Impact Evaluation of Anandshala Program in Samastipur District of Bihar

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1. Introduction[1]

Anandshala Programme in schools has been developed by Quest Alliance and is implemented in government schools in Bihar in collaboration with the education department. It had started as a research pilot programme to understand the reasons behind school dropouts and to pilot strategies to solve the issue effectively. These strategies were implemented in a selected number of schools focusing on teachers and students of class 5, and had three components- training the teachers in using "early warning system", "enrichment programme" and certain parental engagement strategies in selected government schools in Samastipur district.

Based on this experience, and to have a sustainable programme in the state, in the year 2016 Anandshala programme has been scaled up to become a district wide model in partnership with the Bihar State Govt (BEPC, SSA Bihar). It has reached out to all middle schools (classes 5, 6, 7 and 8) in Samastipur district, initially in 5 blocks and expanding to include other blocks over the years.

This is an impact evaluation study of the second phase of the programme in middle schools in Samastipur. The first two sections discuss the intervention details in the context of the education scenario in Samastipur and the research design and methodology used to do the study. The remaining section discusses the findings.

1.1 Upper primary education system in Samastipur

Bihar is located in eastern India and is the twelfth largest Indian state in area and third largest in population. Its economy is based largely on service sector and agricultural sector, industrial sector is still quite small. Samastipur district is located almost at the centre of the state of Bihar, and scores average in the state in terms of development indicators. It has a significantly high SC population. A significant number of workers are in agriculture or are agricultural labourers. The economic and social disadvantages are reflected in the low levels of educational development. Literacy rates are still quite low with high levels of gender disparity (Table 1).

Table 1: Demographic and Education background of Samastipur

Characteristics	Proportion

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[1] This draft is based on a survey conducted in government schools in Samastipur

Proportion of SC population	18.8%
Proportion of ST population	4.4%
Proportion of population (7+ age) who are illiterate	38%
Male	29%
Female	48%
Proportion of workers whose main occupation is	
Agricultural labour	46%
Cultivation	27%

Source: Census 2011

Figure 1: Education indicators at upper primary stage in Bihar and Samastipur
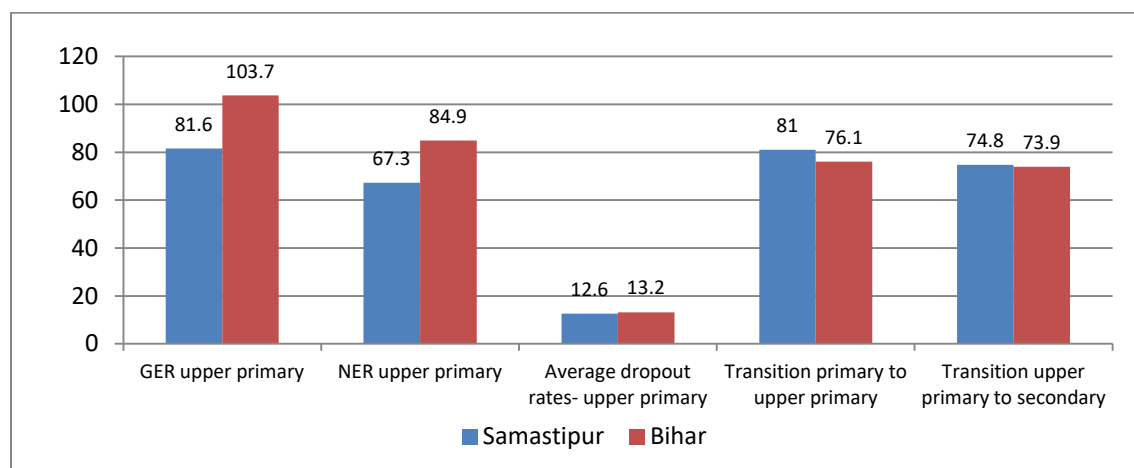
Source: UDISE 2017-18

Bihar is one of the educationally less developed states with low literacy rates (Census 2011). The proportion of males and females who have completed class 10 is also quite low at 38% of males and 21% of females (NSSO 2018). However there have been major changes over last decade. Under the aegis of right to education Act, most children get enrolled in schools. The dropout rates are however high at 13% and the transition from both primary to upper primary, upper primary to secondary (proportion of students who do not transition to next class are out of school) is quite low. So it is still a challenge to retain them for at least 8 years. As a result while

Gross Enrolment Ratio (GER)[2] at upper primary level is very high (103%), Net Enrolment Ratio (NER)[3] is much lower (85%).

Samastipur data is somewhat different from Bihar, and shows an unusual and contradictory trend. The GER and NER at upper primary stage are considerably lower than that of Bihar (81% and 67%). That should imply a higher dropout rate and lower transition rate but the DISE data shows Samastipur had lower dropout rate and similar or higher transition rates compared to Bihar.

This data issue is explored further. Without reliable data it is difficult to have a correct overview of the situation – in which class is dropout a major problem and to what extent. There are contradictions within DISE data, and when compared with household data.

Table 2 provides a clearer idea of the problem. DISE data shows over the last few years age specific enrolment rate of 11 to 13 year old (the proportion of children in 11 to 13 age group who are enrolled in formal schools) boys' and girls' has increased. However boys' enrolment rate even now is 80% and is substantially lower than girls' (93%). This is a rare phenomenon in areas which have strong gender bias.

Table 2: Education indicators in Samastipur between 2012-13 and 2016-17

Year	Age specific enrolment rates at upper primary stage[1]		Average annual dropout rate[2]		Transition rate from class 8 to 9[3]	
	Boys	Girls	Boys	Girls	Boys	Girls
2012-13	69.7	79.9	8.1	-	98.2	-
2013-14	75.6	88.4		0.1	-	91.7
2014-15	72.9	85.8	4.4	5.3	95.5	90.3
2015-16	85.9	99.5	5.8	5.3	87.7	87.0
2016-17	80.3	93.4	13.5	11.7	75.0	74.5

Source: udise.schooleduinfo.in

[1]percent of children aged 11 to 13 years enrolled in schools

[2] Dropout children in a year are students who were enrolled previous year but out-of-school in the current year. Dropout for each class is the percent of dropouts (as a proportion of previous year's enrolment) for each class. Average of classes 6 to 8 is given here.

[3]Number of students who have completed class 8 in the previous year and enrolled in class 9 in the current year as a percent of number of students enrolled in class 8 the previous year.

[2] GER= Students enrolled in classes 6 to 8 as a per cent of children aged 11 to 13 years.

[3] NER= Students aged 11 to 13 years enrolled in classes 6 to 8 as a per cent of children aged 11 to 13 years.

Census 2011 data (Table C10) on the other hand shows that age specific enrolment rates of children at upper primary age (11 to 13) for Samastipur were higher than the average for Bihar – 86% for boys and 84% for girls in Samastipur against 83% for boys and 79% for girls in Bihar.[4]

Our preliminary analysis suggests that it is likely that a significant proportion of students are enrolled in private schools, which may be unrecognized, and so less likely to be reflected in DISE data. DISE data (2016-17) shows that in Samastipur data has been collected from very few private schools (74 recognised private schools and 158 unrecognised private schools or madarsas) and very low proportion of students is enrolled in private schools at elementary stage (3.6%). But informal interactions and discussions with local residents and school teachers point towards much higher levels of enrolment in private schools, especially among boys. If data from these private schools are not included in DISE data, it could be an explanation for the relatively lower enrolment ratios. Underestimation of enrolment rates also makes estimation of dropout and transition rates difficult. The Bihar Education Department would benefit if the data collection process is improved, so as to have more realistic information on enrolment and dropouts.

1.2 The Intervention

As discussed earlier, in the SDPP phase the intervention was focused on class 5, and had three components- training the teachers in using "early warning system (EWS)", "enrichment programme" and certain parental engagement strategies in selected government schools in Samastipur district. The intervention in 2012 was done only in 113 schools randomly selected from 13 blocks in Samastipur. For impact evaluation baseline and endline surveyes were conducted in the 113 intervention and 107 control schools, all selected randomly from these 13 blocks.

EWS involved identification of students at-risk of dropping out of school, closely tracked their attendance, and targeted them for additional support. The thrust of the enrichment activities (EA) was to engage students in various activities conducted in the last period of every school day and focused on language, communication, body movement, sports and Arts. These were expected to lead to a more joyful schooling experience for the students. There were activities like 'open day' in school through which the schools reached out to parents and made them

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[4] In 2019 these rates would have increased

more aware of their children's schooling experience, issues around dropouts and the need for their support.

Class teachers and head teachers were provided training and support by Quest Alliance. In addition two coordinators were hired and assigned to each school, to implement the intervention program in the intervention schools.

Based on this experience, and to develop a sustainable programme in the state, the district wide model was developed to reach out to all middle schools (classes 5, 6, 7 and 8) in Samastipur district. The school level and system level intervention is developed as the **Anandshala** model and at present is being implemented in all schools in selected blocks. In 2016 the scope of intervention expanded and Anandshala was implemented in all middle schools in 6 blocks of Samastipur district and later extended to other blocks.[5]

There have been several changes as compared to SDPP.

a. From 113 schools spread over 13 blocks, the intervention is now focused on all middle schools in 6 blocks in 2016, with the provision that it will gradually increase its coverage to all middle schools in the district. The focus has shifted from class 5 to classes 5 to 8.

b. The scaling up was done in phases. 40 schools were selected as innovation schools where more frequent interactions of stakeholders were planned. These schools were expected to have a demonstration effect and also serve as sites for refining the strategy through implementation, observation and feedback from teachers and CRCCs (the Change Leaders).

c. A cascade training system was used where the master trainers were also selected from the government school teachers, head teachers and CRCCs.

The pilot phase showed that the intervention was over dependent on Quest Alliance and the school coordinators recruited by them and the new practices were not sustained after that phase. For the intervention to be sustained and have a long term impact, the capacity of school heads, the teachers and the CRCCs need to be developed.

So post 2016, it was decided that Quest alliance, through their Anandshala Programme, will support implementation of select school-level government programmes around child engagement environment in school. These were part of the normal school activities but are

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[5] At the time of the survey intervention was in middle schools of 6 blocks. Intervention in Kalyanpur started in 2018.

often difficult to implement in the current context. The EWS and enrichment activities of Anadshala were adapted to conform to the existing government programmes and the responsibility of implementation transferred to the school teachers, head masters and CRCCs. For the purpose training was provided to CRCCs and HMs so that they can train, monitor and support the school teachers in implementing these programmes. Initially the training was provided by Programme officers and resource persons selected from the HMs and CRCCs. Over the years the focus shifted to identifying change leaders from them through a system of self-nomination and selection. Since 2018 District resource groups have been formed from the teachers and CRCCs.

d. The Early Warning System (EWS) complements the Bihar government scheme, MUHIM, whose aim also is to track attendance of all students and follow them up with strategies like home visits to ensure regular activities. So Anandshala provides support to MUHIM as well as EWS.

e. The scope of enrichment activities has also expanded. Earlier the focus was only on the last class activities, but currently other activities with an aim to make school a joyful place for all the stakeholders especially for the children. This also piggybacked on the established government schemes and programs and school specific activities such morning assemblies, extracurricular activities and balsansad activities. The balsansad has an important role in the Anadshala intervention- as the members are encouraged to think of their school in a holistic way and identify aspects where they would like to bring about a change (change projects). This not only would positively impact the agency of the members, but also improve the school environment for all students. While earlier the enrichment activities focused primarily on improved communication and reading skills, the focus is shifted to development of 21st century skills such as critical thinking and problem solving power of children.

f. Strengthen the relationship of schools with parents of children. This was part of SDPP programme too and attempt is made to strengthen parent-teacher interactions through home visits, PTMs and open day.

g. Recognition of good practices- annual Anandshala Shiksha Ratna Puraskar has been instituted. Its a platform for teachers and schools to share good practices, get recognised

through awards and encourage wide scale adoption of good practices. The schools and CRCCs are to self nominate and through practices initiated would be identified, awarded and shared at a wider level.

The **theory of Change of the Anandshala programme** is to introduce system and school level changes to ensure that teachers and parents support their students' schooling and ensure that they stay, engage and learn. It is expected that when all students actively participate in different school level programmes, their outcome would show through higher attendance and performance, which in turn would positively impact the dropping out process.
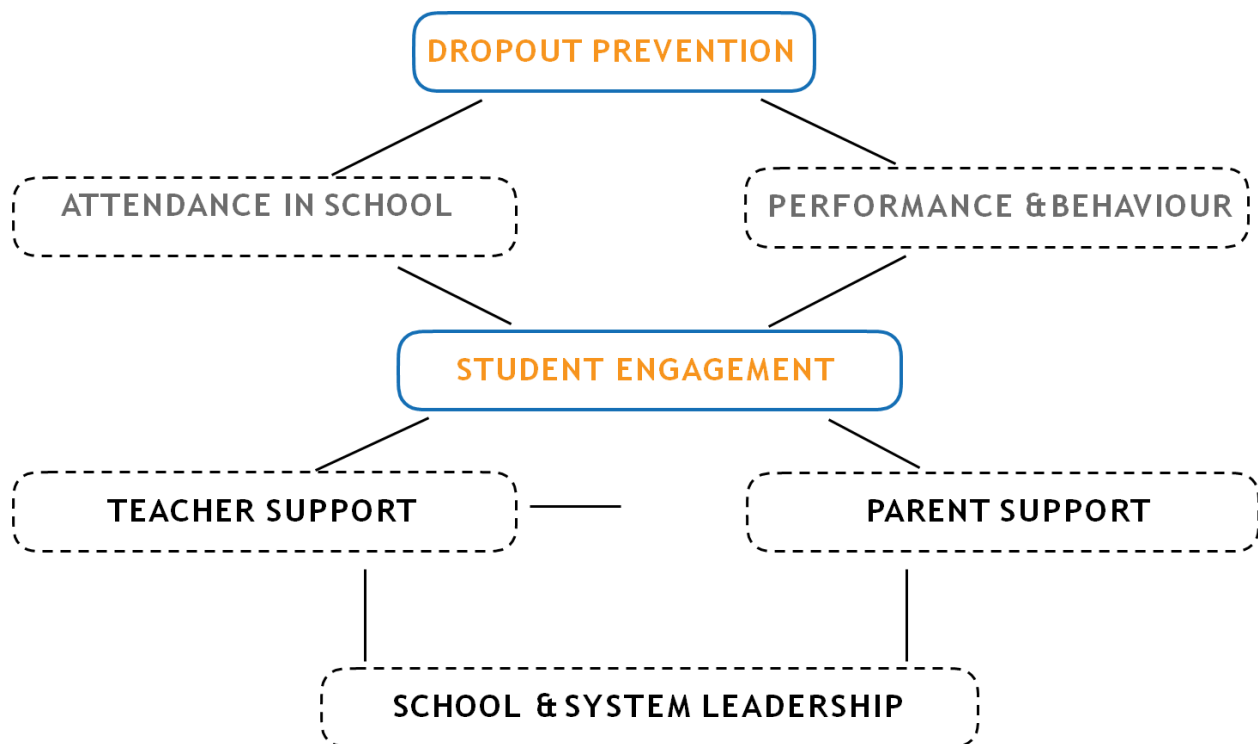
2. Impact evaluation, intervention and sampling design

The result based framework for the Anandshala programme shows that the intervention is expected to have multilevel outcomes and impact the schooling system in several different ways.

a) Improve school functioning and schooling experience of students- make them joyful, responsive and inclusive

b) Improve relationships and engagement of education officers, head teachers, teachers, students and parents.

c) Improve students' learning and skills which will prepare them as future citizens- such as better communication skills and decision making ability.

d) Improve attendance, retention, transition, dropout for both boys and girls in public schools.

e) Empowered leadership at district, cluster and school level.

Systemic change is a slow process, as it will involve changes in behavior pattern of different stakeholders of the system. In three years these long term outcomes may not be achieved, but some changes will be observed particularly in school level indicators and behavior and motivation of stakeholders if the intervention is successfully implemented and the theory of change is valid.

Various quantitative as well as qualitative techniques exist to evaluate the impact of an intervention programme. However, depending on the scope, objectives, and design of the intervention, as well as data availability, some methods are better suited than others in specific cases. For our study the choice of impact evaluation method and the sampling strategy was dictated by the intervention design, sampling strategy and availability of baseline data in 2016 during the SDPP phase.

For this study we aligned our school sample to SDPP sample as the accessibility to baseline data collected in 2016 would have allowed us to use difference-in-difference technique for the present study. Further, it would help us to utilize the rigorous sampling strategy used during the SDPP phase.

A key issue that the sampling techniques aim to tackle is *selection bias* - when those in intervention group are different in some way from those in control group. This *bias* can effectively be reduced by randomly selecting intervention and control groups so that no systematic difference exists between them. And this can help us to attribute changes to intervention. During SDPP stratified random sampling was used to tackle the selection bias. Our sampling strategy draws on the sample from the schools selected during SDPP (covered in greater detail in the section on *sampling design)*.

However due non availability of baseline data (2016) we have used *difference in means test*. [6] *Difference in means test* is a statistical technique, which helps us to determine statistically significant difference in the average values of the indicators of interest between two comparison groups. After applying *difference in means test* on the outcome indicators of interest, if statistically significant and positive difference between intervention and control schools is found, we can conclude that intervention schools are, on an average, performing better than control schools. Even with this technique we can very well ascribe the changes in intended outcomes to the Anandshala program. This is because of the basic similarities between control and intervention schools as well as no systematic differences, between control and intervention schools, in terms of government policy as well as programs run by other NGOs which can potentially bias the outcome. The detailed discussion on this aspect is covered in greater detail in the section on 'school functioning' below.

2.1 Intervention and Sampling design

As discussed above, during SDPP phase stratified random sampling was used to select intervention and control schools. In each of these 13 blocks both intervention and control schools were randomly selected. However post 2016 the scope of intervention changed and all middle schools in 6 blocks, out of the earlier selected 13 blocks, came under the ambit of intervention.

Moreover, during SDPP phase 113 intervention and 107 control schools were selected randomly from 13 blocks. Though post 2016 the scope of intervention changed it was decided to chose a subsample from these 220 schools. For each of the 13 blocks we stratified schools according to length of interventions- schools which had both SDPP and Anandshala interventions (that is from 2012), schools which did not have SDPP interventions but Anandshala intervention from 2016 and schools which had no interventions. From these strata we selected 101 schools through random sampling.[7] Table 3 shows block wise sample number of schools.

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[6] Though data was collected from intervention and control schools of SDPP phase in 2012 and 2015, the data was not accessible.

[7] This allowed us to examine if SDPP intervention had any impact on the schools.

Table 3: Block wise sample number of schools

S.no.	Name of the block	Total number of middle schools	Number of schools during SDPP (2012-2016)		Sampled number of schools (2019)		
			Intervention	Control	2012-2019	2016-2019	Control
1	Khanpur	137	10	10	7	6	0
2	Dalsinghsarai	123	12	11	7	8	0
3	Patori	127	9	9	7	6	0
4	Pusa	95	5	4	5	3	0
5	Ujiyarpur	200	10	9	7	7	0
6	Bibhutipur	212	11	11	0	0	6
7	Morwa	114	8	8	0	0	4
8	Warisnagar	124	5	5	0	0	5
9	Rosera	124	8	8	0	0	6
10	Samastipur	186	12	12	0	0	6
11	Sarairanjan	165	7	6	0	0	6
12	Tajpur	107	6	5	0	0	5
13	Kalyanpur[8]	199	10	9	0	0	0
	Total - Category wise	1913	113	107	33	30	38
	Total	1913	220		101		

2.2 Choice of respondents

Structured and semi structured questionnaires, interviews and structured observations were used to collect the data from schools. Outcomes are expected at multilevel, on students, on CRCCs, school teachers and head teachers, on school functioning and on education officers.

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[8] The sampling design has not considered Kalyanpur block for sampling. Intervention in this block began recently in the year 2018.

Table 4 shows the respondents per school and number of interviews conducted. Total 101 schools were surveyed. In a school, the head teacher and two teachers are interviewed for information on school functioning as well as Anandshala interventions. The level of school functioning is assessed through observation of school functioning and interviews with the teachers and head teachers. Functioning of bal sansad members are also examined with information provided by two balsansad members from each school. There are separate interviews with 6 students of class 8 in each school to capture the specific impact of Quest Alliance interventions – on school activities and participation, and to examine the impact on their learning and life skills. The students interviewed include those who are identified as 'at-risk of dropping out' and also students who are members of balsansad. Two parents have been interviewed from all schools to get feedback on the school quality, on the home support provided by them and parent-teacher interaction. A random selection of parents was difficult due to logisitical reasons.

Several education officers at cluster level are interviewed to document the functioning of the education department and the challenges they face and the impact they have perceived.

The success of the interventions can be seen through their impact on the attitudes, perceptions and capacities of the implementers and the stakeholders of the schooling system (CRCC, teachers, students and parents). Information on enrolment, attendance and transition is collected from secondary and primary data sources and can be used to analyse dropout and attendance rates. Though the interventions do not directly impact learning levels, school level data on examination marks as well as student interviews and assessments will be used for this estimation.

Table 4: Sample size

Interview type	Interviews per school	Total number of interviews		Total
		Intervention	Control	
Head master	1	63	38	101
School observation	1	63	38	101
School enrolment and attendance	1	63	38	101
Parent	2	126	76	202

Bal Sansad member	2	126	76	202
Teacher	2	126	76	202
Child (8th class)	6	378	228	606
Child assessment (8th class)	6	378	228	606
CRCC	7		5	

2.3 Outcomes and Impact Evaluation Methodology

After three years of intervention in the schools of these 5 blocks, three types of impact can be expected- improved functioning of different programmes in school (led by teachers and head teacher and improved home support) leading to changes in schooling experience, more regular school attendance, and changes in relationship among the different stakeholders. One can expect that these changes would make schools a joyful and inclusive space and students will stay, engage and learn, and learning levels would improve and dropping out will decrease. The different stakeholders would collaborate and make for a dynamic schooling system. The impact on school functioning has been analysed in section 3.

The impact on students is assessed through several sets of survey and secondary data. Information on enrolment, attendance and transition is collected from secondary and primary data sources are used to analyse dropout and attendance rates. Though the interventions do not directly impact learning levels, school level data on examination marks as well as student interviews and assessments will be used for this estimation.

We also have tried to analyse the impact on student's attitudes, perceptions and skills. We have used both the "difference in means test" as well as comparison of responses of students in the two categories of schools in section 4.

The success of the interventions can be seen through the impact on the attitudes, perceptions and capacities of the implementers and the stakeholders of the schooling system (CRCC, teachers and parents). We have interviewed the different stakeholders – head teachers, teachers, CRCCs and parents to understand their perceptions of the impact of the intervention. For the purpose we have also compared, where possible the responses of respondents in intervention and control schools about the functioning of different activities.

An additional way of capturing the impact of changes is through the perceptions of head teachers and teachers who have been in these schools for the past 3 years. They are in a position to recall the school functioning 3 years back, and bring out the changes they have observed over these years. While a part of these changes are due to changes in government rules and policies, the differences could be attributed to the programme. In section 5, we compare perceptions of head teachers, teachers and cluster coordinators regarding changes in school and student outcomes in intervention and control schools. We also compare their perceptions on nature of relationship among stakeholders.

The outcomes could be influenced in an important way if teachers and parents collaborated to support the students' school participation and learning, and improving schooling experience. In section 6 we analyse the role parents play in their children's schooling and if there is any difference in these between children in intervention schools and control schools.

In last section we highlight the main achievements of and challenges faced by the programme.

3. School Functioning

This section starts with an overview of the surveyed schools. This is followed by examining and comparing different components of school functioning in intervention and control schools. Finally indices are formed for each of these components and school functioning index is constructed with these. A comparison of these indices for the intervention and control schools reflect the impact of the Anandshala intervention on school functioning.

3.1 Overview of surveyed schools

School level indictors from DISE data shows that though schools in Samstipur have improved in infrastructure, they suffer from teacher shortage and crowded classrooms. Our survey data confirms this, and shows that both intervention and control schools were quite similar. These shortcomings very likely would have had limited the impact of Anandshala intervention.

As Table 5 describes, the profiles of intervention and control schools are quite similar. It s important to note that nearly two thirds of the head teachers in intervention schools have been in the position before the Anandshala intervention began, and are likely to be exposed to the intervention for at least 3 years.

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Table 5: Profile of the Surveyed Schools

	Intervention schools	Control schools
Schools surveyed	63	38
Classes taught	59 schools (93.6 percent) were upper primary (1 to 8) and 4 schools were secondary (1 to 10)	34 schools (89.4 percent) were upper primary (1 to 8) and 4 schools were secondary (1 to 10)
School type	Only 1 school was only for girls and 1 school was only for boys. Others were coeducational.	All schools were coeducational.
When set up	Schools were old. They were set up before 1985, with approx. 70% being set-up before 1960.	Schools were old. They were set up before 1985, with approx. 70% being set-up before 1960.
Head teacher	In 40 schools (63 percent) a Head teacher was appointed. In the remaining schools a teacher worked in the capacity of acting head-teacher.	In 23 schools (60.5 percent) a Head teacher was appointed. In the remaining schools a teacher worked in the capacity of acting head-teacher.
Working as Head Teacher	67% of the head teachers or acting head teachers worked as school head before 2016 and 13% had done that from before 2012.	55% of the head teachers or acting head teachers worked as school head before 2016 and 8% had done that from before 2012.
School enrolment	The schools varied in size. In classes 5 to 8, 30% had 200 or less students enrolled (that is class size less than 50). Around 56% had 201 to 400 enrolled. 14% had higher enrolment in these classes.	The schools varied in size and had relatively less enrolment. In classes 5 to 8, 37% had 200 or less students enrolled (that is class size less than 50). Around 58% had 201 to 400 enrolled. 5% had higher enrolment in these classes.
Infrastructure	Majority of the schools had necessary infrastructure- particularly classrooms, blackboards, drinking water, boys and girls toilets and open playground. However in some schools they were not functional or sufficient. In around half the schools there was electricity in all classrooms and library and boundary wall was available. Few schools had science lab	

	or computer lab.
Teachers	There is a major problem of teacher shortage in both the intervention and control schools in Samastipur district. Approximately 90 % head teacher in intervention schools and 92 % in control schools reported that they have a teacher shortage in their schools. The shortage is particularly for Maths, Science and English teachers. On an average there are 8 to 9 teachers in surveyed schools – quite similar situation in intervention and control schools. These teachers usually taught classes 1 to 8, irrespective of their qualifications and training. Only a few (1 or 2 teachers) teachers were regular in most schools, and others were all hired on contract.[9] Some schools had no regular teachers appointed for upper primary classes. The schools had 8 classes (1 to 8) and 35% of intervention schools and 40% of control schools had less than 8 teachers.
PTR	Calculations based on DISE data in 2016-17 showed PTR of 59 in Samastipur secondary schools (much higher than the RTE requirement of PTR of 30). In the surveyed schools too most have class size of 50 or more – quite high for one teacher to teach. With more teachers and classrooms the class sizes will be smaller and teaching more effective.

Source: CORD Samastipur survey: School Survey (Head teacher schedule and enrolment data)

This section describes in detail different components of school functioning. Six components have been selected for this- general school environment, school infrastructure, morning assembly, bal sansad, Extra-curricular activities and parent teacher meetings. Variables from different questionnaires have been identified to construct indices for each component.

3.2 General school environment

One of the aims of Anandshala intervention is to motivate teachers via head master or CRCCs to maintain time discipline as well as overall discipline in school. This would require teachers to stay back in school till the end of school hours and encourage students to do the same. Some of the activities to make school a joyful place, such as last class activity, facilitated by Anandshala program precisely aims to ensure the attendance and staying back of students in school till the closing time.

The survey team had filled a schedule based on how they observed the functioning of the school. Three indicators are identified from that which provides an idea about general school

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[9] Some of the contract teachers were only class 12 pass with no preservice training

environment – whether schools started and ended according to school timetable. As table 6 shows, in all 3 indicators, intervention schools were better than control schools. In a very high proportion of schools the students came on time, and did not leave early, and in most schools teachers also stayed the whole time. This was true for a lower proportion of control schools.

Table 6: General School Environment in intervention and control group of schools

Proportion of schools with following characteristics	Intervention schools (%)	Control schools (%)
Schools where teachers were not leaving early	92.1	84.2
Schools where students arrived on time	87.3	73.7
Schools where students were not leaving early	82.5	76.3

Source: CORD Samastipur survey, school observation schedule

3.3 School Infrastructure

While Anadshala program had not intervened directly to improve infrastructural facilities their interventions begin with capacity building of head teachers and teachers. They are asked to make a vision plan for the school, and strategise to bring in required changes. While vision plan is a government advocated activities, the capacity building process is likely to enable the school leaders to have a plan and implement it. The vision plan usually involves improvement in essential infrastructure. We have identified five indicators from observation schedule to give us idea on the availability and use of such basic infrastructural elements – use of toilets by girls and boys, use of drinking water, school are safe and secure, and school premises kept clean. One of the element is the use of toilets where intervention schools are performing significantly better than control schools. In other aspects such as availability of drinking water, whether school gate was available and locked during school hours and cleanliness, control schools are performing marginally better than intervention schools.

Table 7: Infrastructure and use in intervention and control schools

Proportion of schools with following characteristics	Intervention schools (%)	Control schools (%)
Schools where boys were	74.6	55.3

observed using toilet		
Schools where girls were observed using toilet	77.8	60.5
Schools where children were observed drinking water from school source	96.8	97.3
School was secure (gate locked during school hours)	47.4	54.0
Schools which were clean	80.9	81.5

Source: CORD Samastipur survey, school observation schedule

3.4 Morning assembly

Morning assembly is a programme that is implemented in all schools. A part of the enrichment programme in Anandshala intervention is to make the morning assemblies student led, participative and informative. Apart from songs and prayers, the students are encouraged to have local news reading, quiz and storytelling during the morning assembly. This would motivate students to come in time, inculcate skills like public speaking and critical thinking in students and make the school a joyful space for them.

Three indicators have been identified to capture functioning of morning assembly in schools (Table 8) - duration of morning assembly, whether it started on time and whether it included a variety of activities. This was based on observation on the day of the survey. For intervention schools not only was morning assembly held for a longer duration of time but in majority of them they also started on time. Moreover, on an average, there were more variety in activities (measured as number of different activities) were observed in the intervention group of schools. While intervention schools were better performing in all three aspects, there is scope for improvement particularly in ensuring that the assemblies started in time. In 38% intervention schools morning assembly started after 9:30 am, when it should have started by 9 am.

Table 8: Morning assembly in intervention and control of schools

Indicators	Intervention	Control
Average time of morning assembly (in minutes)	26.6	19.6

Proportion of school where morning assembly started on time (at or before 9:30 am)	61.9%	38.1%
Average number of activities during morning assembly	4.0	3.2

Source: CORD Samastipur survey, school observation schedule

3.5 Bal Sansad

Bal Sansad or children's parliament are formed in all middle schools in Bihar and is aimed at transforming school environment, linking schools with parents and community members, and improving attendance of students. This is expected to be an elected body, where different members are given responsibility of different departments. Quest Alliance have started to play a supportive role and focuses on improving capability of Bal Sansad members on improving school environment.

Based on the questions asked to two bal sansad members in each school, 10 indicators have been identified to measure the quality of bal sansad activities. These relate to the manner in which the bal sansad has been formed and their functioning. In all these indicators, except one, intervention schools are performing better than control schools. There is a major difference in the proportion of schools where at least two balsansad members meetings were held since April (current session). 76 % of bal sansad members in intervention schools reported it as compared to 50 % of control schools. Not only meetings are held frequently, majority of the members attended the meetings and in significantly higher proportion of schools the decision taken in meeting were implemented in intervention schools.

Focus area for intervention: One aspect where there is a scope for improvement is planning early for change projects. Bal sansad in 45 percent (approx.) of the intervention schools have not prepared a plan to make changes in school environment in the current year.

Table 9: Activities of 'Bal Sansad' in intervention and control schools

Proportion of Bal Sansad members who said	Intervention (%)	Control (%)
Members chosen through improved election	31.8	23.1

process (ballot box)		
Teacher coordinator was assigned	95.2	92.1
They had orientation on their roles and responsibilities	98.4	89.5
At least two balsansad meetings was held since April 2019	76.2	50.0
Majority of members attended meetings	76.2	47.4
The decisions taken in the meeting finalized	66.7	39.5
Plan made to make changes in school environment in the current year	54.0	65.8
Bal Sansad members has active role in organizing morning assembly	98.4	97.4
Bal Sansad members has active role in organizing PTM	68.3	42.1
Bal Sansad members form groups for home visits	71.4	47.4

Source: CORD's Samastipur survey, Balsansad members schedule

However, among the intervention schools where *Balsansad* members had prepared a diverse and inclusive school development plan, they took into consideration various aspects of their respective schools that required dedicated attention and work. Majority of them had emphasized infrastructural and facilities specific plans. For instances, fixing toilets and water taps; maintaining cleanliness of schools; planting trees; wanting facilities like computer, library, sports gear, electricity and fans in classrooms; and better Mid-day meal (MDM) management; etc.

Moreover, many *Balsansad* members also talked about the students centric plans they had thought about for the current academic year, which were aimed towards increasing students' attendance, decreasing their truancy, focusing on their overall development, ensuring maintenance of discipline and punctuality, and improving the quality of teaching at schools. For examples:

- *"…sabhi bachchon ki ruchi jankar unko karya kaise sopen taki unko apna dayitav bhar na lage, iske liye maine khel-khel ke madhyam se sabko batane ki yojna banai hai" (1060904)*

- *"…hamare school me bahut kam bachche aate hain to school me bachchon ko joda jana chahiye… hamari batai jane wali sari baten bachche mante hain"* (1030113)

In case of control schools, *Balsansad* members laid greater emphasis on disciplinary and punctuality related plans for school and students' development. They wanted students to become responsible individuals so that they can take care of their own personal hygiene, do not run away from school, become self-regulatory, and take active interest in morning assembly, etc.

Some *Balsansad* members from control schools also had made plans aiming at enhancement of infrastructure and facilities at schools with special attention to cleanliness, availability of sport gear and visual presentation of the schools, etc.

The *Balsansad* members from the intervention schools appreciated the different school-level stakeholders for helping them with their work. The biggest support system as per most of them was the dedicated backing from the fellow students of their respective schools. The assistance they received in the form of a helping hand to maintain the cleanliness of the schools, ensure proper management of students during the Mid-Day Meal distribution, organize various events and competitions at schools, etc. was much appreciated. One *Balsansad* member said that his classmates helped him to cover classes he had to miss sometimes in order to fulfill his *Balsansad* activities.

"…mein koi bhi kam karta hun to sare bachche sahyog karte hain" (1010413)

"…bachchon se sara sahyog milta hai, mere na rahne par bhi apna kam pura karte hain" (1020106)

Some *Balsansad* members also appreciated the aid provided by their teachers. Teachers helped them in understanding their roles and responsibilities, making execution plan for various *Balsansad* activities, and guide them how to go about implementing the aforementioned plans.

"…bal-sansad me kuch bhi yojna banane par sare teachers madad karte hain" (1010105)

Some commented on the extent of support they receive from all in school (starting from students to staff) to ensure efficiency in functioning of the *Balsansad.*

"…sare sadasya aur sare bachche ka sahyog milta hai aur sath me shikshak ka bhi milta hai" (1020405)

Unlike the intervention schools, not every *Balsansad* members of control schools mentioned getting support from stakeholders. There were many who didn't mention about anybody with

respect to assistance they received. A couple of members said that they got no or next to negligible support from anybody.

"…kyonki sahyog toh nahi mila" (1050101)

"…haan kuch sahyog mil raha hai. Lekin iske bare me mein nahi kah sakta hun. (1070101)

3.6 Extra curricular activity (ECA)

Schools are expected to conduct extra-curricular activities for students like music, dance, art/craft and sports, on a regular basis. They are encouraged to organize extra-curricular activities in the last period of each day as this may also help in retaining students in school till the end of the school day. Here too, Quest Alliance supported the teachers to make these activities more joyful and inculcate life skills in the students.

The indicators are chosen from head teacher interviews. The ECA related activities comprises of sports, quiz, art etc. It can be seen that control schools are doing much better in most of the indicators of ECA.

Table 10: Extra-curricular activities in intervention and control of schools

Proportion of head teachers who said following activities are regularly held in school	Intervention	Control
Music , dance, recitation, role play, debates	78.31	71.05
Drawing or craft	78.84	83.33
Sports	94.97	94.74
Quiz	83.86	89.91
Educational Project	61.90	66.67

Source: CORD Samastipur survey, head teacher schedule

3.7 Parent Teacher Meetings

Head teachers and teachers are expected to have monthly meeting with parents of students, popularly known as Parent-Teacher Meetings (PTMs). Quest Alliance supports the teacher's aims to improve the quality of interactions between teachers and parents. They encourage teachers to inform parents of school activities and student's progress, spread awareness on the importance of education and discuss the ways in which they can support school improvement.

This is done through display of artwork prepared by students, performances by students and discussions with parents.

Six indicators are identified which can be associated with functioning of Parent Teacher Meetings (PTM) (Table 11). In 5 out of 6 indicators intervention schools is performing better. In 97 percent of the schools belonging to intervention group parent teacher meetings (PTMs) were held in comparison to 84 percent of the schools belonging to control group. Another area where the performance of intervention group is better than control group is involvement of children in preparing an activity board during PTMs. However, there also lies a scope for improvement in this area as only 31 percent of the schools belonging to intervention group involved in this activity. Another focus area is ensuring attendance of parents in the PTMs. In 70 percent of the intervention schools not more than 50 percent of the parents attend PTMs. Children should be motivated to prepare activity board as in only 30 percent of the intervention school's students were found preparing activity board during PTM

Table 11: Parent Teacher Meetings in intervention and control schools

Indicators	Intervention	Control
Proportion of Head teachers who said regular PTMs were conducted last year	96.8	84.2
Proportion of Head teachers who said PTM has been conducted in April 2019	85.7	78.9
Proportion of Head teachers who said more than 50% of parents attend PTMs	27.0	34.2
Proportion of Head teachers who said invitation were sent to parents before last PTM.	80.9	76.3
Proportion of teachers who said children prepare activity board for display in PTMs	30.9	19.7
Proportion of teachers who said apart from PTMs, parents come to school also to discuss their child's problems	71.4	64.5

Source: CORD's Samastipur survey, Head Teacher schedule, Teacher schedule.

3.8 School functioning index

In order to make meaningful comparison between intervention and control schools an index of school functioning developed. We have defined *school functioning* as the composite category of the following set of indicators (i) general school environment (ii) school infrastructure (iii) Morning assembly (iv) Bal Sansad activities (v) extra curricular activities and (vi) parent-teacher meeting.

Each component of school functioning is constructed from responses to several questions which reflect the quality of the indicator. For example, indicator 'morning assembly' is constructed by identifying the following variables (i) average duration of morning assembly (ii) average number of activities during morning assembly and (iii) proportion of schools where morning assembly started on time (at or before 9:30 am) as a measure of its quality. These three variables are then combined to generate an indicator for 'morning assembly'. This has been done using *principal component analysis* (PCA), which assign weights based on a mathematical formula and allows combining variables to provide a single indicator. These weighted averages are then standardized to facilitate the comparison between intervention and control groups. The details pertaining to PCA are in the technical appendix.

In order to assess the combined impact of the Anandshala program, on the broad indicators discussed above, the school functioning index was calculated. We see from Table 12, there has been a **positive and significant (5% or 10% level) impact of the intervention on general school environment, infrastructure, morning assembly and Bal sansad.** In case of PTM there is a positive difference in favor of intervention schools, but the difference is not statistically significant. For extra-curricular activity the score is almost equal for intervention and control schools.

After combining these components we arrived at the school functioning index. We found that the school functioning is significantly better in intervention schools in comparison to control schools.

Table 12: School functioning index in intervention and control schools

Average standardized scores	Intervention	Control
General school environment*	0.88	0.78

Infrastructure**	0.76	0.61
Morning assembly**	0.55	0.39
Bal Sansad**	0.79	0.66
Parent Teacher Meeting	0.70	0.62
Extra curricular activity (ECA)	0.82	0.83
School functioning index**	**0.69**	**0.50**

The average mean difference in standardized scores between intervention and control groups, **is statistically significant at 5 percent level of significance

* The average mean difference in standardized scores between intervention and control groups, **is statistically significant at 10 percent level of significance**

3.9 Can we attribute better school functioning to Anadshala program?

We found school functioning to be significantly better in intervention schools than control schools. However the question arises that how far can we attribute this success to Anandshala program? There is a possibility that it might be due to some systemic changes in intervention schools or some other underlying factors which are yet to be uncovered. The following three factors led us to believe that the improved school functioning in intervention schools can be attributed to Anadshala program:

First, in the earlier sections we established that the profile of intervention and control schools is very similar in terms of basic school level indicators, which cannot be impacted by Anandshala program. The components of the Anadshala program aim to bring change in overall school functioning and if these changes are happening only in intervention schools that might be due to the intervention program. Additionally, all schools come under the same district management. Therefore any changes in government policy at the district level would have been applicable for both sets of school.

Another possibility which can bias the outcome in favor of intervention schools is the presence of some other NGO or civil society organization working in these schools. According to our survey data there is a presence of other NGOs in about 24 percent of the intervention schools and 38 percent of the control schools. Their focus area has been mainly improving child

creativity and cleanliness in case of intervention school and infrastructure, cleanliness, child learning in case of control schools. Most of these NGOs such as Aga khan, Aurbindo society are operating both in intervention and control schools. Given the nature and extent of coverage by these NGOs we can safely conclude that their presence would not induce bias in favor of intervention schools.

Third, we have found a positive association between school functioning and intensity of intervention (Figure 2). Intensity is calculated using the number of trainings attended by Head master since 2016 and when he last attended the training as well as the number of times CRCCs visited school in the past 2 months. Positive association implies that intervention schools are not only performing better than control schools, but among intervention schools, those schools with higher intensity of intervention have performed better than schools with lower intensity of intervention.

Figure 2: Relationship between School Functioning and Intensity of Intervention
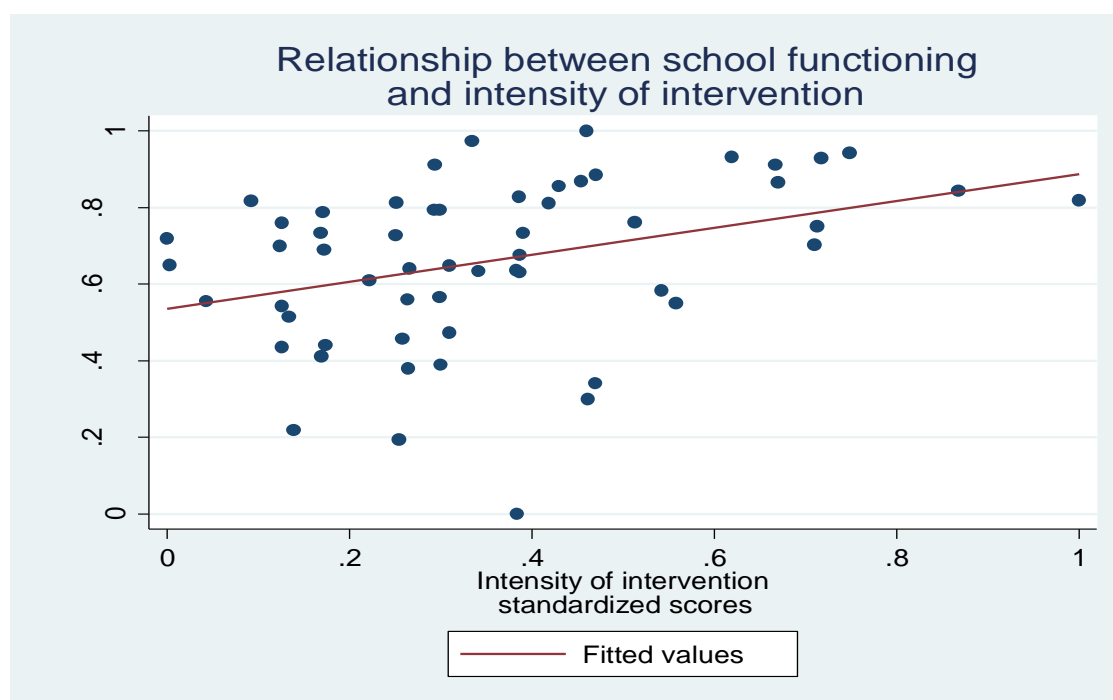
4. Impact on students

Important set of outcome indicators are student attendance rates, and student participation and this in turn should positively impact learning levels and dropout rates. Indicators on which impact on students has been estimated on the following factors

1. Student attendance
2. Schooling participation
3. Student cognitive and non- cognitive skills like communication skills, gender attitudes and problem solving
4. Learning levels and dropouts

4.1 Student Attendance

One of the immediate impacts of Anandshala programme would be on attendance rates. On the day of the survey enrolment data and attendance data were collected from school registers. Additionally headcount was taken from classrooms wherever possible. The headcounts were usually a little lower than the attendance in registers in both intervention and control schools– reflecting the fact that some students come late or leave early. Average attendance rates are low in all schools. [10] But, as Figure 3 shows, attendance rates in intervention schools are higher at 68.57%compared to that in control schools (55.87%) indicating a positive impact.

Figure 3: Average Attendance Rate of students in intervention and control schools

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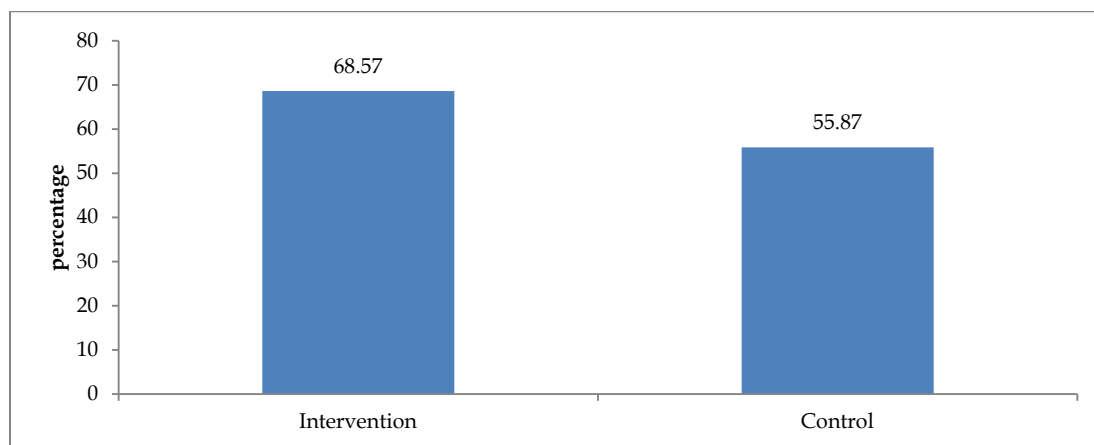
[10] One reason could be that some students are also enrolled in private schools (double enrolment) and does not regularly attend government schools.

While interviewing teachers and head teachers they were asked about their perceptions regarding improved in attendance. A very high proportion of respondents (approx. 80%) of intervention schools said that it has increased. While 65 percent of respondents in control schools said it has increased.

4.2 School Participation

During the survey it was observed that in most schools morning assembly was conducted well in most schools. Many schools conducted last class activities and/or other extra curricular activities. Bal sansads played an important role in keeping the school clean and secure, tracking student attendance, setting up activity boards, gardening and in general assisting the teachers in all school activities. All these indicates that many students did take part in different school activities.

When head teachers and were asked whether there have been any positive changes in different school activities- we can see that in all schools high proportions of head teachers and teachers said there were changes in quality of morning assembly, bal sansad activities and extra curricular activities. In all three activities the proportion of Head teachers who gave this response was a little higher than those in control schools.

Relatively lower proportions said there were changes in school functioning, last class activities, and interaction with parents. However all cases show some positive difference in intervention schools. For MUHIM the difference between two sets of schools is strong, possibly reflecting the influence of child tracking system of Anandshala programme on MUHIM. Several head teachers commented on "bachchon ki kafi upastithi badhi hai", "bachchon ki sankhya me vradhi hui hai" and "bachche chod nahi rahe hain."

Figure 4 presents the proportions of head teachers and teachers were satisfied with different aspects of student behaviour. The chart shows that high proportions of respondents were satisfied with student attendance, learning levels, supporting school activities and confidence levels. And these are all considerably higher in intervention schools. However in all schools late arrival and early departure seems to be an issue and more effort is necessary to improve these.

Figure 4: Proportion of head teachers and teachers who were satisfied or very satisfied with aspects of student behavior
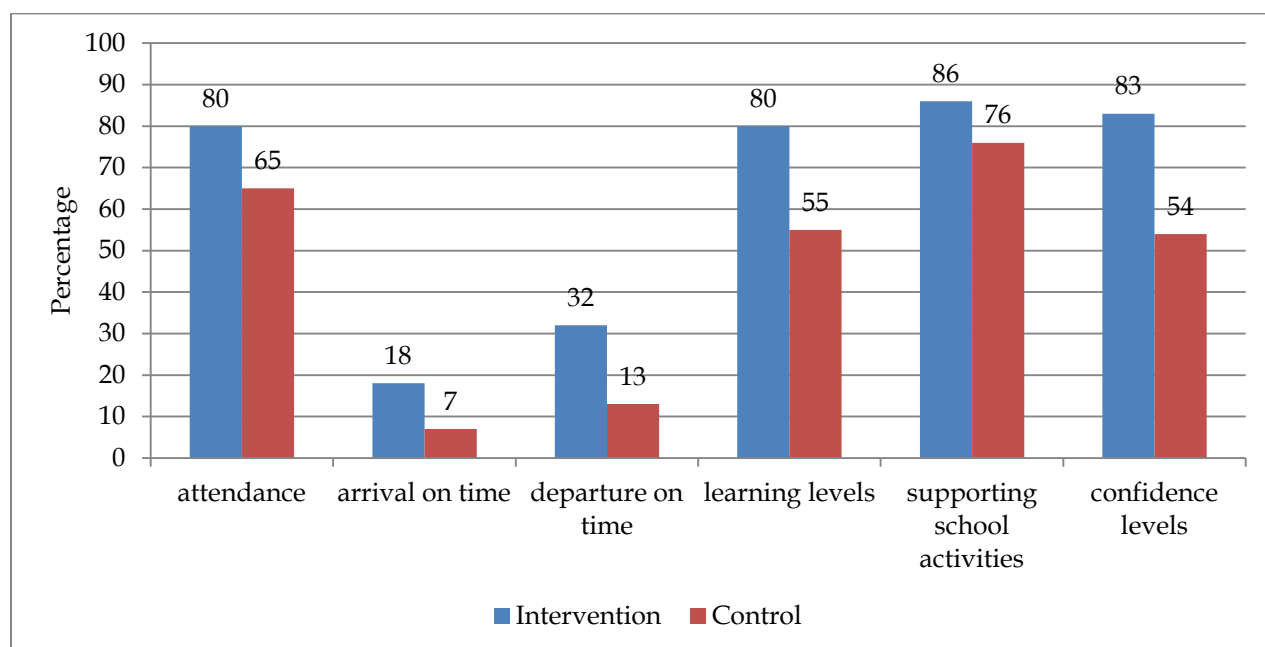
4.3 Non-cognitive skills

The written assessment sheets have tried to assess certain types of non-cognitive skills. The focus of these assessments has been more on their communication with parents and teachers, gender attitudes and decision making.

The following table provides self-reported perception of the students regarding their communication, decision making and gender attitudes.

Table 13: Average Scores on Non-cognitive Skills

Indicator	Intervention	Control	Intervention (Bal Sansad member)	Control (Bal Sansad member)
Average standardized score: Communication of a child with parents*	0.91	0.92	0.93	0.95
Average standardized score: Communication of a child with teacher**	0.88	0.85	0.92	0.87

Average standardized score: Decision making of a child*	0.82	0.83	0.88	0.85
Average standardized score: gender related norms*	0.57	0.52	0.64	0.57

**significant at 5 percent level of significance * the difference in means is statistically insignificant
Source: CORD Samastipur survey, student assessment schedule

The table 13 shows that the non-cognitive skills as reflected through their responses to the schedule need to be improved. This is true for students in both types of schools. The differences between them are small, and neither intervention nor control schools show an advantage in all aspects. Students in intervention schools had higher scores in communication with teachers and gender attitudes, but lower scores on the remaining.

A few questions were asked to the students on what advice they would give their friends if any of them wanted to go against family or community expectations regarding the work, marriage or pregnancy. While there are no correct or incorrect responses to these questions, from their responses one can estimate the proportion of interviewed students who were able to think of possible ways to resolve these problems. A significant proportion was unable to provide any suggestions or said its best to do what was expected from them- these proportions were higher in intervention schools.[11] Those who did respond, largely advocated discussions with their family (rather than anganwadi worker or teacher or community member) to change their expectations.

Table 14: Proportion of students who did not have any suggestion to real life problems

	Intervention schools	Control schools
Proportion of girls who did not provide suggestions to resolve the following situations		
Her friend wanted to delay marriage and continue studying while parents wanted to get her married	11.5	6.2
Her friend wanted to play in the evening when the panchayet has decided that girls will not be allowed outside after 5 pm	41.9	27.8

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[11] There is a possibility that the focus children - that is children with low attendance, low learning levels and low participation, had fewer suggestions. Focus children in intervention schools were interviewed, but not in control schools. If these children are excluded from the data sets, the comparisons show very similar results.

Her friend wanted to delay her pregnancy while her in-laws were pressurizing her to have a baby	25.2	22.9
Proportion of boys who did not provide suggestions resolve the following situations		
His friend wanted to continue studying while parents wanted him to start working	7.1	2.8
If his friend is being bullied in school and wants to drop out	8.2	3.7
His sister wanted to play in the evening when the panchayet has decided that girls will not be allowed outside after 5 pm	39.8	37.5

Source: CORD Samastipur survey, student interviews

Teachers and head teachers also agreed that non-cognitive skills of students have improved. In particular they thought that the bal sansad provided a platform for its student members to develop their leadership skills, awareness of their responsibilities towards their schools and learn teamwork.

> *"…bal-sansad ke jo bhi sadasye chune jate hain unhen school ki sabhi gatividhiyon ke bare me bataya jata hai, aur unhen sabhi gatividhiyon me shamil karvaya jata hai, isse unka bhi netratav shamta ka vikas hota hai"* (School ID: 1030510)
> *"…isse bachchon me netratav ki kshamta ka vikas hota hai"* (School ID: 1020405)

Teachers and head teachers in intervention schools were satisfied with the students' confidence level (figure 4)

4.4 Learning levels and dropouts

4.4.1 Results

A long term impact of the programme is to improve learning levels and results of all students. No separate learning assessment has been conducted during the survey to measure the learning levels. We have compared results of class 8 students in sample schools in 2015-16 (from DISE data) with the results in 2018-19 (collected during the survey). As Figure 5 shows, that in both intervention schools and control schools proportion of students who have scored more than 60% in the class 8 exams show marked increase from around 60% to more than 80%. However there is no significant difference between them.

No significant difference between schools belonging to intervention and control group in terms of results.

Figure 5: Percentage of 8th standard students scoring above 60 percent in 2015-16 and 2018-19**
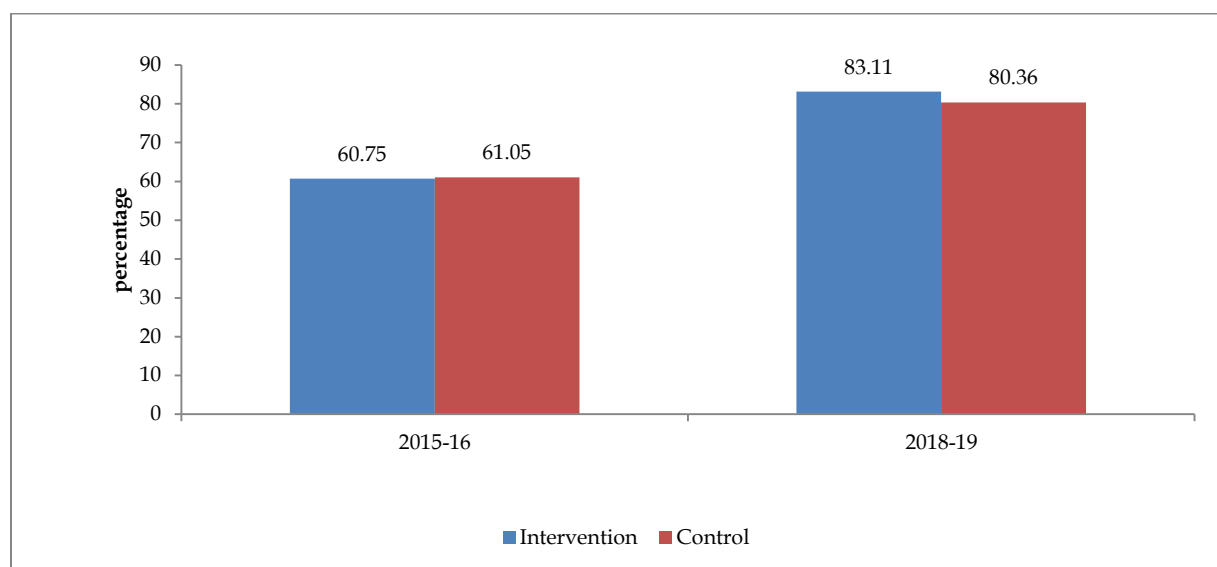
Source: DISE data for 2015-16 and CORD's survey for 2018-19 **same schools are compared

4.4.2 Writing skills

The following sections look at the capacity and perceptions of students based on student interviews and assessments of 3 boys and 3 girls selected primarily from class 8.

Figure 6: Average scores on writing skills
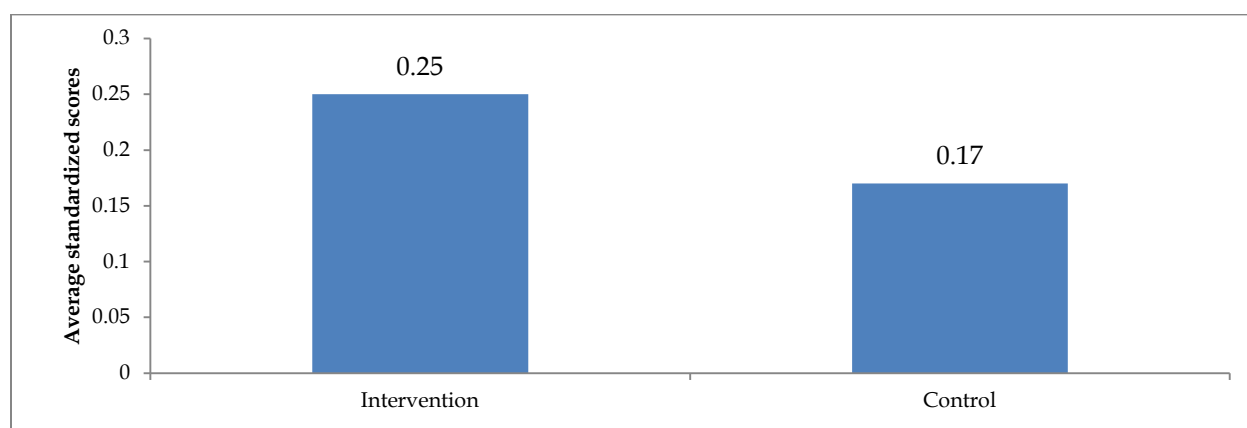
The students were given a multiple choice written assessment paper. There also wrote the answers to two questions– where they were asked which of the school activities they liked and why. We have analysed their answers to grade them according to their writing skills, and their

comprehension and reasoning skills. Table 15A shows that in both types of schools a significant proportion did not write, or their writing was not clear. However 67% students from control schools and 78% from intervention schools wrote clearly. Table 15B show that in both types of schools there is a significant proportion that did not write any answers, or provided no reasons, and only 35% of the students from intervention schools provided proper reasons as compared to 29% in Control schools, and show a slight advantage.

Table 15A: Distribution of students by their writing ability

Proportion (%) of students who	Control schools	Intervention schools
Did not write answers	13	4
Did not write clearly	20	18
Wrote clearly	67	78

Source: CORD Samastipur survey, student assessment

Table 15B: Distribution of students by their reasoning ability

Proportion (%) of students who, in response to questions, provided	Control schools	Intervention schools
No reasons/did not answer	57	58
No proper reason	14	8
Good reason	29	35

Source: CORD Samastipur survey, student assessment

4.4.3 Why impact on results are inconclusive:

The theory of change for Anandshala programme endeavours to ensure that all students stay, engage and learn. However the theory is based on the assumption that certain essential precondition for learning exists

(a) The schools have reasonable infrastructure and teachers, that is a low PTR (pupil teacher ratio) and SCR (student classroom ration) and there are teachers for all subjects. In Samastipur survey it was observed that teacher shortage is **the** problem of the system, and without sufficient teachers no intervention can have a long-term impact on learning levels.

(b) The role of school related factors are more important than household factors in determining learning levels. In the educationally less developed contexts this has been found to be true. However our student and parents interviews show that 90% of students had private tuition after school hours, a phenomenon perhaps reflecting the learning crisis arising from teacher

shortages. However this implies that the changes in results and cognitive learning reflect the impact of private tuition as well.

So it is important that schools have policy and financial support to have required teachers and classrooms, before learning can be impacted.

The interventions to impact 21st century skills have started more recently. The manual for activities to conduct for developing 21st century skills have been distributed in 2018 and most schools have started using it for barely a year. So it is unlikely that improvement in these skills show in intervention schools yet. However the assessment data should is as a baseline and can be used to assess the impact on non-cognitive skills through the next survey round.

4.4.4 Dropout

One of the primary outcomes which intervention aims to achieve is the reduction in dropout rates at the upper primary level. When a child leaves school they may be enrolled in another school or they dropout from the schooling system. Therefore it is difficult to estimate dropout at the school level. So using DISE data we have tried to use block level enrolment figures to estimate dropouts. We have compared total enrolment for 6th to 8th class in year 't' with combined enrolment for class 5th to 7th in year t-1. If no students repeat classes (data confirms that) then the decline in numbers will reflect the dropout. It is further assumed that when a child changes school, the change is within the block and the transfers to schools in a different block are negligible.

Using the above methodology we have calculated average dropout rates for all intervention and control schools at upper primary level. We have found that the dropout rates fell negligibly, by 0.2 percent, in intervention schools between 2015-16 and 2018-19. During the same period dropout rates have increased by 2.5 percent in the control schools.

Figure 7: Dropout rates for control and intervention schools at upper primary level (5th to 8th)
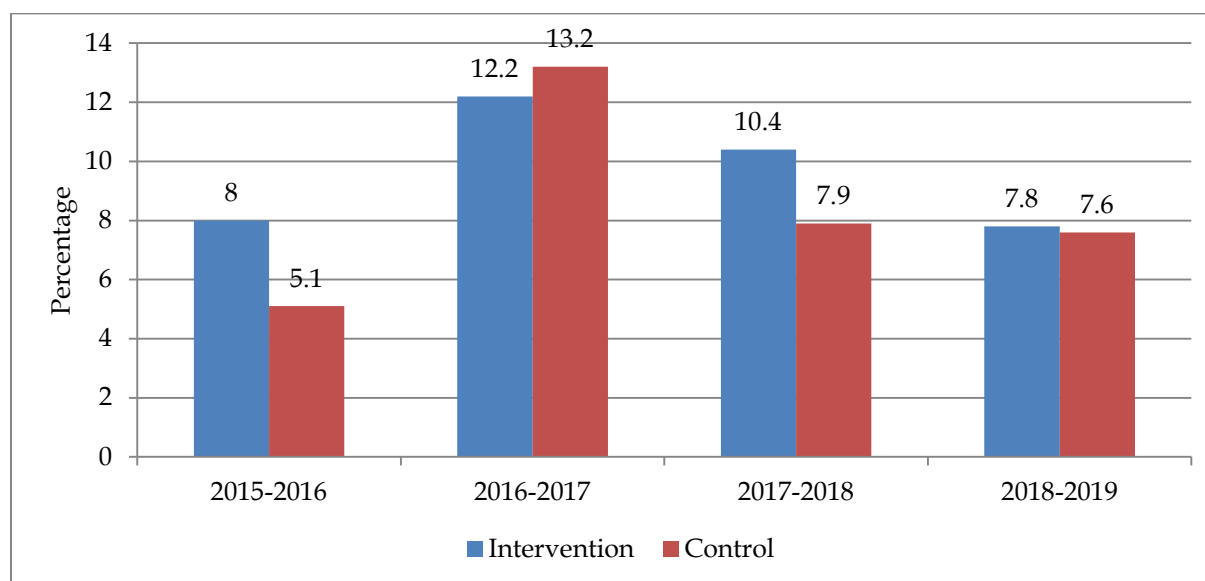
Source: DISE

The present phase of intervention began in 2016, and 3 years may not be a sufficient time to show its impact on dropouts. That could be the reason there is a nonconclusive trend. When head teachers and teachers are interviewed, many from both intervention and control schools said dropout rates have declined and the trend is stronger for intervention schools (covered in detail in the next section).

Another possible reason could have arisen from the existing data collection system. As highlighted earlier, there is a discrepancy in school enrolment data from DISE and household surveys. The contradiction on attendance rates have been highlighted in the earlier section. But there also appears to be imperfect enrolment data from private schools.

NSSO latest round of education data shows that private school enrolment in Bihar is 13% at primary level, 10% at upper primary level and 5% at secondary level. DISE 2015-16 data shows enrolments in private schools are only 3.8%. The need to improve data collection from unrecognized private schools is urgent, as that would help the government to estimate the real dropout rates.

4.4.5 Perception of head teachers, teachers and CRCCs about impact on students

Our survey collected information on the perception of teachers and head teachers on the changes in impact variables that is - student attendance, dropouts and learning. Figure 8 capture these perceptions. Figure 8 compare proportions of head teachers and teachers in the two types of schools who agreed that there has been improvement in student attendance rates and learning levels, and decrease in dropout levels.

Figure 8: Proportion of head teachers and teachers who said there were improvements in last 3 years
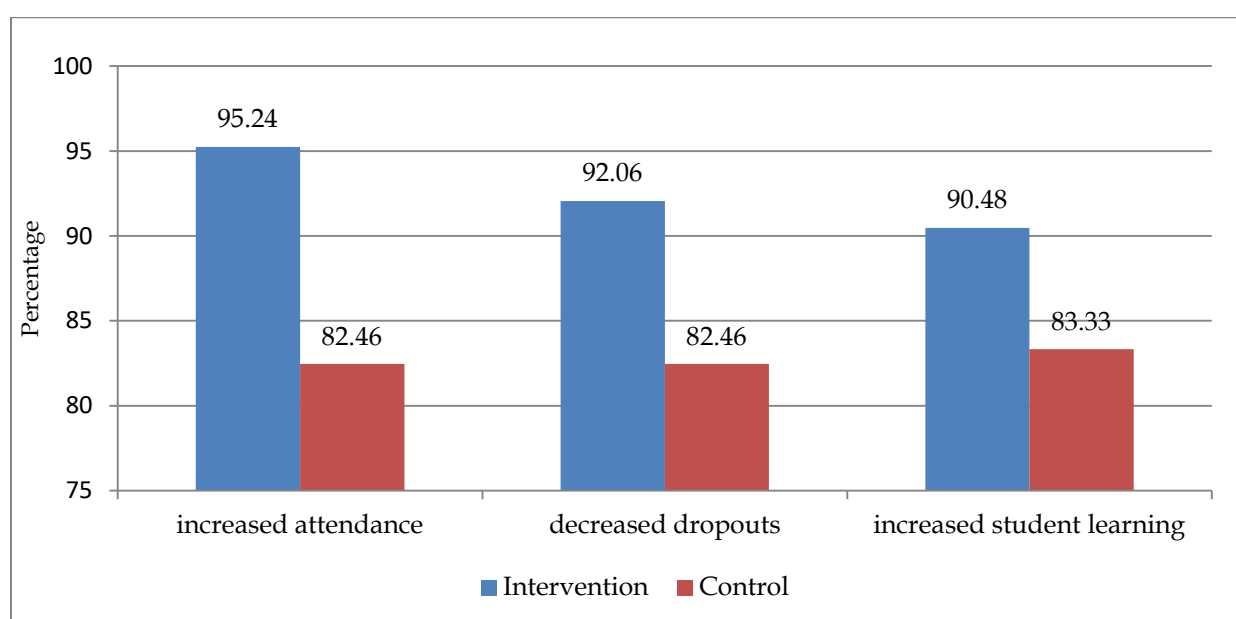
Source: CORD's Samastipur Survey

The first important point which emerges from the comparison is that the proportions are high for both intervention and control schools. This is to be expected, as few school heads or teachers would like to admit that their schools were not improving. The other important point which is observed is that on all parameters those in intervention schools have higher proportions, indicating that higher proportion of respondents in intervention school agree that the schools have improved in these parameters.

Table 16: Feedback from CRCC on impact of Anandshala Programme

Number of CRCCS who are very satisfied with	intervention blocks	control blocks
Learning Levels of Students	2	1
Attendance of students and teachers	4	1
Working of BalSansads	6	2
Working of extra-curricular activities	6	3
CRCCs interviewed	7	5

Source: CORD Samastipur survey, CRCC interviews

Interviews with Cluster Resource Coordinators show similar results. Majority of the CRCCs (4 out of 7 intervention blocks' CRCCs and 4 out of 5 control blocks' CRCCs) from both intervention and control blocks believe that learning levels have improved. They however differed in their perceived reasons for this. CRCCs posted in the intervention blocks gave credit to (i) effective *Balasand* and increased students' participation in Last Class Activity and *Chetna Satra* (ii) improved teaching methods and better guidance to students, (iii) increased interest and realization of importance of education among students, (iv) increased participation of parents in parents-teachers meetings, and (vi) enhanced subject-wise focus. On the other hand, control blocks' CRCCs attributed the progress in results to the (i) teachers have become proactive and give more attention to weak students, (ii) involvement of CRCC and (iii) teachers' rigorous training.

A CRCC who were earlier working in the intervention block said "When I was CRCC in that cluster, results improved through properly implementation and teacher trainings. But now results have deteriorated as the present CRCC is not motivated towards his job.

They also felt that in intervention schools programmes were implemented better. "Yes, major changes have been observed in Vikrampatti. In this school students have done theme based painting. After Last Class activity implementation, about 50% more students started staying back in the school."

"Yes, there are schools that have made major achievements. Proper implementation of Muhim led to reduced dropout rates. In 2-3 schools, major changes have been observed concerning Balsansad."

Our observation, as well as discussion with Quest team members, indicated that attendance, dropouts and learning levels still remain a problem in this area. However when these issues are explored most respondents have said that these are minor issues. There is a need to interpret the data with caution. There appear to be trend of improvement, and intervention schools show a greater improvement, there is need to examine the challenges and adapt strategies. Otherwise UEE goals will not be achieved.

Summing up:

It is seen that the attendance rates in intervention schools are higher than that in control schools. However this needs to be improved further to lead to improved retention and learning. The writing skills are better to some extent among students in intervention schools. But the data do not show any significant impact on non-cognitive skills of students. No concrete evidence on positive impact on dropouts and learning is available, but no decline has been observed either. these are very likely long term impacts and may show changes in the next survey round. However for sustainable change it is important to support the schools with required infrastructure and teachers.

5. Perceptions of Teachers, Head teachers and Cluster resource centre coordinators

In each school the head teacher and two teachers were interviewed about their role in school and their perceptions of change. As pointed out earlier, we make the assumption that the schools in intervention and control blocks were similar before the intervention[12] and both have been impacted by the different district and state programmes. However Anandshala has provided additional support through capacity building of the cluster resource centre coordinators, head masters and teachers to strengthen the implementation of selected government programmes in middle schools. So the impact of Anadshala would be captured through the differences in outcomes in the two types of schools.

The impact can also be captured through the perceptions of those teachers and head teachers who have been in the schools for the past three years about the different aspects in which the schools show changes, schools which shows significant changes.

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[12] which was validated by survey data

12 CRCCs were interviewed- 7 from intervention blocks and 5 from Control blocks. The numbers are too small to indicate a definitive trend. However they have been useful to validate findings from the school survey.

5.1 Perception of Changes in school functioning

In the next graph we have compared the proportions of respondents (teachers and head teachers) who agreed that positive changes in different school activities have been observed in the previous three years. Figure 9 shows that in all schools high proportions of respondents said there were changes in morning assembly and extracurricular activities in schools and the proportion of respondents who gave this response was a little higher in intervention schools than those in control schools. Regarding functioning of balsansads the difference is higher, nearly all respondents in intervention schools (94%) said there was a positive change while 78% said so in control schools.

Relatively lower proportions said there were changes in the last class activities, and in their interaction with parents. However all cases show a similar trend - some positive difference in favour of intervention schools. Regarding perceptions about overall school functioning and MUHIM the difference between two sets of schools is even stronger.

However the responses were less positive when interaction with parents are discussed, identifying it as a major area of future action.

Figure 9: Proportion of head teachers and teachers who said there were changes in school in last 3 years
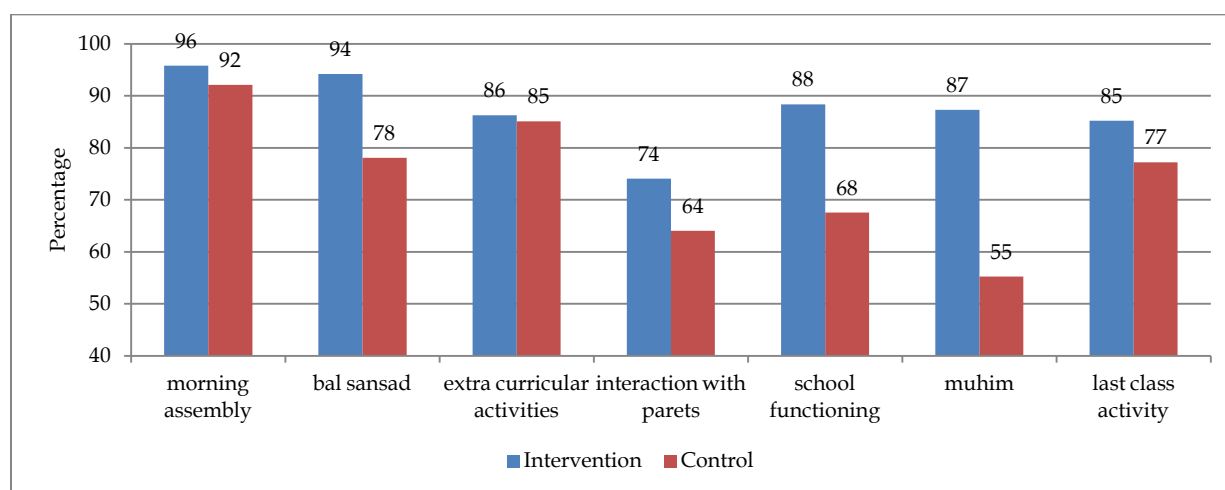
The next graph presents the proportions who said that these were <u>very</u> significant changes The head teachers and teachers were also asked about the extent of change in these activities. The next graph (Figure 10) show the proportions of head teachers and teachers who have said there were significant changes in these activities. Here too the proportions of head teachers and teachers in intervention school had more positive responses. The differences in responses are high for morning assembly, school functioning, bal sansad and Muhim. However none of this graphs show a major impact on interactions with parents. Their views go with our findings discussed the earlier section

Figure 10: Proportion of head teachers and teachers who said there were very significant changes in school in last 3 years
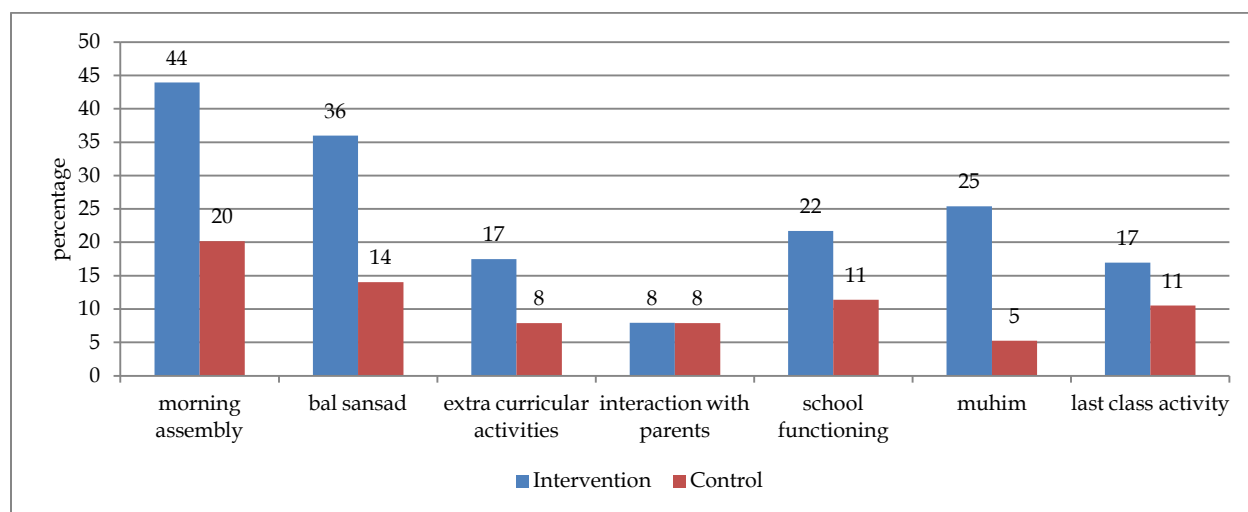
The CRCCs were also of similar opinion. Those in intervention blocks shared that schools in their respective clusters have started implementing various extracurricular activities in the last 3 years. Majority of these CRCCs were satisfied with their working. However, fewer CRCCs of the control schools said so.

The CRCCs of the intervention blocks interviewed said that in some schools in their clusters government schemes such as *Balsansad* and MUHIM were effectively implemented. A few others spoke highly about the enhancement of *Balsansad*. Because of these accomplishments, affirmative changes were observed by CRCCs in some schools such as improvement in students' attendance and reduction in dropout rates.

The Headmaster interviews provide additional insight. According to the HMs of intervention schools, *Balsansad* members have made and continue to make many valuable contributions

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towards the schools' well-organized functioning. They have credited these members for the following affirmative growth their respective schools have registered: Their involvement had significantly influenced the dropout rates, truancy, enrollment and attendance related issues in many schools. They lend a helping hand to the teachers in their work and subsequently reduce their burden, keep an eye on their attendance and most importantly regulate classes in case of teacher shortage or absence in many schools. They aided in increasing efficiency in the implementation, operation, and presentation of various government schemes, and other essential school functions such as maintaining discipline and punctuality. Unlike the intervention schools, the control schools' HMs had less to say about their *Balsansad* members. They appreciated their contributions which were limited primarily to maintenance of infrastructure, cleanliness, punctuality, and discipline in majority of control schools. Moreover, class management, organising school activities such as morning assembly, etc., and management of students' absenteeism were few other inputs of the members that were mentioned by HMs of some control schools.

5.2 Perception of teachers and head teachers of support from other stakeholders

The Anandshala intervention expects to improve relationships and engagement of teachers, students and parents. The teachers and head teachers were asked about their level of satisfaction with the support received from different stakeholders. A very high proportion of respondents said they were satisfied with the other stakeholders, but a lower proportion said they were <u>very</u> satisfied (Figure 11).

Figure 11: Proportion of head teachers and teachers who were very satisfied with support and cooperation from stakeholders
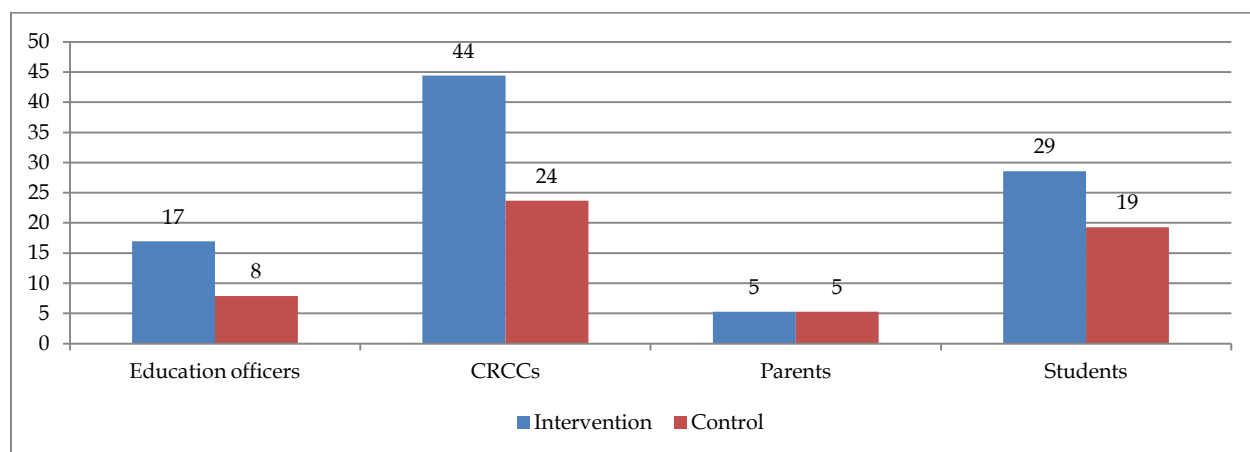
However interviews with the bal sansad members indicated that in intervention schools they were very appreciative of the support provided by other students and teachers. The teachers also appreciated the motivation and work of the bal sansad members.

However when the proportion of teachers and head teachers who are very satisfied with other teachers/head teachers in the school are compared between intervention and control schools it can be seen that positive responses are much higher in intervention schools. The in- school and cluster level relationships appears to be better in intervention schools.

Table 17: Feedback from teachers and head teachers: very satisfied with support from other teachers/head teachers

	Intervention	Control
Proportion of head teacher who were very satisfied with the support of teachers	70	30
Proportion of teachers who were satisfied with the support of head teachers	71	33
Proportion of teachers who were satisfied with the support of other teachers	61	29

The responses of CRCCs were very similar- all CRCCs interviewed were satisfied with the support received from teachers and head teachers while the numbers were fewer for control schools. Several of them said that over time a rapport is built up, but when a CRCC gets transferred the situation deteriorates.

Table 18: Feedback from CRCC: satisfaction with cooperation from other stakeholders

Number of CRCCs very satisfied with	Intervention blocks	Control blocks
BEO	4	3
DEO	1	2
HT	7	2
Other teachers	7	3
CRCCs interviewed	7	5

So while we find that in intervention schools relationships between teachers, head teachers and CRCC is quite positive, very few respondents were very satisfied with the support received from education officers and parents. These aspects of the intervention may require re-strategization.

The proportions who were very satisfied with support received from students are also low – in all cases. As Figure 4 showed, the respondents were not at all satisfied with the students' late arrival and early departures – though the perceptions are more positive in intervention schools regarding early departures. Their perceptions regarding students' support in school activities and their confidence levels are however quite heartening.

Summing up:

Perceptions data need to be interpreted with care as they are influenced by various factors. However, this section shows that for all indicators, the responses from intervention school are more positive. This does indicate that while some aspects of the intervention need strengthening, the school environment in intervention schools has changed and impacted the students and other stakeholders' experiences.

6. Role of parents in school participation and learning.

The previous section showed that one of the major gaps in the outcomes was in the parent teacher interactions. In very few schools majority of the parents attended the monthly PTM meetings, the main forum through which parents and teachers can interact. This is confirmed by the perception of teachers regarding support given by parents. However much of the success of the programme depends on support provided by parents to their children and complement schools effort in providing quality education.

We present in this section responses of students, teachers and parents regarding household support and parent- teacher interactions. While student and teacher respondents were selected randomly, parent selection was more purposive. In each school families of two class 8 students were surveyed. For logistical reasons families could be easily accessed were chosen. So the sample may not be representative. It should be interpreted more "as a best-case" rather than a representative sample.

6.1 Home Support

Parents' responses (Table 19) suggest a high proportion provides helps students in their studies and a high proportion of students are helped by a private tutor. This was true for students in all schools. However given that the majority of students have parents with low levels of education, the home support will be limited in nature and possibly only occasionally. The students responded similarly about help in studies at home (Table 17), but also indicated that much of the support was provided by their elder siblings and not parents. Parents provided their perceptions of their children's experience in school. Almost all said their children enjoyed going to school and a high proportion (83% and 91%) said they were satisfied with their children's progress. About one-fourths said that their children were bullied in school and a higher proportion said they had difficulty in coping with their studies. Not much of a difference was observed in responses of parents with children in intervention and control schools. The major difference was in the proportion of parents who said their child talks at home about school activities- 64% in intervention schools as compared to 44% in control schools.

Table 19: Feedback from parents on home support and children's schooling experience

Proportion of parents who said	Intervention	Control
Any one at home helps the child in studies? (%)	70	86
Child taught by a private tutor (%)	88	93
Child talks at home about school activities (%)	64	44
Child face difficulty in coping with his/her studies (%)	37	30
Child complained of being bullied by other children (%)	25	24
Satisfied with your child's performance in school (%)	83	91
Child enjoy going to school (%)	97	97

Source: CORD Samastipur survey, parents' interview

Table 20: Students' response on home support

Proportion of students who said	Intervention	Control
Anyone at home help in studies (%)	83	91
They have taken private tuitions in the past one year (%)	91	93
There was a pressure on them to dropout from school (%)	3	5

Source: CORD Samastipur survey, students' interview

6.2 Parent Teacher interactions

From teacher's feedback it appears that PTMs are quite regular in more than 80% schools, and around 8 PTMs were held in the previous year. However parental participation in PTMs were not high- only 40% teachers in intervention schools and 58% in control schools said more than half the students attended last PTMs. Almost all teachers said that they do home visits and a high proportion said parents visited schools even when there were no PTMs (Table 21).

Table 21: Teacher's feedback on parent-teacher interactions

Proportion of teachers who said	Intervention	Control
There were regular PTMs(%)	85	82
Average number of times PTMs were held in previous year *	**7.9**	**8.6**
Around half or more parents attended last PTM (%)*	40	58
Parent visited school for some other reason too (%)	79	73
They made home visits (%)	96	92

*For those teachers who said there were regular PTMs.
Source: CORD Samastipur survey, Teachers' interview

Students and parents interviews (Table 22, Table 23) show that small proportions of respondents had positive responses about parent-teacher interactions, and no difference

between intervention and control schools can be discerned. As this is an important part of Anandshala interventions, this part of the intervention need to be restrategised.

Table 22: Student's feedback on parent-teacher interactions

Proportion of students who said	Intervention	Control
Parent had came to school for PTM (%)	65	63
Average number of times parent visited school for PTM *	4	3
Parent visited school for some other reason too (%)	24	21
Teacher visited parents at home (%)	42	50

*For those students whose parents attend PTMs.
Source: CORD Samastipur survey, students' interview

However a high proportion of parents were happy with the school and the teachers, and around half said they had provided help in different forms to school in the past year.

Table 23: Parent's feedback on parent-teacher interactions

Proportion of parents who said (%)	Intervention	Control
Met the principals at least once previous year	65	70
Met class teacher at least once in the last in previous year	56	58
Teacher called or made home visits in the previous year	34	41
They provided any financial or other help for the school	49	44
They were happy with the school and the teacher	85	87

Source: CORD Samastipur survey, students' interview

Summing up:

Parent teacher relationship requires to be improved. However the existing relationship is not of antagonism or apathy but and is a good place to start from.

7. Achievements, Challenges and Recommendations

The aim of the Anandshala programme is to develop a strong schooling system in Samastipur, where the different stakeholders at the school, cluster and district level works together to improve school functioning and improve schooling experience of the students. This would in turn improve student's attendance, engagement and retention and reduce dropouts. The students' learning and skills will improve and prepare them to be better citizens. This is achieved through supporting some of the existing government programmes and building capacity of the teachers and head teachers to implement them in a meaningful way.

Taking into account the scope, the objectives, and the design of the intervention, and the lack of baseline data, the study design uses comparisons of intervention and control schools, and where possible, difference in means test. The comparisons are made on the basis of enrolment data, observation and interviews with stakeholders. In order to ensure there is no 'selection bias' the sample was chosen using stratified random technique.

The intervention involves interactions with all stakeholders of the schooling system- the education officers, head teachers, teachers, students and parents. While the final impact is expected on the schooling system and on students, the intermediate and long term outcomes would show through improved school functioning, improved schooling experience of students and improved capacity of all stakeholders.

It is unrealistic to expect strong impact on all fronts.

1. The intervention works towards changing practices and behaviour of different stakeholders of the schooling system. This is a slow process, particularly in the initial years. The parents of students in government schools are largely in agriculture or informal sector, and have low levels of education. Influencing their practices is likely to be even slower, and very likely is well beyond the domain of education. For such major changes three years is a short time period. Within this time some of the schooling processes may have just begun to change and are largely qualitative in nature, and so difficult to estimate.

2. Certain basic preconditions are necessary to have sustained impact. The teachers and head teachers were engaged in their regular teaching and administrative duties. The schools had settled in a stable situation with low levels of student outcomes. The

interventions require them to change their practices and be proactive in several directions. But this requires certain facilitating factors- (a) sufficient number of teachers,(b) teachers for all subjects-especially maths, English and science, (c) no transfers of teachers /head teachers trained and (d) certain basic infrastructure such as usable and sufficient classrooms.

3. It is easier to assess impact when interventions are simple in nature- such as provision of an extra teacher or adding an extra class to improve learning, or adding to infrastructure. Anadshala is a complex one intervention and is implemented with several stakeholders and outcomes are expected in multiple fronts.

4. Since 2016, the pilot project has been adapted and scaled up. This has happened gradually over time, and some parts have been revised and strengthened on the basis of feedback received from Programme officers and change leaders. Certain components of the program, such as 21st century skills, are relatively new. So the intensity of the interventions had varied over time, over components and over schools. The impact is also likely to vary.

7.1 Achievements

Within these limitations positive changes have been observed in intervention schools in different components of <u>school functioning</u> – particularly changes in schooling activities which involves student participation. In particular morning assembly and Balsansad functioning has improved significantly.

Basic infrastructure and general school environment have shown marked improvement. Both the Head Teachers and bal sansad have played a proactive part to bring about these changes.

MUHIM which requires tracking of attendance of all students is being done better in intervention schools- here too the Bal Sansad members and Teachers have been very proactive.

We have also found better cooperation and support among stakeholders at school level. The head teachers, teachers and CRCCs in intervention blocks showed higher levels of satisfaction with each other. The relationship with bal sansad members were also quite positive.

Our analysis has shown that, though the intensity of intervention is uneven, on an average there is a positive and significant improvement in school functioning.

The <u>impact on students</u> is more uncertain. However on the day of the survey attendance in intervention schools were higher on an average compared to control schools. Students interviews indicate high participation in different activities and a good schooling experience. Intervention schools show some improvement in timely arrival and departure, but to a small extent. Analysis of enrolment data shows that while dropout rates declined marginally in intervention school and increased in control schools between 2015-16 and 2018-19, the trend has been uneven over the intervening years.

Analysis of learning levels on the basis of results show no conclusive pattern. As pointed out, with the extreme teacher shortage and preponderance of provate tuition, impact on results are not likely to be observed.

The noncognitive skills too do not show any conclusive trends except in balsansad members to some extent. One important change was that a higher proportion of teachers in intervention schools perceived an impact on the confidence level in students. As the material for developing 21st century skills have evolved over the years, it is too soon to observe its impact.

However, the primary data suggests that the theory of change holds as the several of the intermediate outcomes are observed.

7.2 Challenges

Some of the challenges have been highlighted when discussing the limitations of the exercise. It was also observed that in an effort to adapt Anandshala activities to government approved programmes, some of the components were not properly implemented. In particular it was found that Early Warning System (EWS) is not being followed in many schools. Among the intervention schools surveyed, 40 percent had not prepared the list of Focus children as late as July and August, 4 to 5 months into the school calendar. While MUHIM ensures attendance tracking of all students, without a FCI list the teachers are unable to pay special attention to these children.

Last class activities were also not held regularly. With extreme teacher shortage it is not a clear whether its feasible. Several schools have converted the last class as an evening assembly, where students participated in several activities.

Very limited impact was observed in organising parent teacher meetings. Head teacher, parents and student interviews all indicated that in few schools more than 50% parents attended meetings.

While CRCCs are quite engaged with the school functioning and Anandshala programme, the relationship with block and district level authorities were not observed to be the same. Several policy changes are required at district and block level for the programme to have desired impact.

7.3 Recommendations

1. Intensity of intervention is uneven, and that could be a primary focus of the Anandshala programme. This would require support from education authorities as well as sufficient teachers. Regular monitoring would be very useful for this.
2. There is a scope of improvement in the parent teacher relationship. The Anandshala team has to take in to account the education level of the parents. Around 15 percents of the parents we have interviewed are illiterate and in addition to that approximately 20 percent have studied till 5th class. This implies that most of the students studying in these schools are first generation learners with parents not taking proactive approach to educate their children. A restrategising of parental involvement would be very useful.
3. At the state and district level there is need to improve data collection, particularly from private schools. Without that the problems of the system are difficult to analyse. At present it indicates higher proportion out of school and higher dropouts of male students- a very unlikely situation in developing countries.
4. Need for a proactive role of district and block level officers to provide teachers of all subjects and basic infrastructure.
5. Advocacy at the system level is very important for the purpose.