

# ASSESSMENT REFORM AND SUSTAINABLE CHANGE IN EDUCATION PART II

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*This two-part paper focuses on the work done (over four and a half years) by the Azim Premji Foundation, in partnership with the governmental SSA, in the state of Uttarakhand. It explores the question: 'Can Assessment reforms serve as an entry point to sustainable change that can also be institutionalised?' within this state. The paper is in two parts: the first part described how using assessment reform as an entry point, analysis (and feedback) of students' performance could trigger changes in classroom processes. The second part suggests ways and means of making this change sustainable and institutionalised. Since the establishment of a positive learning culture in schools involves working at several levels: students, parents, community, education functionaries and heads of schools, this work initiated the development of new structures and processes at the school, district and state levels. Having described each of these in brief, it finally suggests how to use the structures and processes developed to assess the effectiveness of the programme itself.*

**Keywords:** Assessment, Reform, Sustainable and systemic change, Institutionalisation

## INTRODUCTION

Using assessment reforms as the entry point to effect a change in the quality of primary education was described in Part I of this paper - from altering the examination pattern to analysing student responses so as to understand gaps in the teaching-learning process - to acting on such feedback and thus allowing assessment reforms to percolate classroom processes. In this Part of the paper, the institutionalisation of this change is described in detail: with a shifting of ownership of assessment led reform to teachers; a change in the collective notion of a 'good school', to a shared vision for the progress of each school, and a collective vision (between BRCCs, CRCCs, teachers, DIET officials and parents) for improved education in each district. While efforts were directed towards making any attempted change institutionalised and sustainable, only time will tell how far both these criteria have been met. However, this is a report of four and a half years' efforts to bring about such a change, with the results that are visible so far.

Indicators for the successive implementation of this programme are suggested here. In this regard, just as assessment can be effective only when it engages the mind of the learner so as to provoke thinking, application and creative expression - and when it becomes difficult (even impossible) to meet expected standards merely through rote learning - similar criteria are suggested in this paper to assess the effectiveness of the entire programme, as only such integrity will render credibility to any conclusions reached. Thus, 'achievement' (if indeed one can term it so) of the programme goals should be indicated by milestones that are difficult (if not impossible) to reach mechanically. To cite an example, mere participation in the programme cannot be taken to indicate willingness to change - the participation has to be voluntary to truly indicate such willingness. Again, mere preparation of a School Progress Plan (SPP) is not a sufficient indicator of success - scrutiny of the plan for its quality and implementation of the plan (through detailed monitoring of child-wise progress and addressing weakest competencies) should be ascertained. Further, student performance should improve significantly in tests of reflective thinking and application, in place of rote, for success to become tangible. These suggested measures of success can only be quantified comprehensively a few years' down the line: initial samples of results are presented here.

## SCHOOL PROGRESS PLAN

In order to create a follow-up mechanism, a document titled *School Progress Plan (Vidyalay Pragati Yojna)* was developed in 2008 and distributed to each participating school. The idea of this School Progress Plan (SPP) was to ensure a more organized manner of application of the feedback, and other important elements upon which the school needed to work. It was also an attempt to consolidate - in one place - the varied, discrete aspects of school education, viz., enrolment, attendance, teaching-learning process and learning achievements. Since the teacher knows best about the positives and negatives of her school, it is the teacher who is expected to develop his/her own SPP, by identifying enrolment, attendance and achievement areas requiring attention and meet them.

A School Progress Plan had to be designed such that it is simple and self-explanatory: anyone should be able to fill it up (see Appendix II – for a sample SPP). Some indicators of success in this step were: has the school generated its own feedback from the Response Analysis (explained in Part I)? Has the school registered the fact that certain reforms are needed, and identified those spots? Another benefit of this organized reporting format was that a monitoring team could be created (of cluster resource persons) who could visit the schools, from time to time - to view the progress - thus enrolling the academic support functionaries (CRCCs and BRCCs) into the academic activities of the school. This became a one-spot tracking mechanism - both for the teacher and for the Foundation - to see how the feedback is used and how the quality of education actually improves in the school. Figure 3 shows the status on SPP preparation in two districts.

### *Notion of a ‘Good School’: Ripples from assessment led reform*

Simultaneously, in the third year<sup>1</sup> of LGP, it was mutually agreed that the mandatory Continuous Comprehensive Evaluation (CCE) – school grading<sup>2</sup> – (that was being conducted by Districts) was not in sync with the competency-based, end-of-year LGP type evaluation. The teachers thus welcomed the Foundation’s intervention in making the school grading also in sync with the LGP, so that rote learning is not encouraged at all, throughout the year. Thus, even the definition of a ‘highly ranked school’ had to be in alignment with moving away from rote learning.

### **ASSISTING TEACHERS TO TAKE A FRESH LOOK AT ‘ASSESSMENT’**

Considerable evidence (Gordon & Rees, 1997) shows that teachers can be very effective in training pupils to pass tests even when the pupils do not have the understanding or higher order thinking skills that the tests are intended to measure. It was imperative, therefore, that the notion of ‘assessment’ in the minds of teachers be overhauled, and teachers view assessment as a key to unlocking doors to learning throughout the year. School grading was one process that was instated and meant to trigger precisely this shift.

Once the intervention percolated right into the entire year, through school grading, both the State functionaries and the Foundation felt the need to revamp the ongoing in-service training of teachers, so as to make them take a re-look at the entire notion of Assessment. This took the form of expanding the training from just looking at ‘hard spots’ in the content, to attitudinal training, pedagogical training and perspective building in Assessment. In the year 2007-08, the Foundation’s perspective building thus became part of the in-service training.

### **SHIFTING OF OWNERSHIP: INSTITUTIONALISATION OF CHANGE**

Basically, *the shift from teachers being in a compliance mode to going into an initiative mode* was achieved through this adoption of the School Progress Plan. Thus far, the teacher’s role had been that of one who merely implements the plans made by the BRCC, CRCC, etc. A subtle trend can be seen here, of the onus of design and practice of evaluation shifting from functionaries to teachers. However, the latter, too, are being drawn into the change process as described below:

- **Cluster Level Involvement:** CRCCs were oriented in each block on how to carry out Response Analysis. NCF 2005 was shared with all BRCCs of two districts (Uttarkashi & Uddhamsingh Nagar), and about 150 teachers as well as education functionaries studied and shared 200 books in their academic meetings. A series of Teacher Grievance Redressal Camps was held and this continues to be an accessible platform for candid expression by teachers, and involvement in academic issues by CRCCs and BRCCs.
- **Block Level Involvement:** In Uddhamsingh Nagar, the Block Level Annual Academic Plan was reviewed by every BRCC in 2009, and DPO and DIET organised a district level meeting for the review of the District’s Annual Academic Plan. The DPO holds monthly review meetings at the block level.
- **District Functionaries’ (Diet Officials) Involvement** in effecting a change in the education processes: From the Foundation organising Response Analysis workshops, a shift occurred with the DIET officials (in Uttarkashi) taking over this responsibility and leading a workshop in the year 2009, wherein 1200 answer scripts were analysed and 35 people were trained.

### **EXPANSION OF THE PROGRAMME**

#### *Building institutionalisation into the very mode of expansion*

In the first phase of the programme, two (pilot) districts were covered: Uddhamsingh Nagar and Uttarkashi. When the State decided in 2007 to expand the programme to four more districts, viz. Almorah, Champawat, Dehradun and Rudraprayag, the Foundation agreed to offer consultancy services to implement the program there, so as to allow the government to take ownership in bringing about this change. Thus, from communication, to evaluation and finally feedback generation, DIETs/ District Project Offices/SSA were responsible-with the Foundation merely offering consultancy support. Thus began

institutionalization of the desired change. In the second phase of the programme, too, new structures and processes were born in response to ground needs as follows:

**Academic Resource Group (ARG):** It was found that there was a need for better alignment of thoughts and priorities of the various district level institutions, so that they could work cohesively towards one goal. Thus, the need emerged to build the perspectives of functionaries in a shared vision of education, and from there, lead on to ordering the priorities, and working towards them, as a team. From this came the idea of making an ARG (see Appendix I) in each district. Interestingly, this platform has shaken up hierarchies by bringing together functionaries and teachers on an equal footing, as no such body existed prior to this. Discussions in such meetings veer only around issues related to education and have by now, been streamlined so as proceed in a professional manner. Each DIET and DPO has been enabled to draw up an Annual Academic Plan for their own district, which is then shared with the ARG of that district. Decisions taken in ARGs have impacted infrastructure (libraries have sprung up in many places, to name just one), processes (learning hour in every Block Level Meeting, Bal Shodh Mela to provoke children to enquire and explore, to cite two) and culture (people now talk to each other about the state of education in their block or cluster.) Bal Shodh Melas emerged from the need to awaken exploratory and observation skills in children, by expressing these in a festive atmosphere wherein the entire community participated. Such melas were organised at school, cluster, block and district levels.

It was found that action taken on feedback generated (from the assessment of children’s examinations) often reflected inadequate change in classroom practices. In fact, the institutions that had been created by the government for such follow up work, perhaps also needed some sort of capacity building. Thus emerged an area for (institutional as well as functionary) capacity building which the Programme chose to now address, through the transformation of existing resource centres into VRCs: Vibrant Resource Centres. A need was therefore felt for enriching existing materials and creating opportunities for experiential learning for BRCCs, as they would then render informed and meaningful support to CRCCs and teachers. All of the above were continuing to revolve around the central pillar of Assessment and Evaluation, which, in a competency<sup>3</sup>-based form, had to be institutionalized through all of the above.

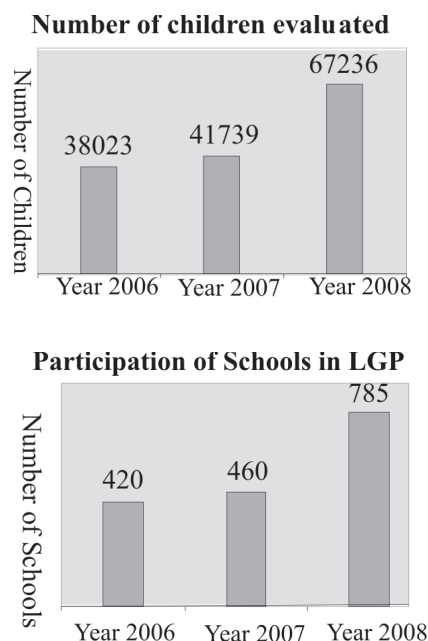
**ASSESSING THE PROGRAMME**

The success of this programme may be measured by several indicators like the following:

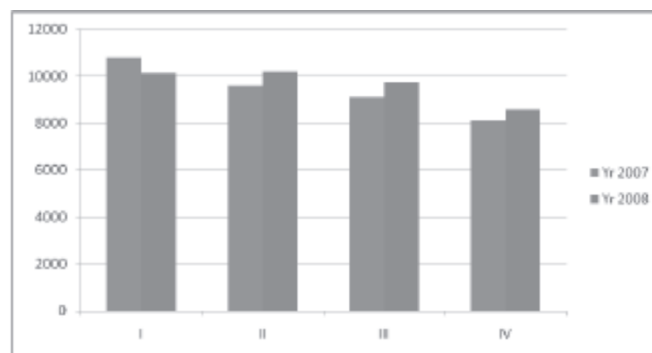
**Number of schools which participated voluntarily** in the programme over the years (indicator of willingness to change):

Over the years 2006-2008, participation in the Learning Guarantee Programme has grown as shown in Figures 1 & 2. Since the participation of schools has remained voluntary, this suggests an increased willingness of the schools - over the years - to bring about a change.

How did this number distribute itself across the classes? This is depicted in Figure 2 below:



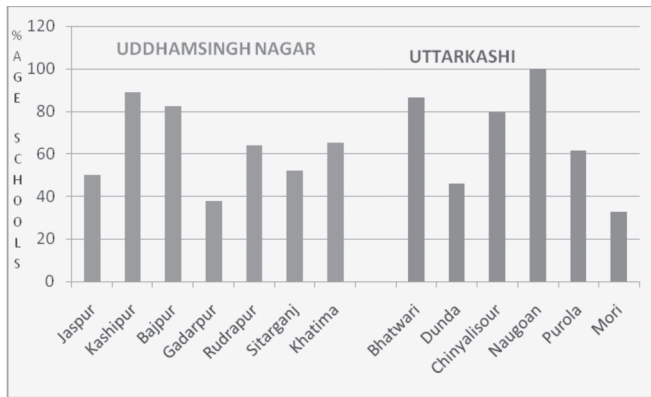
**Figure 1:** No. of schools and children who participated in the programme in 3 years, 2006-08



**Figure 2:** No. of children examined in 2007 and 2008 across classes I to IV

**Extent of monitoring of students’ areas of difficulty** (measure of shift from Assessment OF learning to Assessment FOR learning): Did schools take pains to monitor students’ areas of difficulty, as shown first, by the preparation of School Progress Plan, and then by its quality? An attempt was made to understand the reasons why some schools have not prepared their SPP. Various factors emerged: amongst which were a lack of understanding of subject-wise competencies by teachers,

the lack of conviction amongst some teachers about the need to fill such a document - when they ‘already knew’ their students’ weaknesses and strengths - and an inability to link assessment to classroom processes.

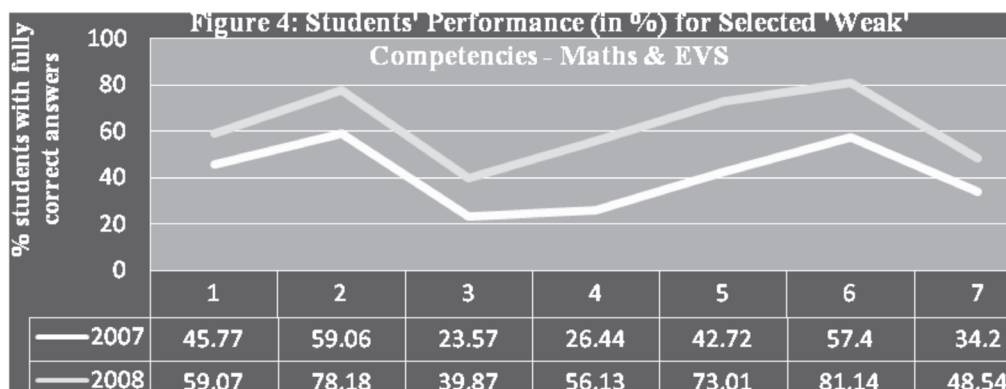


**Figure 3:** Percentage of schools in two districts that prepared SPP

Many who prepared the SPP also took pains to implement it. This now needs to be confirmed through a scrutiny of the respective School Progress Plans, which should show a detailed monitoring of changed areas of difficulty. Both the number and quality of SPPs prepared will eventually be monitored across the state. A strategy is being developed to have at least 50% of all schools prepare and implement their SPPs in 2011, with the percentage slowly increasing to 100% (see Appendix II for sample SPP).

**Changes in classroom processes** so as to address specific difficulties in learning as identified in School Progress Plans: By scrutinising SPPs across the state, it is intended that the number of schools who have made Assessment for Learning happen will be measured.

**Improvement in learning** in the areas of difficulty (examples drawn here are only from Math & EVS), in response to feedback gained from response analysis: If a **teacher** teaching a particular class acts on the feedback gained from Response Analysis, (s)he should take measures to address the areas of difficulty. This could then manifest as improved performance of students in the same competencies, with the new batch of students. This was shown in Figures 3 and 4 in Part I of this paper. If a school treats the feedback gained from response analysis seriously, this should reflect in the same batch of students showing a shift in their performance in at least a few competencies, as they move up to higher classes, even though a different teacher may be teaching them in the higher class. While comprehensive data across the state remains to be gathered in this data field, as SPPs are only now being made, Figure 4 below shows precisely such a shift, in selected competencies of Math & EVS (the table below the graph explains the codes used) for students of Classes I to IV. Thus, while only 42.72% children of Class II could get fully correct answers in subtraction of 2-digit nos., over 73.01% of the same batch could get fully correct answers in Class III in subtraction of 3-digit nos. with borrowing.



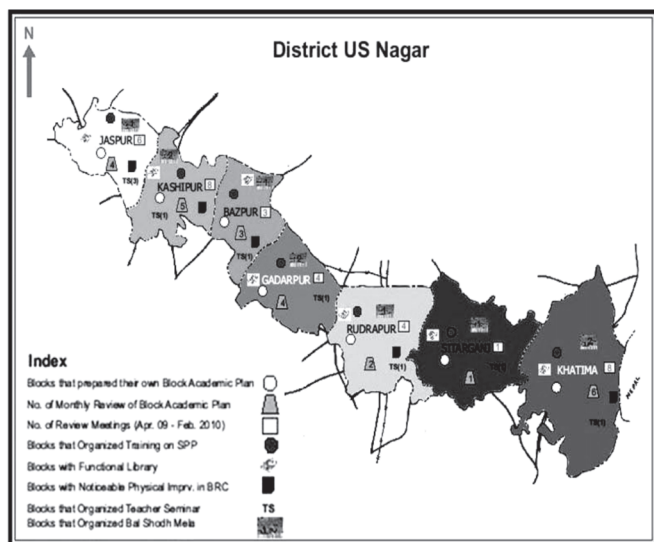
Description of codes used in Figure 4

Code No	Class- Competency2007	Class- Competency2008
1	I: Personal Hygiene	II: Discuss the importance of keeping one’s surroundings clean
2	II: Occupation and our helpers occupation	III: Knows objects and equipments used by people engaged in different
3	III: Our District	IV: Knows names of state level official
4	I: Identifies 2 digit numbers	II: Identifies tens place in 3 digit numbers
5	II: Subtracts 2 digit numbers	III: Subtracts 3 digit numbers with borrowing
6	III: Reads a clock	IV: Reads a clock
7	III: Divides 3 digit number with 1 digit divisor	IV: Divides 4 digit number with 2 digit divisor

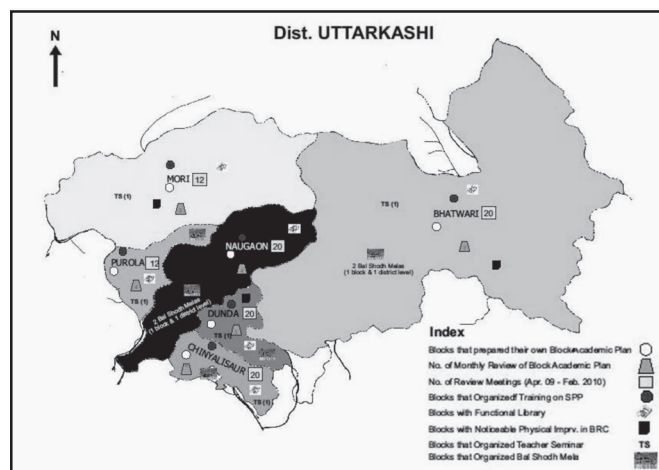
Comprehensive data of the kind shown in Figure 4 will be available across the state when SPPs are made and acted upon throughout the state. This will then serve as another measure of success of the programme. Since improvement in learning alone cannot be taken to indicate success of the programme, the next suggested indicator is an *actual change* in classroom processes, as a consequence of the development of SPP.

**Overall picture across two districts**

All the above processes have been initiated across two districts of Uttarakhand and the degree of penetration is represented in the maps below:



**Figure 5:** Interventions in Uddham Singh Nagar as a result of assessment led reform



**Figure 6:** Interventions in Uttarkashi as a result of assessment led reform

**HOW WAS ALL THIS BROUGHT ABOUT?**

A four-and-a-half-year programme must have had certain guiding principles to lead towards ‘success’ – to the extent that success in such work can be measured. Ironic though it may sound in a paper on assessment, it was often the experience of this team that the immeasurable aspects of the work were most critical. In a sense, it was the immeasurable that often paved the way for the emergence of measurable parameters (see Appendix III for a few illustrative cases). Some principles which were followed all through this work were as follows: The child was made the centre of all concerns, so that all decisions reflect this focus. Collective decision-making formed a basic thread of the fabric’s weave: both in internal operations of the Foundation as well as in all interactions with the state functionaries and teachers. Working *with* the government and not parallel to it, was collectively seen as the wisest way to effect a large scale change. A conscious decision was taken *not to refer only* to LGP in all interactions. This created (as intended) a sense of inclusion amongst participating teachers and functionaries, who now felt this was not only ‘an Azim Premji Foundation programme’, but had a lot of their own (ongoing) work included in it. In turn, it also helped the Foundation look at the holistic picture, and not stay focused only on LGP. Another conscious decision was taken NOT to demand any sort of data from the schools, as they had so far been weighed down by such frequent demands from functionaries. Instead, all they did was to fill in a form volunteering participation - once in the year. This also implicitly conveyed a respect for their main work, viz. teaching. All feedback received from teachers and functionaries was noted and used to modify the next year’s operations, thus helping the Foundation gain credibility, as well as freeing up avenues of candid expression from all participants. Moving away from rituals and hierarchical practices (like cutting ribbons, spending substantial time at the opening of every function on worship, participants sitting in rows while functionaries sit on a raised dais, etc.) was another principle that was arrived at collectively. In the Indian context, it is common knowledge that people (especially in rural areas) listen to a stranger only after (s)he has built a rapport with them. Expounding innovative ideas (in education or any subject, for that matter) fall on deaf ears if the ‘listener’ is not really listening. Until such time as their hearts are won over, the peoples’ minds will not make any shift. All interactions were conducted keeping this in mind. The overarching principle was that building a rapport and maintaining warm camaraderie was far more important than showing quick results. Offering sharp criticism was collectively arrived at as a taboo. With sustained work in this direction, the Foundation intended to achieve a sense of partnership - even collective ownership - between Foundation members and participating school teachers, functionaries, policy makers, etc in the state of Uttarakhand. There is of course, much that

remains to be done. Inbuilt into this programme are its own indicators (or measures?) of success, which are now slowly moving from:

- Has the school *made* a SPP (in the 2009 - fourth year of LGP) to
- Has the school *used* the SPP (in the 2010 - fifth year of LGP); this is where we are now. (Such data will emerge in 2011).

Consolidation of efforts is intended again: a couple or more years down the line, coupled with measurement of success of the programme against indicators which include the above.

## NOTES

<sup>1</sup> An academic year in Uttarakhand schools begins in April of one year and ends in March of the next year.

<sup>2</sup> CCE was intended to be conducted mostly by the teacher and sometimes by a functionary (like CRC), so that the functionary's findings would be incorporated into a School Grading, wherein the CRC would rate the school.

<sup>3</sup> As already stated in footnote 5 (Part I), certain words like "competency" get adopted into the jargon of academic discussions within non-English (regional language) speakers of the state education system, with whom the Foundation works. Hence, it appeared valid to give a new dimension to the word as implying all the three aspects: knowledge, understanding and skill.

**Abbreviations used:** ARG- Academic Resource Group; BEO- Block Education Officer; BRC- Block Resource Centres; BRCC- Block Resource Centre Co-ordinator; CCE- Continuous Comprehensive Evaluation; CRCC- Cluster Resource Centre Co-ordinator; DEO- District Education Officer; DIET- District Institute of Educational Training; DPO- District Project Officer; EVS- Environmental Science; LGP- Learning Guarantee Programme; NCF- National Curriculum Framework; SPP- School Progress Plan; SSA- Sarva Shiksha Abhiyan; VRC- Vibrant Resource Centre.

## APPENDIX II

### *School progress plan: Sample entry*

Competencies that need to be addressed/Name of School	Possible reasons for low performance	Work plan/Strategies to address the competency
To understand plants- their life cycle, parts, functions and uses.	<p>The topic is generally taught using a blackboard with no real life examples</p> <p>Lack of opportunities for children to learn by doing things on their own.</p> <p>No opportunities provided for observation, making their own questions, etc.</p>	<p>Plan for observation- on plants, their parts (in small group)</p> <p>Discussions based on children's observations of plants in their surroundings- their uses, seasons in which they blossom, etc.</p> <p>Observe the leaves of different plants and tabulate/list them. Categorize them as per their shapes, sizes, other parameters.</p> <p>Discuss the need of plants for other living beings</p>

## REFERENCE

Gordon, S., & Rees, M. (1997). High stakes testing: Worth the Price? *Journal of School Leadership* 7, 345-368.

## APPENDIX I

### *Academic Resource Group*

As a key team for each district (being a suggestive body for making key decisions for that district), it was felt that perspective building of such a group would strengthen that district educationally. Half the members of the ARGs of each of the two pilot districts were sent (funded more than 80% by the Government, and the rest by the Foundation) to Digantar for perspective building in the first year of Phase II, and then the other half of each ARG team was sent to Vidya Bhawan in the second year of Phase II. The Foundation introduced a process of sharing of the training received, into the design of the functioning of ARG meetings. Also, the readings given in both places were bound and distributed to all ARG members for spreading it all across their respective blocks. Here, too, was an attempt at institutionalization: i.e. building of institutional memory.

### *Objectives*

- To create a common platform and positive environment to discuss issues related to academics of government primary school by develop a culture of sharing ideas and experiences
- To identify academic problems/issues faced by resource centres/government primary school teachers and possible solutions/step for actions
- To support and guide DIET and DPO and other resource agencies in designing Annual Academic Plan and calendar for the district, implement and review the same.

### APPENDIX III

#### *Two Illustrative Cases*

A *Shiksha Sahayak* in Government Primary School, Ganeshpur, Uttarakhand who was obviously not bowled over right at the start of the Azim Premji Foundation's Learning Guarantee Programme, **Rekha Chamoli's** school participated in it because they got an 'order' from the state. The good news is that after 2 years of active involvement of the LGP team with the school, Rekha now candidly admits that she feels like she is a part of the LGP family. Her initial skepticism and discontentment with NGOs has transformed into a deep sense of belongingness and respect for the Foundation and its work in assessment.

**How did this 180-degree change come about?** To Rekha, the turning point was when she actually saw the LGP question papers. Having been a participant of the curriculum-designing and textbook-writing workshops organized by the state, Rekha already had an academic perspective. What attracted her to the Programme was the academic perspective around assessment that it sought to build in teachers. She unhesitatingly accepts that it is through this changed perspective that she - along with other teachers - has realized that '...the objective of teaching Hindi is not to memorize the number of brothers Sri Ram had, or the birth date of Lal Bahadur Shastri...!' The questions in the papers have assisted her in making the shift from rote-based teaching to teaching for the attainment of subject objectives.

When thirty-one year-old **Manvendra (Cluster Resource Centre Coordinator, Tulyada Cluster, Chinyali Block,**

**Uttarkashi)** first heard of the Learning Guarantee Programme in 2005, it did not trigger an interest in him right away. Being a Head Teacher at that time, he felt that since he was any way assessing his students, where was the need to try new ways of testing them? His first jolt was when he actually saw the test papers. That such questions could actually be asked of the students came to him as a pleasant surprise. He had been accustomed to typically traditional questions, like those which ascertained whether or not students could add two numbers. Here, the concept of addition of numbers was being tested in changed contexts. This, Manvendra felt, would help a student far more in dealing with every day real-life problems. In fact, the new assessment tools impacted him enough to provoke a detailed analysis of the tools by him. In the past, questions had been drawn straight from the textbook, more often than not. No thought had been given to whether or not the textbook or classroom processes were aiding the child in living life better. "After all," adds Manvendra, "why are we educating our children? So that they live life better. And truly, these question papers were geared in that direction." When fractions were taught, they were usually just shown as a numerator over a denominator. And here, in these new test papers, figures with partly shaded areas were being depicted to represent fractions. Surely, Manvendra felt, this was a far better way to teach fractions? Indeed, Manvendra confesses, "these papers are not only serving an evaluative role: they are guiding teachers on the teaching strategies that can be used for certain concepts. A reflective teacher will absorb this just by studying the LGP question paper."