to
	students.
Students in Classes 9 and 10 are encouraged to use the	Students use the SLUs but the teacher provides no
library and science laboratory regularly.	feedback on students' queries or work.
The teacher uses models, charts and examples from	The teacher uses rote learning to teach difficult sections
everyday life, including agricultural work, to explain	of text books.
scientific concepts.	

Overall, students confirmed that teachers attempted to use interactive teaching methods and tried their best to engage students in lessons:

'The teacher divided the class into two groups and kept asking questions, like in a quiz'. (Student, KSPI school) 'In every class, the teacher takes individual names and encourages each one of us to ask questions'. (Student, KSPI school)

However, in some cases, students reported that teachers had not changed their methods:

'We wish our Science teacher would conduct group activities like our English teacher. This would surely make things simpler and more enjoyable for us'.

Against this background of variability of teaching style, students emphasised their appreciation of the Student Learning Units provided by Kusuma. They particularly liked picture stories, puzzles, word meaning exercises and 'fill up the blank' exercises. In focus groups, many students said that they referred to SLUs regularly at home. With a few exceptions, students said that SLUs were rarely used in classroom activities or given feedback on their work and this was confirmed in observations of teaching practice.

Despite evidence of positive teaching methods and use of learning materials, a key problem for students is that they 'lag behind' and therefore find lessons difficult to understand:

'Our teacher teaches us well but we are not able to comprehend everything he says. So, we often fail to participate'.

A further barrier to learning identified by students is that of teacher absence. In one school, students reported that their Maths teacher had taught a class once in the previous 15 days.

Satisfaction with training and mentoring support

Teacher satisfaction with the training and mentoring support provided under the Udbhav programme is likely to have an impact on teacher take-up of recommended classroom practices. Teachers of all subjects expressed a positive appreciation for the training provided under the Udbhav programme. They particularly valued learning about the use of group work, the creative use of local resources for teaching and participatory teaching methods. Crucially, teachers reported that Udbhav training courses improved their confidence and motivation:

'It has given us new hope. There is a gradual increase in the interest of students too'. (KSPI teacher)

Some teachers had not received a full set of TSUs and SLUs and others felt that they would benefit from further training in their use. Teachers also identified a number of constraints to applying new teaching methods in the classroom, such as the need to seek permission of the head teacher, low learning levels of students, large class sizes and short lessons (40 minutes). Some DRG members recommended the introduction of Udbhav teaching methods in primary schools in order to improve the learning levels of students on entry to secondary schools.

In general, government teachers and Kusuma volunteer teachers held contrasting views about their experience of mentoring support. Kusuma volunteer teachers were more positive about the mentoring support they received and cited examples of how DRG members had provided practical tips and useful strategies for addressing challenging situations. By contrast, government teachers tended to question the credibility and expertise of DRG members and said that DRG school visits were too brief. Most government teachers also claimed that they were not interested in the performance reports of DRG members because they were already sufficiently confident in their teaching skills. This suggests that government teachers perceive mentoring as a form of inspection and rather than a positive tool for professional development.

'Telling you honestly, the post of DRG should be cancelled. They give feedback that often interferes with the course of the class'. (English teacher, KSPI school).

A review of the level of teaching experience of DRG members shows that 7 out of 12 have taught for 1-2 years before joining Kusuma. 5 other DRG members have taught for a minimum of 6 years and a maximum of 18 years. A core group of DRG members thus have considerable teaching experience. However, a majority might be considered novice teachers and some credence might therefore be given to the criticisms made by government teachers. That said, the views of government teachers might also be interpreted as resistance to a push for positive change. As the Hardoi DEO commented:

'The biggest challenge in teaching is the low motivation and negative attitudes of teachers. They have to be pushed to do their best. Our teachers are very well qualified and talented, but due to lack of motivation, they are not performing. There is no performance tracking of teaching, no promotions, no appreciation and very little notice is given whether they are doing well or not'.

3.2 Does the Udbhav model for teacher training support improved learning among students?

Student scores

In Hardoi, student scores in 2016 are compared with baseline results and with student scores in 'light touch' schools. In the baseline assessment, average scores were lower in KSPI schools for all subjects compared with 'light touch' schools. In 2016, this pattern was reversed and average scores are higher in KSPI schools compared with 'light touch' schools. Graph I below shows that, compared with the baseline results, average student scores in KSPI schools increased in all three subjects.



Graph I: Mean Scores of Children in Assessment Test in 25 KSPI Schools

Overall, student scores in 'light touch' schools show a small increase compared with baseline results, with the exception of test scores of students in Class 10 for Science (see Graph 2 below).





Compared with light touch schools, the relative gains in student scores in KSPI schools are considerable. However, this pattern is not reflected in Class 10 Board results for 2016 which show higher pass rates for 'light touch' schools in English and Maths, and parity in scores for Science⁹.

Teacher performance and student scores

Teacher performance is widely acknowledged as a factor that might explain variability in student scores. Accordingly, observations of teaching practice were conducted in a sample of schools ranked as low (n=3), medium (n=3) or high (n=3) in the baseline learning assessment.

Schools ranked as low in the baseline assessment show a marked improvement in student scores in 2016. Student scores decreased in two out of three schools ranked as top in the baseline assessment. Student scores declined in all three schools ranked as middle in the baseline assessment. Observations of teaching practice were examined to explain possible reasons for these trends.

Findings show that the best performing teachers were clustered in the three schools rated as low performing in the baseline assessment. Of the 9 schools selected for observation, these were the only schools to record gains in student test scores. Evidence therefore suggests that improved teacher performance has a significant impact on student learning levels.

⁹ Class 10 Board results are as follows: English – 76% (KSPI), 83% (comparison schools); Maths – 64% (KSPI), 71% (comparison schools); Science – 75% (KSPI and comparison schools).

Impact of private tuition on student scores

Access to private tuition also has an impact on student scores. In 2016, approximately a quarter of students in KSPI schools took private tuition for English and over a third for Maths. Between 2015 and 2016, there was a 10-point increase in the proportion of students taking private tuition for Maths, and a decrease for other subjects. Compared with KSPI schools, fewer students in 'light touch' schools take private tuition across all subjects. There was also a sharper decrease in the proportion of students taking private tuition between 2015 and 2016.

Graphs 3 and 4 show that students in KSPI and 'light touch' schools who take private tuition score consistently higher than students not taking private tuition in all subjects in 2015 and 2016. The impact on student scores in Maths is particularly marked.



Graph 3: Mean scores of children taking private tuition in KSPI & Light Touch Schools by subject

Graph 4: Mean scores of children not taking private tuition in KSPI & Light Touch Schools by subject



4. Conclusions

- There are difficulties in attributing impact of the Udbhav programme on teaching practice and student scores due to limited opportunities to observe the performance of government teachers and the multiplicity of interventions delivered in KSPI schools. That said, some teachers demonstrated a high level of competence across several domains in classroom observations. In general, teachers tended to be more competent in the use of questions to promote student engagement than group work, peer learning or other participatory teaching practices.
- Students expressed positive appreciation for teachers who attempted to encourage their active participation in lessons but they were keenly aware that they 'lag behind' and find lessons difficult to understand regardless of the teaching method used. SLUs were popular with students and help to compensate for variability in the quality of teaching they experience and teacher absence.
- Teachers were very satisfied with training provided under the Udbhav programme, reporting an increase in confidence, motivation and awareness of more innovative teaching strategies. Views about the benefits of mentoring support were mixed: volunteer teachers were generally positive but government teachers doubted the credibility and expertise of DRG members. While the criteria for selecting DRG members merit review, teacher attitudes pose a significant constraint on the potential for the Udbhav programme to have a positive impact on teaching practice.
- In 2016, average scores are higher in KSPI schools compared with 'light touch' schools and this reverses the results of the baseline assessment. However, this pattern is not reflected in Class 10 Board results for 2016 which show higher pass rates for 'light touch' schools in English and Maths, and parity in student scores for Science. The performance of individual teachers and access to private tuition has a significant impact on student performance.

Implications for policy, practice and research

- Community involvement in school governance may help to promote a more positive learning environment in schools and improve the accountability of teachers to parents and other community members. Training and support for SMDC members is a priority for KF in 2016-17;
- Headteachers have a key role to play in promoting the translation of Udbhav teaching methods into practice, sustaining good teaching practice, monitoring teacher attendance and ensuring the active use of library, science and computer facilities. A focus on school leadership is a priority for KF in 2016-17;
- The mentoring role and criteria for recruiting DRG members merit further consideration and alternative options may need to be considered for the 2016-17 academic year;
- Further efforts are required to ensure that KSPI schools have a full set of TSUs and SLUs, actively use SLUs in classroom activities and provide feedback to students on tasks completed in SLUs;
- Students should be consulted for their views about what has a positive and negative impact on their learning and how these issues could be resolved;
- The availability of remedial education is critical to the capacity for students to reduce their learning lag and benefit from secondary education. The delivery of the Secondary School Readiness Programme is a priority for KF in the 2016-17 academic year;
- Moving forward, Board exam results should provide a more independent and reliable indicator for the impact of Kusuma programmes on student learning than context-specific tests. An annual process evaluation will provide a better means for explaining programme impact.

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