A Report

Humayun's Tomb-Nizamuddin Basti Urban Renewal Initiative

Base Line Survey of Two Municipal Corporation Primary Schools (MCP)

June- 2009

Acknowledgment

To begin with, we would like to thank Aga Khan Foundation for giving us this opportunity to know and understand the lived social and educational realities of children, parents, community, teachers and other stakeholders in the Nizamuddin Basti. It was an extremely insightful and enriching experience. We, hope this report is an account that is not only authentic to us a research team, but will enable the dedicated team of AKF to play a role of sheet anchor in qualitatively transforming the social and educational life options of community in Nizamuddin Basti.

We would like to thank, in particular, Meena Narula, Sanjiv, Kishwar Khan, Hyder Rizvi, and other personnel at AKF for their continued support and assistance in facilitating the study.

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Executive Summary

The present Baseline Study derives its significance from the larger context of the Aga Khan Historic Cities Programme (HCP) which promotes the conservation and re-use of buildings and public spaces in historic cities in the Muslim World. The programme demonstrates how the conservation of cultural heritage, in many cases the principal asset at the disposal of the community, can provide a springboard for social and economic development, a rise in employment, incomes and economic opportunities, greater respect for human rights and better stewardship of the environment.

In India, the Humayun's Tomb - Hazart Nizamuddin Basti – Sundar Nursery Urban Renewal Initiative within which the present study is embedded is a public- private partnership project involving the Archeological Survey of India, Central Public Works Department and the Municipal Corporation of Delhi. It includes in its spectrum preservation and restoration of cultural heritage of important historic monuments, constructive management of open spaces, soft landscaping and revitalizing the community in the Nizamuddin Basti. The social development initiatives include improvements in the three core areas of health, education and environmental sanitation.

Against this backdrop, the present Baseline Study was envisioned as an in-depth school study designed with the objective of developing appropriate intervention strategies for enhancing the quality of children's schooling experiences, making school more accountable to the parents, and generating greater community commitment in the functioning of the school. The study aimed to capture a nuanced understanding of the structures and processes, both within and outside the schools which influence classroom practices that in turn shape children's learning, identity and future life options.

The key research areas around which the study was designed were: assessing learning achievement of children in Hindi, Mathematics and Urdu; identifying gaps in their understanding and common learning difficulties; establishing inter-linkages between learners' level and classroom practices adopted by the teachers; contextual understanding and perception of teachers about learners and community they serve; voices of children and the community on issues related to the school and education in general.

The research methodology entailed school visits, classroom observations, interviews, focused group discussions and interactions with all the key stakeholders. The following research strategies, both qualitative and quantitative, were used to address issues as stipulated in TOR:

- Administering learning tasks to students of classes II, III, IV and V in Hindi, Urdu and Mathematics; developing a grid of indicators for mapping children's linguistic and mathematical understanding on a learning continuum.
- Observations of classroom practices and processes.

- Interactions with the Head Masters and teachers in order to understand their perceptions about schooling practices and community; Study of teachers' diaries, school time-table, midday meal disbursement, records, files etc.
- Focused-group discussions (FGDs) with students on their perceptions about teachers, school experiences and their aspirations in life.
- Interviews and FGDs with parents and other stakeholders in the community with focus on understanding their perceptions of education and ways of building the school-community interface.

Learning Achievement

One of the key objectives of the present study was to assess children's conceptual understanding and reasoning in Mathematics, Hindi and Urdu; to identify specific learning difficulties experienced by children and gaps in their conceptual understanding; and linking the emerging insights to school and home practices. The tests were primarily designed to provide critical inputs and directionality to pedagogic practices for augmenting the quality of learning in both the schools.

Assessment tasks were designed at two levels: Level I and Level II for plotting linguistic and mathematical competencies as they emerge naturally and get firmed up because of experiential and schooling knowledge. Level I tasks were largely structured around class 2nd competencies and were administered to students across classes 2nd, 3rd, 4th and 5th; Level II tasks were structured around class 4th competencies and were given to 4th and 5th class students. Level-based framework of assessment was necessitated on three accounts: one, to map the progression of competencies as they emerge across the classes; two, to identify incongruence between formal, prescribed class-based competency level and potential level of children's thinking and reasoning; and three, to build an informed perspective on learning difficulties and gaps in children's understanding

Steered by this framework, the data, both qualitative and quantitative was generated. The quantitative data was analyzed: across levels (Level I and II); across classes (2nd to 5th class); across gender (boys and girls); across schools (The Nizammudin Basti School and Pant Nagar School). Accounts of children's responses, as collated during conduct of tests and as seen in the answer scripts were used to support the findings. In each of the following sections Mathematics, Hindi, and Urdu, an attempt is being made to build an informed perspective on children's linguistic and mathematical understanding.

Mathematics

The learning achievement tasks in Mathematics, for levels I and II, were largely constructed on the bases of the two strands of primary school mathematics: arithmetic and geometry. The dimensions of mathematical understanding assessed were Numeral Understanding; Arithmetic Operations; Problem Solving; Pattern Identification and Seriation.

The data, at level I, suggest that children are at a rudimentary stage of developing mathematical understanding. A significant number of primary school children are potentially at risk of failing to learn mathematics successfully. 35% 2nd graders could not identify numerals; 61% faced difficulty in seriating numbers; 41% were deficient in basic arithmetic operations; and 49% were struggling to link their intuitive mathematical understanding to the formal school knowledge meaningfully.

It is alarming that children's weak numerical knowledge and poor computational abilities continue to persist in classes 4th and 5th. 12% 5th graders were still struggling with number identification, 35% had deficit seriating ability, and 14% lagged in basic computing skills. Another significant observation is that performance on everyday mathematics dips at class 4th, suggesting that formalized nature of school mathematics does not organically link up with children's intuitive ways of mathematically dealing with everyday practices.

At level II, the data projects both encouraging and worrying trends. More than 64% of the 5th graders know the number system well, 77% are competent in basic arithmetical operations, and 52% can apply their mathematical reasoning to everyday practices. However, their understanding of fractions and decimals is inconsistent. 55% of the 5th graders also lag in their ability to seriate.

The regressive nature of numerical and computational strategies used by 4th and 5th class children is worrying. Many children continue to add from left to right, fail to see 'base-ten' as a unit; treat multi-digit numbers as adjacently placed single-digit numbers, rather than using place value knowledge; experience difficulties in seriating; manipulate relationship between numbers in an arbitrary fashion rather than applying logic based rules; lack strategy to partition and combine numbers; and struggle to decode statement problems and represent them in mathematical terms.

These learning difficulties need to be urgently addressed as they may lead to developing anxiety and negative attitude to school mathematics. It is therefore suggested that the school should have an in-house provision for a 'Mathematics Recovery Program' for facilitating and advancing mathematically lagging children and bringing about a shift in mindsets of teachers from mathematics as a mechanical acquisition of algorithmic competencies to a conceptually informed mathematical understanding.

Further, teachers should be professionally capacitated to adopt a slew of constructive measures for developing sound mathematical understanding in children. Some of the suggested pedagogic approaches are:

- designing teaching learning strategies around an emergent mathematical understanding and reasoning of learners by using dynamic ways of assessing children's mathematical knowledge, nature of problem solving strategies used, common misconceptions and gaps in learning

- building meaningful linkages between in-school and out-of-school mathematics; providing opportunities to use mathematical thinking in a wide variety of novel contexts

- providing 'hands-on' and 'minds-on' exploratory tasks to invoke children's reasoning strategies to connect various interrelated mathematical concepts; jointly negotiating meanings; and bringing math from their varied backgrounds and experiences in to classrooms

- attending refresher courses to strengthen mathematical knowledge and learn developmentally appropriate pedagogic ways.

Hindi

The learning achievement tasks in Hindi for levels I and II were constructed on the basis of the four language functions, namely listening, speaking, reading and writing. In addition, some formal areas of language rules, grammar, syntax, structures, intuitive understanding of language as reflected in its everyday usage were also looked into. The assessment tasks were designed to develop an insight into language proficiency of primary school learners in Hindi, reading accuracy, common misconceptions in their linguistic understanding, and specific learning difficulties faced by them.

At level-I, children have high oral proficiency to articulate in Hindi, have fairly reasonable listening ability to attend to language details, but their reading and writing skills are rudimentary. They experience difficulty in identifying letters and *matras*. This further limits their reading and comprehension ability; and being the poor spellers, their ability to construct and write syntactically correct and meaningful sentences is also severely constrained. However, with each successive class, children's language ability improves with girls performing better than boys across all language tasks. By end of the 3rd class, children have started spelling high frequency words, but specified shortfall in linguistic facility continued till class 4th and 5th in one or the other language area:

Level-II learners have reasonably well developed proficiency in understanding and articulating the spoken language. They have an extended vocabulary, can formulate basic sentences, have a fairly good knowledge of the phonetic spelling patterns, and can follow a series of oral directions to complete a task. They can construct simple sentences to create a short narrative for practical purposes. They can read and meaningfully comprehend simple texts. However, their written language has grammatical and syntactical errors involving tenses, complex sentence construction and idiomatic expressions.

Reflecting on finer details, identification of *matras* is the major source of reading difficulty, with 47% of 4th graders and 37% of 5th graders still struggling to accurately recognize them. As much as 47% of fourth graders could not read letters with double *matras*. However, reading of words improves when scaffolding in the form of pictures is provided. The problem in reading words with half alphabets and bindu or chandrabindu continues; 55% of 4th graders and 50% of fifth graders are still experiencing difficulty in visual decoding and phonetic pronunciation of these letters. 79 % of fourth graders are able to comprehend and meaningfully engage with the short text. In writing, surprisingly, 4th class students have done better than 5th class students. Children's understanding of grammar and other language rules has started to firm up; 92% of 4th graders were successful in matching words with suitable

adjectives and choosing the right form of tense; however, frequency of spelling errors is still on the higher side, with 29% of 4th graders and 25% of 5th graders continue to be weak in spelling. Girls have performed better than boys in all areas of language across the classes and the schools.

To improve children's language proficiency, literacy-rich environment should be created in the school. Emergent readers should be given as much exposure to print as possible. This will help them in letter identification and will later on help in developing writing skills. Authentic texts such as newspapers, magazines, advertisements, and banners can be used for this purpose. This will also help in situating classroom learning within the students' contexts. Due emphasis should be placed on strengthening children's comprehension abilities. Emergent writers should be given the experience of touching, feeling and holding paper and pencil. They should be given the freedom of even scribbling on paper if they wish to do so. Ability to write is an intellectual way of organizing and communicating one's ideas. Hence, children should be provided with active writing experiences that allow the flexibility to express one's views in any nonconventional forms of writing at first and over time move to conventional forms. Space for self expression in speech as well as in writing has to be created in classrooms.

Urdu

Learning achievement tests in Urdu for levels I and II were constructed to assess children's proficiency in Urdu in terms of basic language functions: listening, speaking, reading and writing. In addition, some formal areas of language like its syntax, sentence structure, grammar and everyday understanding of language were also looked in to. The focus of the tests was on identifying children's specific learning difficulties, common misconceptions, and their strengths.

The data, both qualitative and quantitative projected quite a dismal picture. At level I, the elementary level, most of the 4th and 5th graders were struggling to develop even a rudimentary knowledge and understanding of Urdu. Children were experiencing all sorts of learning difficulties in: identifying, sequencing, structuring and placing of alphabets with and without '*nuqta*' (dots), with particular sign and with similar sounds; confusion in direction in which letter had to be marked; inability to recognize letters; flawed and incorrect pronunciation; improper knowledge of predecessor and successor letters. In addition, children had infirm and inconsistent understanding of small forms of letters that constrained their ability to read and write (reading of the text, bifurcation, adjoining, making words from the letters). However, oral grammatical ability of the students at level II was found to be quite reasonable. The learning difficulties assumed frightening severity in 2nd and 3rd graders; they literally had no clue about structure of language, its oral rendition and comprehensible writing was simply out of their reach.

Statistically speaking, children in the Nizammudin Basti School had poor and improper knowledge of Urdu alphabets: 74% of 2nd, 50% of 3rd, 44% of 4th and 20% of 5th graders could not identify and internalize simple sound alphabets in its totality. The reading disability gains severity at level II as only 15% of 4th and 35% of the 5th class student had some preliminary understanding of the complex sound alphabets system;

the majority are still struggling to comprehend essential nuances and complexities of written Urdu language.

Non identification of simple and small alphabets proved to be the major stumbling block in firming up of children's writing abilities: 81% of class II, 77% of class III, 74% of class IV and 60% of class V students could not legibly write the given task at level I. What is worrying is that even at level II, 79% of 4th and 66% of the 5th graders were not able to do the written task. This shows that with increasing level of task difficulty, non-performance also intensifies.

However, these findings have to be viewed in the larger context of teachers' pedagogic beliefs and practices, socio-cultural context of Nizamuddin Basti, parents' perceptions about Urdu, and children's mental intent in learning Urdu. In parents' interview it emerged that they want their children to pursue schooling in either Hindi, or in English medium. Parents also perceive that Urdu in today's time is linked to limited economic opportunities and moreover it can be learnt at home or at *Madarsa.* Children in the Nizamuddin Basti School also seconded their parents' views. They simply want to obtain working knowledge of Urdu for largely reading Holy Scriptures and to communicate in Urdu. This to some extent explains children's low motivation and lack of interest in learning Urdu seriously.

The other coordinate of poor performance in Urdu can be traced to teachers' pedagogic beliefs and practices. In Headmaster and teachers' interviews it clearly emerged that they do not hold children and their families in high social esteem, denigrate them and perceive that children of such social lineage are intellectually incapacitated to gain much from schooling. Steered by this social construction that the Basti children are 'dull', 'dumb', 'lazy', and 'passive', teachers have adopted the pedagogic practices that tend to reinforce social identity of these children: Mechanical rendition of lessons; directing children to passively copy the lesson as developed on black-board without clarifying the underlying conceptual rationale; near absence of 'hands-on' experiences and interactive learning situations; ignoring children's specific learning difficulties; no regular feed-back to children on their performance; and in general building a classroom culture that does not excite children to think and apply knowledge constructed by them. All these measure further de-motivate children and they lose their zest to learn Urdu.

Taking cognizance of undercurrents and dynamics underlying teaching-learning of Urdu, a slew of strategic measures should be adopted to strengthen children's performance in Urdu. Two distinct area around which efforts may be centered are: one, teachers' perceptions and beliefs; two, teachers' pedagogic knowledge of Urdu. Teachers should be sensitized towards learning needs and aspirations of the Basti children through seminars and workshops. Through such forums, social stereotypes about learning potentialities of disadvantaged children should be deconstructed; and a positive shift in their mindsets should be realized. Some of the broad areas around which concerted efforts can be organized are:

- Sensitization of teachers towards the students and the community since language usage flows from community, dialects and culture

- Teaching-learning strategies which are effective with primary school learners
- Understanding of nuances of Urdu as a language and issues involved in its teaching and learning
- Preparation of interactive teaching-learning resources which augments emergent understanding of Urdu
- Diagnosing learning difficulties in Urdu and evolving strategies to deal with them

These measures will enable teachers to engage themselves more meaningfully in the teaching- learning processes, build their confidence, and deconstruct the preconceived notion of the learners and their background. It will also enrich them with the constructive ways of teaching linguistic basics in an interactive manner as traditional methods of teaching of Urdu are not only boring for children but also distracts and build negative feeling towards the subject.

Class Room Practices and Processes

The other objective of the study was to understand how school culture, teachers' beliefs and perceptions shape children's thinking and learning. An informed perspective about school practices and processes was built by considering:

- actual and verbatim account of classroom discourse and processes
- teachers' pedagogic beliefs and practices
- school culture as specific to each of the two schools

An emerging conclusion was when teaching-learning practices are largely geared to rote memorization and drilling practices, children tend to become inert, reclusive and lose interest in the subject. What is worrying is that these curricular experiences not only induce passivity and blind acceptance to authority, but convey implicit messages to children that lower their self-esteem and identity. Children who experience such school processes may come to accept future positions in which 'seem appropriate' to their social class, gender and ethnicity. Their future opportunities and rights as individuals might thus be limited by school practices. In contrast, where the teacher makes a conscious attempt to build an environment conducive to learning, link content to children's lives and ensure classroom participation of each child, children tend to be actively engaged in constructively contributing to building of classroom discourse , enjoy the subject and process of learning it. They are likely to become self-critical, reflective and life-long learners capable of taking a position and cogently articulating their views.

Pedagogic Beliefs and Perceptions of Teachers

The teachers and Head Masters have developed an understanding of the background of the students in both the schools. They are aware of their social background, their standard of living and parental occupation. Class teachers were particularly aware of the family backgrounds of the students in their class. However, they were unable to elaborate on how and why this understanding is critical to classroom processes. They

did not have a notion of 'learning' being contextually embedded and still carried on with universalistic beliefs. This needs considerable attention.

However, many teachers were of the view that the background of the students, coupled with parental apathy towards education was the root cause of students' low learning levels. They also reported many cases where students dropped out of school before completing class V and moved to other parts of the city or the country. In the Basti School, it was observed, that teachers were quick to label children of migrant labourers and *fakirs* as low achievers. In such cases, they used children's background as an excuse for their low achievement levels. Thus, there is the need for caution and teacher sensitization. Some additional observations are:

- The Head Masters and teachers at both schools reported an excessive burden of paper work and record keeping as part of their administrative work. They emphasized the inability to use their knowledge of innovative pedagogical practices in the classroom and perform their teaching roles to their utmost capacity due to this administrative burden. They faced considerable lack of time to teach in the classrooms.
- They also mentioned that students enrolled in the schools were irregular in attending classes. As a result, learning levels varied greatly in their classes. This resulted in difficulties in following a structured time table as provided by the MCD. The Weekly Lesson Plans made to satisfy the school inspectors also remained so on paper and were not translated into practice due to irregularity of students in school. The subjective reality of the school varied greatly from what was expected to happen on paper.
- The teachers of both the schools mentioned that they were required to perform multiple roles in the school. Their work was not restricted to teaching academic subjects in the classroom but also involved organising and conducting co-curricular activities, games and sports etc. While they acknowledged receiving pre-service and in-service training for these, they expressed difficulties in being able to synthesise all these roles into their rhythm of school work. Similarly, in the Basti School that is undergoing the BALA intervention, teachers accepted that they are aware of simple uses of the newly constructed building spaces, particularly the spaces in the classroom for pedagogic gains. However, they expressed keenness in attending trainings to ensure optimum utilization of the building as a resource for teaching and learning.
- The Head Masters and teachers also expressed willingness to develop the Parent Teacher Meetings (PTMs) as a medium to build a bridge between the school and the community. It was felt that building this bridge would improve teacher accountability on the one hand and ensure regularity of attendance of students on the other. At present the PTM exists only as a formal forum without a dialogical character.

Voices of Community

The community in the Nizamuddin Basti aspires for quality schooling experiences for their children and has an informed perspective on what constitutes quality education. To a large extent, education is envisioned by poor parents as a way to enhance their

social status and self-esteem, as a means to upward occupational and social mobility, and to gain economically. They further hold that acquisition of the schooled knowledge would strengthen intellectual faculties and hence social worth of their children. However, they feel frustrated when their hope of education as a great social and intellectual equalizer is belied.

It is critical is to envision community as the equal partner in this process of educational and social renewal. The need is to have a 'wider ownership' of the school by taking all the stakeholders on the board: community, parents, teachers, government functionaries, local social activists, etc. The potential to realize an expansive notion of school ownership lies in the forums such as Parent Teacher Association (PTA). The existing PTA is to be re-energized to garner more community support, commitment and responsibility; to build mutual trust between parents and teachers; stabilize school attendance; strengthen school functioning; facilitate collective decision-making; and to establish a more egalitarian social order. For further capacity building of the community, a forum like 'School-Basti Committee' can be constituted. Through this forum context-specific issues can be addressed: organizing mobilization drives and awareness campaigns, tracking school-going status of Basti children, considering ways of main-streaming out of school children, strengthening processes of school development, etc.

Some of the specific views and demands of the parents are:

- All parents value education as a means of upward social and occupational mobility.
- They repose considerable faith in the government school system since they value the certification and permanence.
- They have a notion of 'quality' and what a good school means and carry a wish what the Basti School in particular, after its renovation, will hold new promises in this direction.
- They are willing to co-operate with the school but have some apprehensions about the teacher viewing them with suspicion and contempt. They would be glad to have more dialogue with them and dispel these beliefs.
- Parents expressed the need for their children to participate in co-curricular activities within the school. They felt that such an involvement would help build a sense of belongingness and develop confidence in children through participation in various activities.
- They also voiced the need for vocational education in schools for both boys and girls. Courses in stitching, cooking, etc were considered useful in both professional and personal spheres for both boys and girls.
- They expressed a need for organizing better English education in schools so that more promising and varied opportunities were available to their children in the future. This shows the seriousness of parents towards the future of their children.
- They also felt the need to organize classes during summers in schools as they felt that the two month gap was too long a period of disassociation with both studies as well as the school. They expressed happiness with the earlier summer camp organized by Aga Khan Foundation in the school.

- They were equally sensitive towards the education of their daughters as they were towards their sons. This shows the growing awareness towards the education of the girl child in the community. Many parents were also open to the suggestion of their daughters taking up occupational roles in their future lives. In fact, many suggested that they should be prepared to take up jobs if their circumstances so demanded.

Students' Voices

Students of both the schools expressed considerable enthusiasm for studies. They regard education as an essential prerequisite for enhancing their job and life options; and a way to gain self-worth and esteem. Most of them were happy with their teachers but felt that they could do with more guidance and regularity of their studies. Some of their educational needs and aspirations are:

- Students of the Basti School particularly expressed a need for organizing co-curricular activities within the school. They were also keen on going for trips and excursions with the school. At the moment, on account of structural renovation, these activities rarely take place.
- Students of classes IV and V in both schools voiced clear aspirations and goals in their lives. They valued higher education and had a clear understanding of the opportunities of further studies available to them and believed that education could improve their status and life chances. To realize their career options, they want extra coaching or enrichment classes should be held in the school.
- Some students also reported the use of corporal punishment in schools. However, most of them felt that this was not a regular feature and was an essential part of the school discipline process.

Some Additional Strategic Recommendations

The study findings indicate that children in the Nizamuddin Basti School do not attend school regularly, tend to drop out before they complete primary school cycle or, even if they continue to attend school, much is desirable in their level of learning. The problem can be traced to systemic issues of access, dysfunctional school, quality of schooling experiences, motivation and commitment of teachers, and lack of meaningful linkages between school and community. However, on the fillip side, teachers and parents are optimistic about the need to change the schooling and familial practices for realizing sustainable educational and social change.

It is in this context , Aga Khan Foundation should envision its strategic role as that of a key anchor in initiating social and educational renewal processes in the Nizamuddin Basti. It will largely entail measures such as sensitizing teachers toward needs, aspirations and lived reality of urban slum children, making curricular experiences more relevant and engaging so as to improve school's holding capacity, making school functioning more transparent and accountable, building capacity of community in terms of knowledge of their rights, roles and responsibilities, and forging facilitative linkages between school and community for ensuring regular student attendance and for sharing children's progress. Unless these practices are implemented in an earnest way, an imminent danger is that drop-out rate will climb

up; and in the worst scenario, dejected parents might start believing that their children are not 'intelligent enough' to be in school, and withdraw them from school to be pushed into livelihood and life options that would further make their existence appalling.

An additional array of approaches and strategies are suggested to strengthen the mainstream education system:

- Linking formal school system with pre-school education; designing school readiness activities that are likely to attract children to schools
- Providing academic support to school teachers through training and pedagogic renewal for improving the quality of education
- Making schooling a joyful experience by infusing contextually relevant meaning into curricular practices; linking classroom practices with children's immediate life situation and environment
- Providing in-school remedial classes that enhance learning level and stem dropout rates
- Self-esteem and self-confidence building programmes for children
- Mobilizing and sensitizing community towards their role in education of their children; empowering the community to articulate their demand of holding school accountable for learning gains of equitable quality
- Forging meaningful linkages between the community and the school that would take the teacher closer to the community, thereby promoting better understanding and appreciation of children's lived reality
- Creating a forum, *'Stakeholder's Forum'* wherein all the stakeholders--parents, teachers, government officials, community members, local social activists, local political leaders, AKF can converge to collectively build and realize the vision for providing quality school experiences and better life options for the Basti children.
- Putting in place an Education Management Information System (EMIS) to systematically plan, manage and monitor progress of the program.

Chapter 1
Introduction

The Context and Framework of the Study

The present Baseline Study derives its significance from the larger context of the Aga Khan Historic Cities Programme (HCP) which promotes the conservation and re-use of buildings and public spaces in historic cities in the Muslim World. The programme demonstrates how the conservation of cultural heritage, in many cases the principal asset at the disposal of the community, can provide a springboard for social and economic development, a rise in employment, incomes and economic opportunities, greater respect for human rights and better stewardship of the environment.

In India, the Humayun's Tomb - Hazrat Nizamuddin Basti – Sundar Nursery Urban Renewal Initiative within which the present study is embedded is a public- private partnership project involving the Archeological Survey of India, Central Public Works Department and the Municipal Corporation of Delhi. It includes in its spectrum preservation and restoration of cultural heritage of important historic monuments, constructive management of open spaces, soft landscaping and revitalizing the community in the Nizamuddin Basti. The social development initiatives include improvements in the sectors of health, education and livelihood.

Within the education initiatives, of prime importance in the vision plan is a School Improvement Programme which is being designed and implemented in two Municipal Corporation Primary Schools, which fall within the target area. One of these schools is situated in the hub of the Basti and is designated as the Basti School, City zone. The other school is a Model School in the Central Zone, called the Pantnagar School. It is located in the outskirts of the Basti. Key focus is being given to the re vitalization of the Basti School because of the centrality of its location and potential for addressing the educational needs of a vast number of children, who are in the primary school age group, living within this catchment area. According to the Social Initiatives Education Project Report, the number of children in the school going age is estimated to be approximately three thousand. The Report also highlights that the school has been relatively dysfunctional since the past few years. A good number of children lag behind academically and drop out without completing the primary school cycle. Some of the features which merit urgent attention include infrastructure and more meaningful usage of school spaces, a more conducive school environment, better holding capacity of the school, adopting more dynamic and contextually relevant pedagogic practices, a greater degree of teacher commitment and ownership of the school and more facilitative linkages with the community. A range of initiatives are being planned in this regard, some of which have already begun to be operationalised. At present, large scale renovation and re-designing work in the building and classroom infrastructure are in rapid progress with the hope that structural changes will strengthen teaching-learning processes as well.

In the Pantnagar School, some issues related to teaching and learning processes warrant attention to further augment quality. What is of greater significance is the

assumption, that quality enhancement in these two schools will genuinely spread to the other seven schools which are accessed by the Basti population, as well. The schools are also seen as the strong foundational bases which will enable the children to make worthwhile onward linkages with their quests for higher education and upward occupational and social mobility. The project thus places centre stage thrust on realizing sustainable educational and social changes by qualitatively transforming school practices.

The demographic composition[*1] of the Nizamuddin Basti community is very heterogeneous as it is constituted by socio-economically differential strata of Muslim families that have kept on settling in the area around Humayun's Tomb over a period of time. The Nizami families, the original inhabitants of the area claim their historical lineage from the community dating back to the time of the Sufi Saint Nizamuddin Auliya, Amir Khusro and the Mughals. They regard themselves as the custodians of the historical monuments and tombs located in the Nizamuddin Dargah Complex. They have large land holdings and are economically affluent. Their children study in Public Schools and so they do not fall into the rubric of the present study.

In the post-partition period, a number of Muslim families moved from Old Delhi and its neighboring areas to occupy the tenements vacated by the families that migrated to Pakistan. These families are relatively well off, are largely in white collar jobs, have stable income and are housed in permanent dwelling units, the Pucca structures. Many of the Muslim women teachers in the MCD Schools in the Nizamddin Basti belong to this stratum of the community.

However, in the recent past, a large number of socio-economically disadvantaged and geographically displaced families have settled in the area for better livelihood chances and life options. These migrants live in squatter settlements along the sewer line, under bridges, in the parks, encroaching upon any stretch of vacant land in the area. Most of them work in the informal sector as daily wage laborers, rag pickers, rickshaw drivers, cooks, painters, vegetable vendors, domestic helpers and beggars. They are not protected by labor laws, earn below the minimum wage and work under exploitative conditions. They have little access to health, education or income generating facilities.

Note 1: The socio-demographic profile of the Nizamuddin Basti Community has being built up on the basis of inputs provided by the AKF team, Head Master of the Basti School and interaction with different segments of the community.

This stratum of the community faces considerable hardships in their economic survival, often have to migrate in a cyclical pattern in search of employment and are constantly threatened with the fear of displacement on account of being the illegal encroachers of public property. This is essentially the population that sends their children to the two MCD schools under the purview of the present study. It is this marginalized segment of the community that AKF aims to revitalize by providing quality education, enhancing their self-esteem and reviving pride in their community inheritance.

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[*] Note 1: The socio-demographic profile of the Nizamuddin Basti Community has being built up on the basis of inputs provided by the AKF team, Head Master of the Basti School and interaction with different segments of the community.

Key Research Questions and Methodology

Against this backdrop, the present Baseline Study was envisioned as an in-depth school study designed with the objective of developing appropriate intervention strategies for enhancing the quality of children's schooling experiences, making school more accountable to the parents, and generating greater community commitment in the functioning of the school. The study aimed to capture a nuanced understanding of the structures and processes, both within and outside the schools which influence classroom practices that in turn shape children's learning, identity and future life options.

The key research areas around which the study was designed were: assessing learning achievement of children in Hindi, Mathematics and Urdu; locating the gaps in their understanding and identifying their common learning difficulties; establishing inter-linkages between learners' levels and classroom practices adopted by the teachers; knowing the contextual understanding and perception of teachers about learners and the community they serve and capturing the voices of children and the community on issues related to the school and education, in general. The research questions that were framed for steering the Baseline Study were:

- What do the learning levels of children show in Mathematics, Hindi and Urdu?
- Which competencies do they lag behind in and which ones are they comfortable with?
- What are the processes through which they learn? What are the specific areas of difficulty they face in Mathematics, Hindi and Urdu?
- What is the nature of the teaching learning processes that unfold in the classroom? How do classroom processes facilitate students' learning? What resources are available to facilitate teaching-learning in school? How are these resources utilized? What is the nature of the teacher-student relationship, classroom management and evaluation strategies?
- What curricular activities other than academic studies take place in the schools? How do students and teachers perceive these activities? What does the school culture reflect?
- What is the nature of association and engagement of parents and community with the school? How does it influence the functioning of the school?
- On the bases of the above questions, what are the possible interventions for students, teachers and community that can be planned and strategized by Aga Khan Foundation to improve the whole-school functioning?

The Baseline Study was conducted from February 26th to May 31st 2009. The research framework, tools with underlying rationale and scheduling of fieldwork was finalized through a consultative process with the AKF team. Prior to actual conduct of the study, field familiarization visits were undertaken to get a feel of the contextual reality of the learner groups and community where AKF intends to intervene. The visits were also used for pilot testing of the learner achievement tasks. These visits enabled the team to locate its research questions, tools and strategies in a more informed perspective.

The research methodology entailed school visits, classroom observations, interviews, focused group discussions and interactions with all the key stakeholders. The following

research strategies, both qualitative and quantitative, were used to address issues as stipulated in the TOR:

- Administering learning tasks to students of classes II, III, IV and V in Hindi, Urdu and Mathematics; Developing a grid of indicators for mapping children's linguistic and mathematical understanding on a learning continuum
- Observations of classroom practices and processes
- Interactions with the Head Masters and teachers in order to understand their perceptions about schooling practices and community; Study of teachers' diaries, school time-table, midday meal disbursement, records, files etc.
- Focused-group discussions (FGDs) with students on their perceptions about teachers, school experiences and their aspirations in life
- Interviews and FGDs with parents and other stakeholders in the community with focus on understanding their perceptions of education and ways of building the school-community interface

Work Plan and Time Schedule of the Study

Dates	Task
31st January,, 2009	Perspective building, initial tool sharing and sampling criteria with AKF team
3rd & 7th February, 2009	School familiarization visits and Pilot Testing of Achievement Tasks at Basti and Pant Nagar schools
26th February,, 2009	Finalization of tools and research strategies with AKF team i
27th February to 6th March 2009	Visits to Basti school for tool administration in Mathematics, Hindi and Urdu, at both the levels
3rd to 7th March, 2009	Visits to Pant Nagar school for tool administration in Mathematics and Hindi at both the levels
26th March & 14th April, 2009	Visits to Basti and Pant Nagar schools, respectively for interaction with the community, group discussions with school teachers and Head Masters
15th, 16th & 22nd April, 2009	Classroom Observations and Interviews with school teachers and Head Masters at Basti and Pant Nagar schools

Focus of the Report

Taking into consideration that AKF is in the process of conceptualizing social and school development initiatives in the Nizamuddin Basti area, a major focus of the report is to raise critical issues related to pedagogic practices in order to suggest ways to strengthen the functioning of the MCD Schools in the catchment area. The Report has been structured in consonance with the major research dimensions addressed:

Chapter 1 The Context and Framework of the Study

Chapter 2 Learner Achievement in Hindi, Mathematics and Urdu

Chapter 3 Classroom Practices, Teachers' Perspective and Students' Voices.

Chapter 4 Community-School Interface

Chapter 5 Key Findings and Recommendations

Appendices

Chapter 2
Learning Achievement in Mathematics, Hindu and Urdu

One of the key objectives of the present study was to map and assess the learning levels of children in Hindi, Mathematics and Urdu in the two MCD Schools: Nizamuddin Basti and Pant Nagar in the project intervention area. The tests were primarily designed to provide critical inputs and directionality to pedagogic practices for augmenting the quality of learning in both the schools. Thus, the thrust was to build an informed understanding of the processes through which children learn and specific learning difficulties experienced by them.

Tool Development and Administration

For firming up the assessment tasks, it was envisioned that the standardized assessment tools developed by NCERT in Hindi and Mathematics for classes II and IV can be used. However, during the process of tool administration and while checking students' answer scripts, it was realized that these tools were not only incompatible with children's learning level but were also a distressing experience for quite a many children. For instance, in class IV it was observed that many children could not make much sense of the achievement test because of their poor reading and writing skills; and felt let down. The problem assumed even more severity in class II as the non-interactive nature of the test failed to realize children's natural abilities and potentialities.

After an initial pilot trial, it was consciously decided to discard any such tests that attempt to merely measure children's academic abilities in a static fashion; and lowers their self-esteem. Instead, it was visualized to develop contextually and developmentally appropriate assessment tasks that would take in to account children's lived reality and thus would be able to provide an informed insight in to children's actual learning potentialities and understanding. In addition, it was also thought that it would be more meaningful if children's abilities are located on a learning continuum ranging from class II to V so as to diagnose children's specific learning difficulties and their strengths. Thus, assessment tasks were structured around points on learning continuum that highlight 'critical understandings' required by students in order to progress in their mathematical and linguistic learning. These points often flag difficulties and bottlenecks in children's understanding.

Guided by this rationale, assessment tasks were designed at two levels: Level I and Level II for plotting linguistic and mathematical competencies as they emerge naturally and get firmed up because of experiential and schooling knowledge. Level I tasks were largely structured around class 2^{nd} competencies and were administered to students across classes 2^{nd}, 3^{rd}, 4^{th} and 5^{th}; Level II tasks were structured around class 4^{th} competencies and were given to 4^{th} and 5^{th} class students. Level-based framework of assessment was necessitated on three accounts: one, to map the progression of competencies as they emerge across the classes; two, to identify incongruence between formal, prescribed class-based competency level and potential level of

children's thinking and reasoning; and three, to build an informed perspective on learning difficulties and gaps in children's understanding.

Out of over five hundred students enrolled in the Nizammudin Basti and Pant Nagar Schools, a sample of two hundred three students was selected for the present study. The students were randomly selected to ensure an approximate true representation of each class; and similarly, proportionate gender representation from each class was also ensured. The tools were administered in an interactive, non-threatening and relatively fear-free environment for bringing out children's actual potentialities.

The tests were administered by a group of 5-6 researchers. For the younger children and for tasks that required the active presence of the researchers, each researcher sat with a group of seven to eight children to ensure that each of them received the requisite attention and help. Rapport building was done with the children before the formal testing process. To put them at ease, they were assured at the beginning and during the tests that they were not being assessed for marks. In general, the researchers acted more as facilitators than invigilators. It was observed that due to linguistic difficulties or task unfamiliarity, children sought clarifications in many tasks in all the three tests.

The tool administration process was therefore not a structured paper and pencil test approach that required children to work in isolation. Rather it was replete with scaffolds provided to the children to enable them to comprehend, learn and perform the tasks expected of them.

The sample of participants for each of the levels was as follows:

	Classes	The Basti School	Pant Nagar School	**Total Students Class-wise**
Level I	Class 2nd	29	28	57
	Class 3rd	17	10	27
	Class 4th	11	13	24
	Class 5th	10	10	20
Level wise : Total Students		**67**	**61**	**128**
Level II	Class 4th	25	30	55
	Class 5th	10	10	20
Level wise: Total Students		35	40	75
Total Sample : Overall & School-wise		**102**	**101**	**203**

Framework of Tool Analysis

As articulated earlier, tasks were framed to assess children's conceptual understanding and reasoning in language and mathematics; to identify specific learning difficulties experienced by children and gaps in their conceptual understanding; and linking the emerging insights to school and home practices. Steered by this framework, the data, both qualitative and quantitative was generated. The quantitative data was analyzed:

across levels (Level I and II); across classes (2nd to 5th class); across gender (boys and girls); across schools (The Nizammudin Basti School and Pant Nagar School). Accounts of children's responses, as collated during conduct of tests and as seen in the answer scripts were used to support the findings. In each of the following sections on Hindi, Mathematics and Urdu, an attempt is being made to build an informed perspective on children's linguistic and mathematical understanding.

Mathematics

Foundations of mathematical thinking entail ability to make meaningful sense of the world around us, to reason and systematically solve problems, to comprehend relations and patterns in both numbers and space, and to understand the ways these work in our everyday lives. With this as the backdrop, the learning achievement tasks were developed to understand children's knowledge of formal school mathematics and their naturally occurring processes of intuitive mathematical thinking. The assessment framework specifically focused on dynamically judging children's numerical knowledge, relative sophistication of their numerical strategies, their ability to mathematize the given problem, to identify specific learning problems children experience in learning math, children's common misconceptions, ability to link formal math with everyday practices or vice versa, and to profile strengths and weaknesses of children. The tests were designed to provide crucial inputs and directionality to teaching practices for supporting the emergent mathematical learner.

The learning achievement tasks in Mathematics for levels I and II were largely constructed on basis of the two strands of primary school mathematics: arithmetic and geometry. As formal mathematics is structured around conceptual understanding of numbers, quantity, structure, space and relations, tasks were framed on these areas in mathematical learning. In addition, tasks on informal and intuitive processes of mathematical thinking were appropriately weaved at both the levels of assessment.

Children's mathematical understanding was assessed around the following dimensions:

- Numeral Understanding: Ability to read numerals, to arrange numerals in ascending and descending order and conceptualization of place value
- Arithmetical Operations: Ability to algorithmically perform mathematical operations of addition, subtraction, multiplication and division
- Problem Solving: Ability to understand and mathematize problems in everyday life contexts
- Pattern Identification and Seriation: Ability to complete a series of patterns using logical thinking and reasoning; recognize and identify relations between numbers

For the test construction, SCERT textbooks served as the reference points as they were the prescribed teaching-learning resource in both the schools. The wider nature of tasks and their complexity level was largely drawn from these textbooks or kept at the same level of difficulty at which these textbooks are pitched. The tasks were developed taking into cognizance learners' socio-cultural context, intuitive construction of math and curricular space provided to everyday usage of math in classroom practices. The

assessment tasks were designed in the graded level of difficulty and were finalized after a pilot try-out of the test.

The section below presents the finding and interpretation of children's performance on mathematical tasks. The data was quantified in percentages to give an overview of development of mathematics on a learning continuum- across the basic mathematical competencies (numbers, arithmetical operations, everyday mathematics and relations); across levels (level I and level II); across classes (class 2nd, 3rd, 4th and 5th); across gender (boys and girls); and across school (The Basti School and The Pant Nagar School). The quantified data was supported by an accompanying qualitative commentary to have a more nuanced and holistic understanding of development of mathematical thinking.

Tasks developed at level I were given to students from classes II to V. Similarly, the tasks of level II were carried out with students of classes IV and V. items and at level II, of 21 items.

LEVEL I

The test at level I was administered to students in class 2nd, 3rd, 4th and 5th in order to map the process of development of mathematical thinking and structures on a learning continuum and to identify specific learning difficulties. Understanding children's basic competency in numbers, shapes, facility in arithmetic operations, and their ability to apply mathematics to everyday life situations was the larger objective. The test at level I consisted of 15 items. Tasks were administered individually with children responding orally or in written form. Students were assisted in doing the given math tasks by way of cues, prompts, or by re-phrasing the question. Considering that children, specifically in class 2nd were emergent readers and writers, they were appropriately facilitated by the researcher. The purpose was to capture the mathematical potentialities of the learner and to understand processes in development of mathematical thinking and operations.

Numeral Knowledge

Numerals are the written and read symbols for numbers. They are the primary axis around which school mathematics is developed and stands as conceptual foundation for higher mathematical understanding and structures. Learning to identify, recognize and write numerals is regarded as an important accomplishment of early numeracy development. The term 'identify' is taken for the ability to state the name of a displayed numeral. The complimentary task of selecting a target numeral from a randomly arranged group of displayed numeral is referred to as 'numeral recognization'. Children's numeral knowledge was adjudged through three tasks: visually identifying numbers ranging from 8 to 125, figural representation of numbers in the range of 5 – 170; linguistic representation of numbers in the range of 7 -112.

65% of class 2nd children could not visually identify numbers ranging between 50 and 100.The difficulty persisted in higher classes as almost 15% of 3rd, 4th and 5th graders were seen struggling with correct identification of numerals. Another observation was

that students found it easier to identify numbers in multiples of 5 and 10: 35, 40, 100 and 125 were therefore easily identified, while 22 and 74 were not. Further, many students were more comfortable with counting in English than in Hindi. In particular, students of class 2nd, when asked to count orally, often counted till 20 in Hindi, but shifted to English when they had to count beyond 20.

In the task requiring them to write numbers in words, 2nd and 3rd graders could visually identify numbers but were not able to write the same in either English or Hindi. Difficulties in writing and spelling errors were quite prominent in the answer scripts of students across all the four classes. As many as 30% students of class 4th had difficulty in writing numbers greater than 100 in words, even though the numbers had been identified by them. This is explainable as most of the children were diagnosed as poor readers and writers on the language assessment test.

In the question requiring writing numbers in figures, many 2nd and 3rd graders were not able to even read the words. However, the problem diminished with each successive class. Still, 30% students of classes 3rd, 4th and 5th were not able to write numbers between 51 and 100. Another problem faced was in writing the number 41¼bDrkfyl½. Some of the students wrote it as 14 showing that they were writing according to the way it was spoken in Hindi ¼bDrkfyl½

Seriation

To understand children's ability to seriate, they were required to arrange numbers in ascending and descending order respectively (Question 4 & 5). The task had two parts, each pitched at different level of difficulty: One, to serially arrange an assorted set of numbers ranging from 1 to 20; two, to serially organize numbers ranging from 21 to 100.

Almost all children across different classes were unfamiliar with the concept of ascending and descending order and required repeated clues and prompt to conceptually understand the given task. Most students were comfortable arranging numbers in an ascending order but not in a descending order. Only 30% of class 2nd children were able to arrange numbers in a descending order as against 56% who were able to arrange in an ascending order. The second graders were largely secured with numbers ranging up to 20. Many did not even attempt the second part of both the questions. In classes 4th and 5th, students seemed comparatively at ease with higher numbers too. However, it is worrying that as many as 35% students of class 5th were not able to seriate numbers, even less than 20, in either ascending or descending order. This inability is bound to adversely impact their acquisition of higher mathematical concepts and operations.

In the Basti School, the performance of girls was slightly better than that of boys across all classes on all the tasks involving numbers and seriation. However, the trend was reversed in the Pant Nagar School with boys outperforming the girls. Overall, the performance of students in both the schools was comparable and showed an upward trend in higher classes.

Basic Arithmetical Operations

Basic arithmetical operations are ways of combining numbers through addition, subtraction, multiplication, and division. It is premised on children's understanding of how numbers relate to each other. Addition and subtraction, the fundamental mathematical activities are an essential constituent of formal school math at the lower primary level. However, at the start of school, children lack generalized algorithmic understanding of these operations though they have intuitive understanding of addition and subtraction on the basis of everyday life experiences. With this consideration, assessment tasks were framed to understand children's acquired algorithmic competency and intuitive strategies devised by them to arrive at mathematically correct answer.

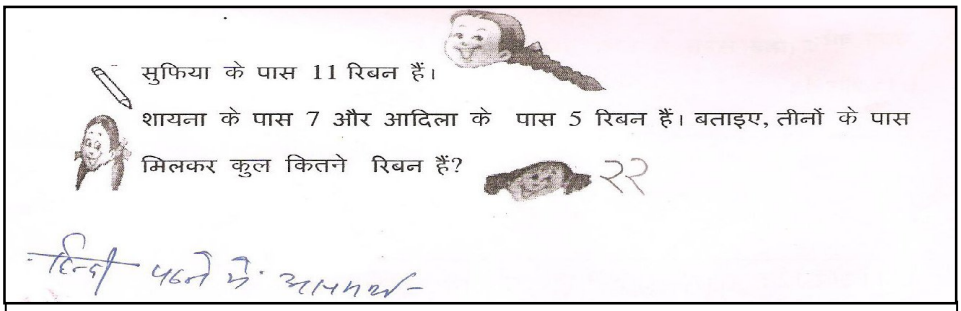


Image MA1: Researcher notes that student is unable to read Hindi
Source: Script of class III, Basti School

The data point to poor computational ability of children. Almost 50% of class 2nd students were not able to add 15 and 4; and 23 and 6. Their performance on the 'carry over' task was quite dismal with only 33% students solving the question correctly. While the performance increased significantly in higher classes, it is alarming that almost 15% students of class 4th were still unable to perform simple addition, not involving carry over.

Some of the numeral strategies exercised by children were: Many children used counting-on strategy rather than counting from 'one' to solve addition. For example, for solving 15+4, children counted 16, 17, 18, and19; and answered 19. However, 5th graders used more efficient procedural strategies to solve the task---11+12. They used strategies such as adding to ten-base and commutatively. Interestingly, some of the children had intuitively devised their own ways and procedures of solving computational problems: for instance, a child added 11+12 as 10+10=20; 1+2=3; 20+3=23, the correct answer. It was also observed that many students were adding from left to right in multi digit addition, instead of from right to left, and therefore could not algorithmically perform the double digit computations. Lack of correct procedural knowledge further accentuates computational failure at 3th class as 56% children could not secure their knowledge of arithmetical operation of addition.

Similar problems were faced in questions involving subtraction. Many students were not able to either identify or to comprehend what the symbol of minus (-) stands for. More than 50% of the students in class 2nd and over 20% of the students in classes 4th and 5th were not able to subtract when question was stated in a text bookish fashion. It was also observed that most students used fingers or drew sticks to subtract. Only a few students in classes IV and V were able to subtract mentally.

Many students in class 2nd were unfamiliar with the concept of borrowing and only 18% were able to perform the task. Students in higher classes were relatively better at computing subtraction operation involving borrowing. However, many students faced difficulty even in this question. The percentage of students who were able to perform this task was 50, 55 and 70 respectively in classes III, IV and V. Further, boys across classes and schools outperformed the girls in both the tasks involving mathematical operations. Also, the performance of students of Pant Nagar School was slightly better than the performance of students in the Basti School. While 10% of students of class 5th in the Pant Nagar School were still not able to perform the tasks, the corresponding figure in the Basti School was 20%. Persistence of weak computational ability can be partially attributed to nature of classroom practices that do not provide timely diagnostic feedback to learners and in the process allow errors to go unaddressed to acquire compounded form later on.

Identification of Shapes

Besides quantity and relations, early school mathematics also introduces children to the notion of space. They are therefore expected to develop the ability to identify basic geometrical shapes – square, triangle, and circle, appreciate their usage in daily life, and visualize shapes as they exist in natural surroundings. Geometrical knowledge paves the way for acquisition of measuring abilities in next levels of schooling.

The assessment tasks required children to identify shapes and match it with the corresponding pictorial representation. Most of the students though conceptually familiar with the shapes could not associate it with its 'mathematical' name. For instance, second graders identified circle as *'roti'*, triangle as *'samosa'* and square as *'maidan'*. They could figure out that cycle tire is circular, table is rectangular, arrow heads are triangular, and so on. The performance of class II students in this task was better than all other tasks with almost 90% of them identifying the shapes correctly. Many of the older children could make out that eggs are spherical, tree trunk is cylindrical, and beehive is hexagonal—all naturally occurring shapes. It could also be inferred that recent intervention in the Basti School in form of creating functional learning spaces in classrooms has begun to influence children's geometrical thinking.

Everyday Mathematics

Besides formal mathematical concepts, tasks were framed to probe into children's naturally occurring ways of making mathematical sense and ability to apply these to everyday life situations. Children's intuitive knowledge of combining and partitioning numbers, notion of time, structuring of a year into months, a month and a week into days, and figuring out of pattern were some of the assessment tasks.

Results were quite baffling. More than 50% of class 2nd students could not decode and comprehend the simple problems. 3rd and 4th graders continued to face difficulties in these tasks with over 25% students unable to solve these questions. The maximum difficulty was faced in the task involving division. Students were asked that if 12 *rotis* (bread) have been cooked, and each of the four guests is to eat equally, how much each guest would get to eat. However, some of the children were able to intuitively solve the task by drawing bread pieces and assigning them equally to each guest. Still, as many as 71% in class II and 25% in class V were unable to answer the question.

Further, the task involving multiplication required them to calculate the number of flowers in six pots, if each pot had five flowers. Instead of using multiplicative operation, some children counted each flower in the picture, while others added five six times. They were however, unable to use operation of multiplication to algorithmically compute the problem. However, children were intuitively able to figure out that multiplication is the repetitive addition and division is the repetitive subtraction.

Another task required students to state the number of months in a year, days in a week, hours in a day and minutes in an hour. Most students in classes II, III and IV were unfamiliar with these concepts. Though students of class 5th had a better understanding of the concept of time, still 20% of the fifth graders were unaware of the fact that an hour is calibrated in to sixty minutes. Most students wrote numbers randomly. More than 50% of the students in classes II, III and IV were unable to name the days in a week, some students mixed up the names of the week in Urdu and Hindi. However, taking *Friday-Juma Namaz* as the reference point, some of the children could figure out the organization of their lives in terms of weekly bazaars and television serials.

In the clock-reading task, more than 30% of the second graders could not estimate the exact time as shown in the clock as they conceptually lagged the notion that an hour is divided into sixty equal minutes; and a clock has an hour hand and minute hand to calculate the time. However, the others solved it intuitively by applying numeral strategy of counting-on. The performance of students improved significantly in classes 4th and 5th with almost 95% of the fifth graders were able to accurately read the minute hand.

Concluding Observations about Students' Performance at Level-I: Mathematics

At level-I, the learning tasks were largely structured around schooling competencies as specified in curricular framework and textbook for class 2nd children. The data, both qualitative and quantitative suggest that children are at rudimentary stage of developing mathematical understanding and securing mathematical principles (Table MA 1, 3 & 5). However, a significant number of children are still potentially at risk of failing to learn mathematics successfully at an early stage of schooling- the 2nd class: 35% of 57 second graders could not identify and comprehend numerals; 61% faced difficulty in seriating numbers; 59% were deficient in basic arithmetic operations; and 51% were struggling to meaningfully link their intuitive mathematical understanding to

the formal school knowledge. The learning difficulties are equally common among boys and girls; and among both the schools. Many of the problems experienced by children are related to their poor reading and writing skills, weak knowledge of mathematical facts and operations, and passive reliance on 'rote memorized' rules and procedures , with little thoughtful application as to whether answers are correct or make sense. On fillip side, their intuitive mathematical understanding seemed to be robust. Many children could figure out the inverse relationship between addition and subtraction—a fundamental logical principle of arithmetic. However, their emergent mathematical abilities are fragile and need scaffolding.

Table MA 1: Presents the Performance of Students of Classes II to V on Competencies in Mathematics at Level I in both the Schools

Basic Competencies		Percentage of Students (N = 128)											
		Class 2nd			Class 3rd			Class 4th			Class 5th		
		G (27)	B (30)	C (57)	G (17)	B (10)	C (27)	G (7)	B (17)	C (24)	G (10)	B (10)	C (20)
Numeral Knowledge	**01 to 10 – identify the number**	89	90	89	100	90	96	100	94	96	100	90	95
	Write in Words	81	83	82	100	100	100	100	100	100	100	100	100
	Write in Numerals	93	73	82	100	100	100	100	100	100	80	100	90
	11 to 20 – identify the number	81	77	79	94	90	93	100	94	96	100	90	95
	write in words	81	80	81	100	100	100	86	100	96	90	100	95
	write in numerals	78	63	70	76	90	81	86	65	71	100	100	100
	21 to 50 – identify the number	74	90	82	88	90	89	100	94	96	100	80	90
	write in words	67	63	65	88	90	89	71	76	75	100	100	100
	write in numerals	52	60	56	71	70	70	57	94	83	70	80	75
	51 to 100 – identify the number	30	37	33	53	60	56	43	82	71	80	60	70
	write in words	70	70	70	82	90	85	71	94	88	90	100	95
	write in numerals	56	47	51	82	70	78	57	71	67	50	90	70
	greater than 100 – identify the number	33	67	51	53	80	63	86	88	88	100	60	80
	write in words	44	33	39	71	80	74	57	76	71	100	90	95
	write in numerals	33	40	37	47	10	33	43	53	50	80	60	70
	Competency Average	**64**	**65**	**65**	**80**	**81**	**80**	**77**	**85**	**83**	**89**	**87**	**88**
Seriation	**Ascending Order - upto 20**	44	67	56	47	80	59	86	88	88	60	70	65
	upto 100	37	47	42	35	70	48	71	76	75	60	70	65
	Descending Order - upto 20	19	40	30	65	60	63	71	65	67	70	60	65
	upto 100	30	23	26	41	60	48	86	59	67	70	60	65
	Competency Average	**32**	**44**	**39**	**47**	**68**	**55**	**79**	**72**	**74**	**65**	**65**	**65**
Basic Arithmetical Operations	**Addition**												
	double + single digit	48	57	53	65	90	74	71	88	83	90	100	95
	double + single digit (expanded form)	33	47	40	53	70	59	71	88	83	60	100	80
	double + double digit	74	60	67	35	70	48	100	88	92	100	90	95
	double + double digit with carry over (expanded form)	33	33	33	41	70	52	100	82	88	90	100	95
	Subtraction												
	double - single digit	44	47	46	59	40	52	57	88	79	70	80	75
	double - single digit (expanded form)	30	47	39	65	70	67	57	59	58	70	80	75
	double - double digit	37	33	35	41	50	44	71	71	71	100	100	100
	double - double digit with borrowing	7	27	18	59	50	56	29	65	54	60	80	70
	Competency Average	**38**	**44**	**41**	**52**	**64**	**56**	**70**	**79**	**76**	**80**	**91**	**86**

Identification of Shape	Square	93	77	84	94	100	96	71	94	88	100	100	100
	Rectangle	89	77	82	88	100	93	71	94	88	100	100	100
	Triangle	96	90	93	100	100	100	100	100	100	100	100	100
	Circle	85	90	88	100	100	100	100	100	100	100	100	100
	Competency Average	**91**	**83**	**87**	**96**	**100**	**97**	**86**	**97**	**94**	**100**	**100**	**100**
Everyday Mathematics	statement problems-addition	48	50	49	65	70	67	43	82	71	100	90	95
	statement problems-Subtraction	37	50	44	53	80	63	57	76	71	90	80	85
	counting objects in groups (or multiplication)	85	80	82	76	100	85	100	76	83	100	100	100
	statement problems-division	19	37	28	53	80	63	86	71	75	80	70	75
	Concept of time												
	Reading the clock - hour hand	63	70	67	71	100	81	86	76	79	100	100	100
	minute hand	63	63	63	71	60	67	71	71	71	90	100	95
	Months	48	60	54	65	70	67	43	71	63	90	100	95
	Days	33	27	30	59	60	59	43	71	63	90	90	90
	Hours	26	37	32	59	50	56	29	71	58	90	80	85
	Minutes	41	40	40	41	70	52	14	71	54	70	90	80
	Competency Average	**46**	**51**	**49**	**61**	**74**	**66**	**57**	**74**	**69**	**90**	**90**	**90**
Pattern Identifi -cation	Numbers	63	73	68	47	70	56	86	88	88	60	60	60
	shapes	26	63	46	47	80	59	71	71	71	70	60	65
	Competency Average	**44**	**68**	**57**	**47**	**75**	**57**	**79**	**79**	**79**	**65**	**60**	**63**

Legend: G: Girls, B: Boys, C : Combined

What is alarming is that children's weak numerical knowledge and poor computational abilities continue to persist till class 4th and 5th. For instance, on 2nd class competencies, 12% fifth-graders were still struggling with number identification, 35% had deficit seriating ability, and 14% lagged basic computing skills. In some competency areas, the ability to deal with numbers among students of class IV and V is at the same level as that of class III. Another significant observation is that though second and third graders are reasonably better off in everyday mathematics than at basic computational operations, their performance on everyday mathematics dips at class 4th , suggesting that formalized nature of school mathematics does not organically link up with children's intuitive ways of reasoning and mathematically dealing with everyday practices. No significant difference has emerged in the performances of girls and boys. While students of the Pant Nagar School are better at comprehending numbers and at pattern identification, particularly in classes IV and V, students of classes II and III the Basti School are better at everyday mathematics. However, in terms of percentages these differences are marginal.

Equally worrying is regressive nature of numerical and computational strategies used by 5th class children. They continue to add from left to right, mechanically recite a sequence of words, fail to see 'base-ten' as a unit of any kind, struggle to decode statement problems and represent them in mathematical terms, and experience difficulties in arranging numbers in ascending and descending order. These learning difficulties need to be urgently addressed. It is an established educational fact that children who are low achievers in the early years continue to remain so throughout their schooling cycle; and gradually begin to develop anxiety and negative attitude to school mathematics because of poor understanding and rare experience of success in it.

LEVEL II – Upper Primary Level Competencies

The assessment tasks were largely structured around mathematical competencies of class-four children as specified in the curricular framework and SCERT textbook in math. The same conceptual framework and underlying rationale that shaped framing of assessment tasks at level-I was followed. Thus, assessment tasks were organized around five numerical and computational abilities: Numerical knowledge, Seriating Ability, Basic Arithmetic Operations, Fractions and Decimals, and Everyday Mathematics. The test at level-II was administered to students in class 4th and 5th in order to map processes of their mathematical understanding and principles on a learning continuum and to identify specific learning difficulties. The data was both qualitatively and quantitatively analyzed.

Numbers and Seriation

At level II, children's numeral ability to identify and write numbers advances to a higher level of comprehension and understanding, largely four to five digit numbers. Therefore, their knowledge about place-value, ordinal relationship between two whole numbers, and ability to seriate is correspondingly expected to firm up.

A number of tasks (Question 1 & 2) were framed to assess children's numeral knowledge and ways of making sense of number system. The data projects both heartening and worrying trends: Most of 4th and 5th graders were able to recognize two and three digit numbers but 44% of 4th graders were found struggling to correctly identify four digit numbers. The ability to convert spoken or written three digit numeral in to words was also flawed, with almost 65% of the 4th and 5th graders failing to accomplish the task. The problem further gained severity in dealing with four digit numbers. A considerable difficulty was experienced in writing numbers such as 'four thousand one' (4001); and maximum facility was seen in writing numbers such as 'two thousand four hundred six tens and one' (2461). It is explainable as the former requires a firm knowledge of place-value; and in verbal utterance of 4001, both hundred and ten are muted. Poor understanding of number system is likely to constrain children's ability to engage with higher mathematical operations.

Place Value

Place value is an important concept in learning multi-digit numbers as it enables us to express an infinite range of numbers with only ten different digits (0,1,2,….9) on basis of position they hold in the whole numeral. The value given to a digit is according to its position in a number; and the value of the position increases in power of ten from right to left. Comprehending place-value means realizing that every number has a place value and its place provides facility for calculation. Understanding place value requires a child to make sense of and comprehend relations in a highly complex system for symbolizing quantities.

Considering centrality of place value in the number system, a series of tasks were constructed to adjudge children's knowledge of place value. 35% of 5th and 42% of 4th graders could not understand the conceptual underpinnings of place value. On

differently framed tasks, confusion and gaps in children's knowledge of place value surfaced: inability to decipher the given task; assigning place value to digits in a whole number in an arbitrary fashion, without much understanding; proceeding from left to right in giving place value; flummoxed when 'zero' occurs in a given numeral, and so on. For instance, one of the students held that all numbers below ten are 'ones', i.e., they have place value of 'one'—leading him to erroneously construct that each numeral in a multi-digit number had the place value of 'one'. ("nl l NkVk gj uEcj bdkb gkrk gA ;gk lkr dk LFkkuh; eku iNk g, *10* l NkVk g, blfy, bdkb gA"). When asked what constitutes tens and hundreds, the student was unable to answer.

Children were equally confused with the place value of 'zero' at different positions in the given numeral. For instance, many students wrote 'four hundred fifty five' as 40055; many others could not indicate the place value of 'zero' in a given numeral like 4001, 1460. Children's failure is largely linked to the traditional ways in which children are taught numbers—by unitary, counting-by-ones approach that hampers children's subsequent graduation to working with concept of 'base-ten', an essential prerequisite for understanding and appreciating the logic underlying place value.

Seriation

Seriation is an ability to arrange numbers in a specified order and is held as an index of high-order thinking and problem solving ability. Children's ability to seriate was assessed through differently framed tasks: arranging numbers in an ascending or descending order; 'forward number word sequence' and 'backward number word sequence'; establishing relationship among a set of numbers by performing appropriate mathematical operations.

Inability to comprehend the nature of seriation and its conceptual underpinnings that were quite evident at level I persisted at level II with the same severity. Most of the students, in fact 45% of the fifth graders seemed unfamiliar with the concept of arranging numbers in sequence. Similarly, the conceptual framework for understanding the 'ordinal' value of numbers was found to be lacking in most of the students, more so in the fourth graders. Children failed to respond to the task, 'what comes before' and 'what comes after'. Many students held that 1600 instead of 1699 comes before 1700. This observation gets linked up with the practice of teaching numbers in a 'jumping' fashion—10, 20, 30, and so on; 100, 200, 300, and so on. Such meaningless rendering of numbers not only fails to provide stability to children's number concept but also hampers deeper realization of mathematical understanding.

Another task in the seriation series (Question No. 6) required children to select an appropriate sign ($\leq$, $=$, $\geq$) for establishing the relationship between two sides in a given equation. 50% of the 5^{th} and 62% of the 4^{th} graders still had to secure their mathematical understanding that 5 x 4 = 5 x 2 x 2. They were unable to appreciate that the number four can be numerically manipulated into 2×2. Another significant observation is that 50% of the students of class V were stumbling in performing basic operations in simple addition and identifying the relation between the two sides of the equation. However, data indicates that children's ability to seriate gains stability and strength in 5^{th} class; an encouraging upward trend. Surprisingly, in the Basti School,

the class IV students were better at arranging numbers in ascending and descending order than class V students. It could be conjectured that teacher related variables led to the differential mathematical outcome.

Basic Arithmetical Operations

Numerical facility and computational ability are the two major components of the school mathematics. Successful realization of these two abilities is an essential prerequisite for advancing higher order mathematical understanding, processes and operations. At level II, children's ability to perform basic arithmetical operations of addition, subtraction, multiplication, and division were assessed.

The data projects a mix of both encouraging and worrying trends: Most of the students were able to perform multi digit addition without carry over with ease. Over 85% of the fifth graders could add four digits with carry over—a heartening gain since level-I. However, 40% of the fourth graders were still struggling in accomplishing carry over skill. Overall, a satisfying performance as basic ability to add is the cornerstone of higher computational operations.

Students' stumbling experiences in subtraction continued. Almost half of the 4th graders did not have any clue about 'borrowing' strategy. In fact, many of the students held that question, '171-38' is flawed as 8--the bigger number cannot be subtracted from 1--a smaller number. Many such instances suggest that children interpret and treat multi-digit numbers as single-digit numbers places adjacent to each other, rather than using place value knowledge for the digits in different positions. The difficulty was compounded when they were required to perform multiple borrowing in the multi digit numbers—'1000-333'. Merely 16% of 4th and 35% of 5th graders were able to solve this question. This is explainable as weak and ineffectual understanding of place value is bound to adversely interfere with children's ability to comprehend the underlying logic entailed in subtraction tasks.

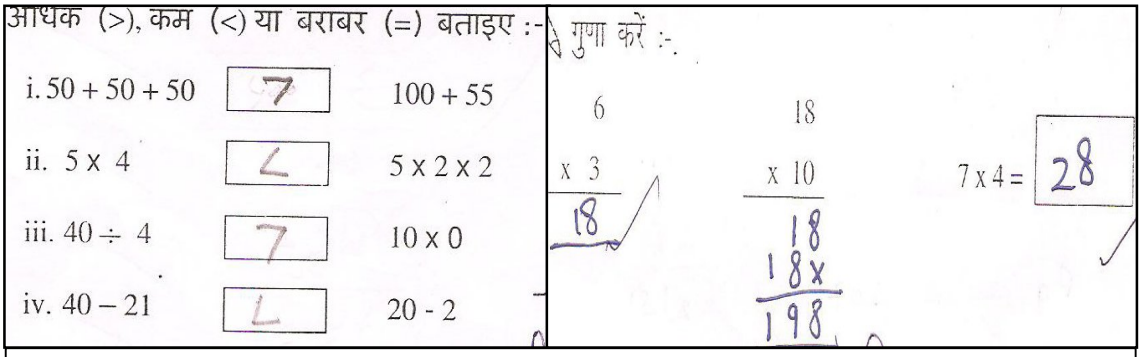


Image MA 2 & 3 (from L to R): Student unable to judge equality after performing mathematical operations (left) and Student faces difficulty in multiplying two digit numbers (right).
Source: Scripts of class IV, Basti School and class V, Pant Nagar School students

Children's poor performance in simple multiplication and division operations further brings out gaps in their mathematical understanding. Students experienced a range of difficulties: inability to comprehend both the conceptual and algorithmic logic entailed in performing the operation; unfamiliarity with mathematical symbols, × and ÷; emergent algorithmic facility to compute single digit multiplication e.g., 8×6, single digit division e.g., 9÷3, but not with multi digit numbers; practically no knowledge of multiplicative and divisive property of 'zero', i.e. product of a number multiplied by zero is '0'. Consequently, only 40% of 5th and 23% of 4th graders could perform two-digit multiplication; nearly 40% of the students had a deficient understanding of division.

However, children's dismal performance is to be seen in the larger context of the traditional ways in which multiplication and division is being taught. Rather than building on children's intuitive knowledge that multiplication is repeated addition and division is the repeated subtraction, children are pushed to learn these operations as a mechanical function of multiplication tables. Through repetition and practice, conventional representation of arithmetic and ways to compute it are drilled, not the underlying logical aspects of mathematics. Classroom practices force children to passively acquire the skill to 'borrow', 'carry over', 'columnar multiplication' rather than conceptually 'owning' the concept.

Some other useful observations: The boys of class 4th outperformed the girls in both the schools; difference becoming significant in the Pant Nagar School. The overall performance of 5th class students was better than that of class 4th students; the nature of difficulty experienced by the fifth graders remained the same as that faced by the 4th graders. The key problem areas were subtraction with borrowing- particularly multiple borrowing, multiplication with zero, multiplication of two digit numbers, division- particularly of two digit numbers and multiple computations.

Fractions and Decimals

Learning of fractions and decimals is the most challenging concept to accomplish in whole of the primary school mathematics. It was but natural to expect that children would be struggling in dealing with these areas of mathematical understanding. The tasks were framed to assess children's knowledge and computational ability in fractions and decimals; and conceptual application of these abilities in solving everyday life practices.

The most widespread difficulties experienced by children stemmed from their weak or faulty conceptualization of : notion of fractions; understanding fraction as part/ whole; representing fractions; comparing fractions; 'base-ten' concept; finding equivalence between halves, quarters and eighths; converting fractions into decimals and vice versa; relationship between fractions and division, and so on. The field observations suggest that building an informed understanding of fractions also gets complicated as it involves a combination of unfamiliar spoken words (rhu cVk pkj) and written representation (3/4) that are interrelated ; thorough understanding of number system and number-line(developing the concept of whole numbers and part-numbers together); and proportional reasoning.

Even though the quantitative data indicate that 47% of the 4th and 70% of the 5th graders were able to identify the correct decimal form, the field observations suggest that children largely relied on procedural knowledge to solve the question rather than conceptually comprehending the underlying logic. Children's blind reliance on drill and practice-based computation skills is not going to hold them in good stead when they eventually graduate to algebra and geometry. This fear was substantiated as most of the children reverted to their intuitive mathematical understanding in answering the questions based on every day practices. Rather than appreciating fractions as a form of division premised on proportional reasoning, and then applying the requisite mathematical operation; most of the children resorted to their intuitive ways of dealing with such problems.

The final word: Children's fragile understanding of fractions is to be viewed in the context that most of the primary school teachers themselves are not well conversant with these complex mathematical concepts and pedagogic approach of meaningfully enacting them. Near absence of 'hands on experience' and 'interactive teaching-learning' resources further constrain children's emergent understanding and internalization of fractions. However, in spite of the fact that the Basti School does have interactive teaching-learning spaces in form of fraction walls, number line, grids, numeral wall, and patterns of part/whole shapes etched in windows, 5th graders were equally getting stumped in dealing with these areas as the 4th graders. An imminent need then is to evolve a 'constructive culture' of mathematical understanding in the classroom in order to activate and support children's mathematical thinking; otherwise gains of these specifically created educational spaces would wither away.

Everyday Mathematics

As in level-I, tasks were framed to probe into children's intuitive mathematical sense and ability to apply these to everyday life situations. Children's natural ability to invent ways of mathematically dealing with everyday problems, notion of unit and measurement, and knowledge of performing conversion on units of weight and distance were some of the assessment tasks.

Again, results were quite baffling. About 60% of class 4th and 50% of 5th class students could not make sense of the simple daily life problems posed to them. The maximum difficulty was faced on the tasks involving multiplication and division. In one of the questions, students were asked to calculate the total amount of meat sold by a shopkeeper if his sales on three consecutive days were 25, 30 and 20 Kg respectively; and to work out the total cost if one kilogram of meat was sold at Rs. 80 per kilogram. Only 30% of the fifth graders could solve the question, either algorithmically or intuitively; some could figure out the arithmetic operation that had to be applied; while the others were just stumped. Similarly, only 40% of the 4th and 60% of the 5th grader could solve the problem that called upon the logical ability of applying mathematical operation of division.

Another question required them to perform conversion on units of weights and distances. This task aimed at checking students understanding of relations between two different units. Most students were unable to perform this question. Some of them

wrote the same answer (1000) in all four parts which made three parts correct by default. Even then, the data reveals that more than half the students are unaware of the concept of conversion.

The measurement task was framed to assess children's ability to either intuitively estimate the length of a given pencil, or to measure it by using a ruler. Surprisingly, only 15% of children could meaningfully engage with the measurement activity. What is more distressing is that natural ability to measure various objects in one's environment (length of a bed, cricket bat, pant, black-board, one's own height, hair, and so on) on basis of non-standard units that children tend to invent in their natural course of development was practically non-existent. Further, it is quite unexplainable in context of the Basti School where a seven-foot long real life measuring scale is wall mounted in every class as part of the BALA intervention: only 8% of 4th and none of the 5th graders were aware of the correct usage of scale. Children's performance on conversion tasks was equally appalling; more than 50% of the students were found struggling with the task, the task whose usage is so widespread in our daily life—relationship between kilogram and gram, meter and centimeter, and so on. A plausible inference is with schooling, children's spontaneity in bringing their experiential knowledge into school math and vice versa diminishes.

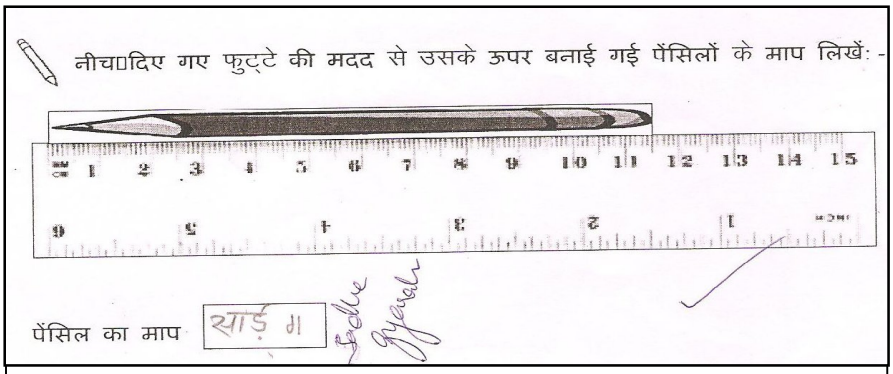


Image MA 4: Student is able to measure but not able to present in symbolic form.
Source: Script of class IV student. Basti School

Concluding Observations about Students' Performance at Level-I: Mathematics

At level-II, the learning tasks were largely structured around schooling competencies as specified in curricular framework and textbook for class 4th children. The data projects both encouraging and worrying trends: Nearing the end of primary school cycle, more than 64% of the 5th graders have secured their knowledge of the number system, 77% are competent in basic arithmetical operations, 52% can apply their mathematical reasoning to everyday practices; however, their understanding of fractions and decimals is fragile, as only 43% could make sense of these complex mathematical concepts. 55% of the fifth graders also lag in their ability to seriate. Performance of students across all the competencies is better at class V than at class IV. Also, the 5th

class students of the Pant Nagar School have outperformed the Basti School students on all the competencies. The gender difference is marginal (Table MA 2, 5&6).

The learning difficulties are equally common among boys and girls; and among both the schools. Many of the problems experienced by children are on account of their poor literacy skills, inability to understand symbolic representation of mathematical operations, unstable numerical knowledge, lack of conceptual clarity about the logical rationale underlying place value, and passive reliance on 'rote memorized' rules and procedures, rather than building an informed perspective on mathematical understanding and reasoning.

What is encouraging is that by and large children have retained their natural spontaneity in mathematically making sense of and dealing with the real world around them. For instance, they could innately figure out that multiplication is a repeated addition and division is a repeated subtraction —a fundamental logical principle of arithmetic. However, at the same time it is distressing that children are not able to meaningfully link their intuitive ways of mathematical reasoning to algorithmic ways of addressing a given math problem; and children's intuitive ability is perhaps waning under the impact of formal school math.

Also, equally worrying is regressive nature of numerical and computational strategies used by 4th and 5th class children. Many a children still fail to see 'base-ten' as a unit of any kind as they continue to follow unitary or count-by-one approach; manipulating relationship between numbers in an arbitrary fashion rather than applying logic based rules; lacking strategy to partition and combine numbers; interpreting and treating multi-digit numbers as single-digit numbers placed adjacent to each other, rather than using place value knowledge for the digits in different positions; struggling to decode statement problems and represent them in mathematical terms. These learning difficulties need to be urgently addressed as they may lead to developing anxiety and negative attitude to school mathematics; and may eventuate in child's disengagement from school.

Table MA 2: Presents the Performance of Students of Classes IV and V on Competencies in Mathematics at Level II in both the Schools

Basic Competencies		Percentage of Students (N = 75)					
		Class 4th			Class 5th		
		G (27)	B (28)	C (55)	G (11)	B (9)	C (20)
Knowledge of Number System	writing two digit numbers in numerals	81	89	85	100	100	100
	identifying and writing two digit numbers in words	33	46	40	55	78	65
	writing three digit numbers in numerals	37	54	45	55	67	60
	identifying and writing three digit numbers in words	30	39	35	18	56	35
	writing four digit numbers in numerals	37	61	49	45	56	50
	identifying and writing four digit numbers in words	41	71	56	55	100	75
	Place Value	44	71	58	73	56	65

	Competency Average	**43**	**62**	**53**	**57**	**73**	**64**
Seriation	Ascending Order - upto 1000	63	71	67	45	67	55
	Descending Order – upto 1000	41	64	53	45	67	55
	What comes after	19	61	40	55	78	65
	What comes before	7	32	20	0	33	15
	Greater than, Less than or Equal involving Addition	70	61	65	36	67	50
	Greater than, Less than or Equal involving Subtraction	70	71	71	73	89	80
	Greater than, Less than or Equal involving Multiplication	19	57	38	36	67	50
	Greater than, Less than or Equal involving Mixed Operations	78	61	69	73	67	70
	Competency Average	**46**	**60**	**53**	**45**	**67**	**55**
Basic Arithmetical Operations	Addition - double + double digit	93	96	95	100	89	95
	Addition - double + double digit with carry over	81	89	85	91	100	95
	Addition - three digit + double digit	67	86	76	100	100	100
	Addition - three digit + double digit with carry over	67	86	76	100	100	100
	Addition - four digit + three digit	44	79	62	73	100	85
	Addition - four digit + three digit with carry over	44	79	62	73	100	85
	Subtraction - three digit - double digit	52	82	67	100	100	100
	Subtraction - three digit - double digit with borrowing	48	57	53	91	78	85
	Subtraction - four digit - three digit	44	71	58	100	100	100
	Subtraction - four digit - three digit with carry over	11	21	16	27	44	35
	Multiplication - single x single digit	63	89	76	100	89	95
	Multiplication - double x single digit	11	32	22	36	44	40
	Division - double / single digit	48	79	64	55	56	55
	Multiple Operations - addition of three numbers	56	54	55	55	67	60
	Multiple Operations - addition followed by subtraction	22	36	29	18	22	20
	Competency Average	**50**	**69**	**60**	**75**	**79**	**77**
Fractions & Decimals	Recognition and representation - in fractions	56	61	58	91	56	75
	Recognition and representation - in decimals	41	54	47	91	44	70
	Addition and multiplication in decimals	22	36	29	45	0	25
	subtraction and division in decimals	4	0	2	0	0	0
	Competency Average	**31**	**38**	**34**	**57**	**25**	**43**
Everyday Mathematics	Statement Sums - addition	81	75	78	100	78	90
	Statement problems - subtraction	19	43	31	45	67	55
	Statement problems - multiplication	30	14	22	27	33	30
	Statement problems - division	22	54	38	36	89	60
	Measurements - use of scale	22	7	15	0	22	10
	Measurements - in decimals	37	39	38	18	56	35
	Conversion- distance (Kms into ms)	19	29	24	18	67	40
	Conversion- distance (ms into cms)	30	54	42	27	78	50
	Conversion - weight (Kgs into gms)	26	43	35	18	44	30
	Conversion - weight (gms into mgs)	15	18	16	18	22	20
	Reading the clock - minutes hand	70	82	76	100	100	100
	Reading the clock - hour hand	74	82	78	100	100	100
	Competency Average	**37**	**45**	**41**	**42**	**63**	**52**

Legend: G: Girls, B: Boys, C : Combined

Suggestions for Strengthening Teaching Learning Practices

The Assessment Study established that children in the two schools-- Nizamuddin Basti and Pant Nagar are in the process of firming up their preliminary numerical knowledge; are somewhat on the weaker ground with respect to arithmetical operations; and are experiencing difficulty in conceptually building sound understanding of seriation, place value, decimals and fractions. On the fillip side, with each successive class, children's mathematical understanding and reasoning is improving with mathematical principles and operations becoming more secured. However, quite a many children are potentially at risk of failing to learn mathematics successfully in their primary school cycle.

The difficulty in securing mathematical knowledge stemmed from varied sources: individual learner characteristic, frequent absence from school resulting in gaps in mathematical learning, lack of home experiences with mathematical activities, rote memorization and drill based teaching learning practices. Further, classroom observations indicated that schools do not have systematic approach and plan to address children's specific learning difficulties. An imminent educational intervention is required to support children's emergent mathematical knowledge for two reasons: one, to prevent developing negative attitude and anxiety in children to math that may eventuate in their subsequent disengagement from school; two, a conceptually firm mathematical foundation would ensure success in later schooling cycle.

The school should have an in-house provision in form of 'The Mathematics Recovery Program' for facilitating and advancing mathematically lagging children to a level at which they are likely to learn successfully in a regular class. An essential element of this intervention program would be bringing about a shift in mindsets of teachers about the basic nature of mathematics; and their pedagogic beliefs and ways. School math is being largely seen as mechanical acquisition of algorithmic competencies that are to be realized through drilling practices for ensuring success in examination. Eclipsed from this perspective is the rationale of securing a conceptually informed mathematical understanding and reasoning. Further, school math is taught in a fairly formal way that is alienated from children's real life contexts and experiences. This perception about the school math need to be challenged and changed: mathematic is not a mere ability to carry out numerical computations but is grounded in children's need to make sense of their life experiences; and hence should be built on children's natural ability to organize, structure and communicate their responses. This issue on teachers' pedagogic beliefs needs to be systematically addressed through seminars and workshops wherein each teacher is not a passive recipient but an action researcher.

Teachers should be professionally capacitated to adopt a slew of constructive measures for developing sound mathematical understanding and building confidence in children. Some of the suggested pedagogic approaches are:

- To build an informed perspective on their learners, teachers should be geared to develop dynamic ways of assessing extent of children's knowledge, ability to think mathematically, nature of problem solving strategies used by children, their common misconceptions and gaps in learning. Armed with information, teachers should be supported to design teaching-learning practices that would enable them to meaningfully address the specific learning difficulties and needs of learners.

- Children's mathematical understanding can be secured by building meaningful linkages between in-school and out-of-school mathematics; encouraging children to learn multiple algorithms for doing arithmetic operations; holding their intuitive ways of mathematizing valid; providing opportunities to use mathematical thinking in a wide variety of novel contexts; taking children from contextual, metaphoric understanding to abstract mathematical reasoning. All these measures would enable children to 'own' the mathematical knowledge constructed by them rather than passively relying on algorithmic competencies.

- Teachers should use a range of 'hands on experiences', interactive teaching-learning resources and real life situations to support children's emergent understanding and

interiorization of mathematical concepts. Teachers should give ample of 'hands-on' and 'minds-on' exploratory tasks to invoke children's reasoning strategies to connect various interrelated mathematical concepts and principles; sharing ideas and jointly negotiating meanings; and bringing math from their varied backgrounds and experiences in to classrooms.

- Regarding, addressing children's specific learning difficulties in place value, seriation, fractions and decimals, teachers own understanding about these complex math concepts was found to be infirm and ineffectual. Teachers need a refresher course to strengthen their mathematical knowledge and developmentally appropriate pedagogic ways of taking it to children.

Learner Achievement in Math at Level – I
An Ensemble of Some of Students' Answer Scripts

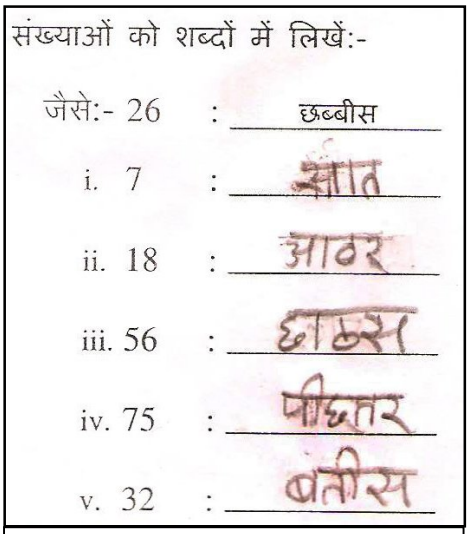


Image MA 5: Student has identified the numbers correctly but is unable to write the spellings correctly.
Source: Script of class II student, Pant Nagar School

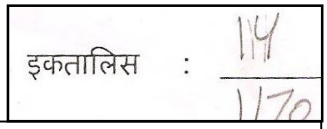


Image MA 6: Student writes *ik-talis* (forty one) as 14.

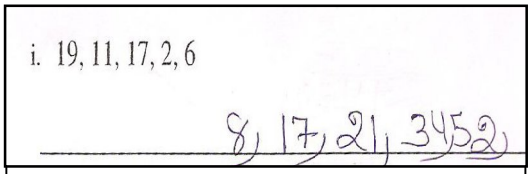


Image MA 7: Students are unable to comprehend the task requirement.
Source: Script of class II, Basti School

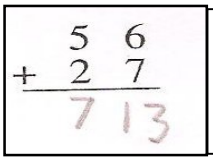


Image MA 8: Student adds from Left to Right, facing difficulty in carry over
Source: Script of class II student, Pant Nagar School

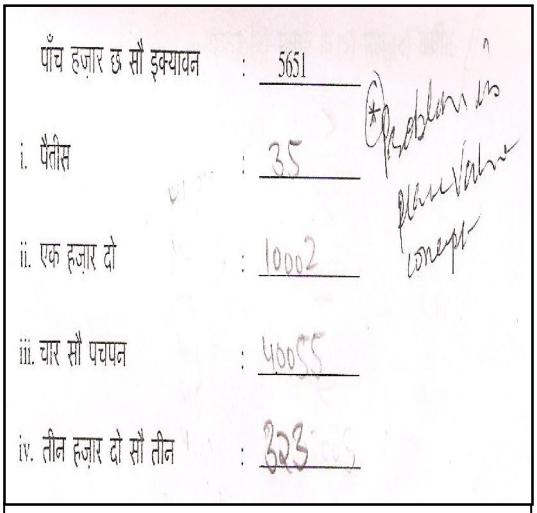


Image MA 9: Student is able to read the words but not write numerically. Researcher notes that student has difficulty in the concept of Place Value
Source: Script of class IV student, Pant Nagar School

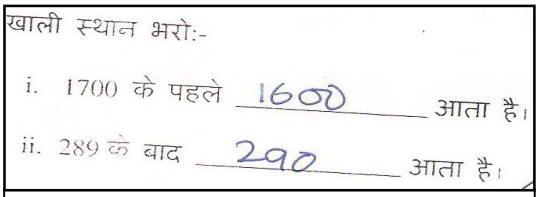


Image MA10: Numbers in school taught in 100s. Notion of ordinal value is weak.
Source: Script of class V, Pant Nagar School

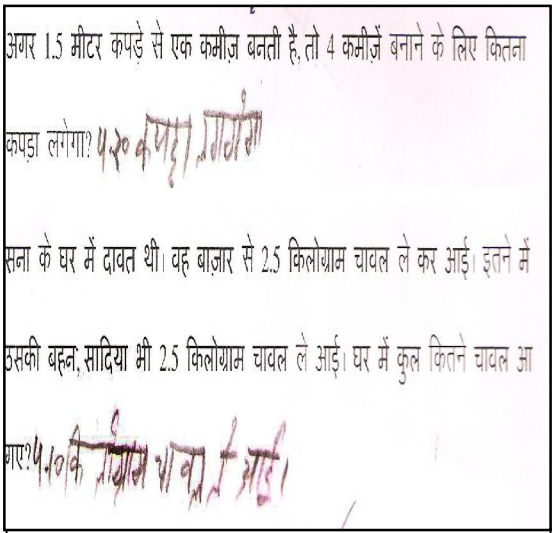


Image MA11: Student is not able to perform operations on decimals, particularly when involving carry over
Source: script of class V student, Basti School

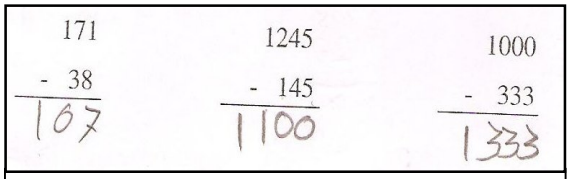


Image MA12: Student faces greater difficulty in subtraction, particularly when involving borrowing
Source: Script of class IV student, Basti School

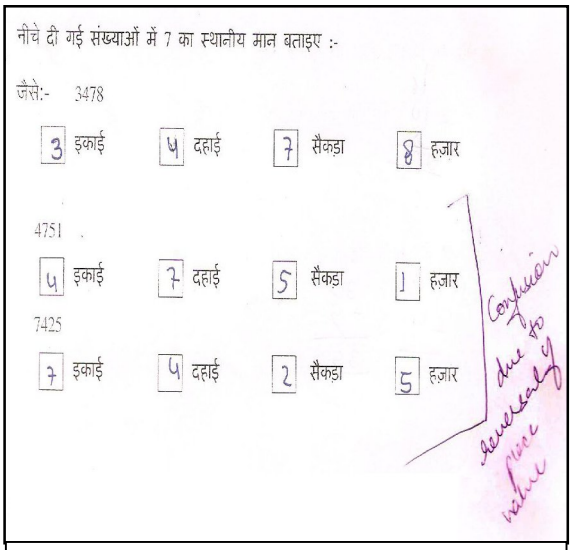


Image MA 13: Student faces difficulty in place value when positions are reversed
Source: Script of class IV student, Pant Nagar school

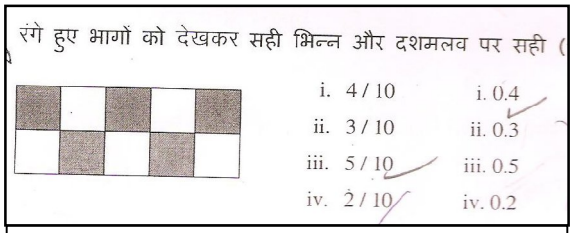


Image MA 14: Student is able to represent in fractions but not in decimal form
Source: Script of class IV student, Basti School

Hindi

A language has an implicit rule-bound structure that is involved in producing and expressing language. Language's communicative and generative features enable children to make sense of the world around them and to cogently articulate. Thus, the learning achievement tasks in Hindi for levels I and II were constructed on the basis of the four language functions, namely listening, speaking, reading and writing; and in addition language's constructive and generative ability was also looked in to. Some formal areas of language rules, grammar, syntax, structures, intuitive understanding of language as reflected in its everyday usage were also assessed. The assessment tasks were designed to develop an insight into language proficiency of primary school learners in Hindi, reading accuracy, common misconceptions in their linguistic understanding, and specific learning difficulties faced by them.

Children's proficiency in language was mapped around the following dimensions:

- Ability to listen and articulate: This was assessed using the task of developing a story around a given set of pictures.
- Ability to read and comprehend: This was assessed through task of reading a text and making context-specific meaning of the given text.
- Ability to write: This was understood through tasks that assessed functional purpose of writing as well as its imaginative and creative expression.
- Language rules and grammar: This was assessed through tasks on correct forms of words, spelling, sentence construction, singular-plural, antonyms, etc.

For the test construction, SCERT textbooks served as the reference points as they were the prescribed teaching-learning resource in both the schools. The wider nature of tasks, their complexity level, and the vocabulary chosen for the reading tasks was largely drawn from these textbooks or kept at the same level of difficulty at which these textbooks are pitched. The tasks were developed taking into cognizance learners' socio-cultural context, intuitive construction of language and curricular space provided to everyday usage of language in classroom practices of language development. The assessment tasks were designed in the graded level of difficulty and were finalized after a pilot try-out of the test.

The section below presents the finding and interpretation of children's performance on language tasks. The data was quantified in percentages to give an overview of development of language on a learning continuum- across the basic language competencies (listening, speaking, reading and writing); across levels (level I and level II); across classes (class 2nd, 3rd,4th and 5th); across gender (boys and girls); and across school (The Basti School and The Pant Nagar School). The quantified data was supported by an accompanying qualitative commentary to have a more nuanced and holistic understanding of language development.

A word about the specific nature of Hindi language: Hindi is written in the *Devanagari* script. It consists of 48 letters and additional diacritical signs. The arrangement of the alphabet is strictly phonetic, with letters classified by place of articulation: vowels (Loj) and diaphthongs first; then consonants (0;tu) with an inherent schwa vowel. Vowels

are marked for length and appear in full form in word-initial positions or as diacritical signs (ekk) in medial or word-final positions. Consonant clusters are organized in form of families of words: d ox] p ox and others. Children need to learn the specific features of Hindi script in the course of reading acquisition.

LEVEL I

The test at level I was administered to students in class 2nd, 3rd, 4th and 5th in order to map the processes of language development on a learning continuum and to identify specific learning difficulties. Listening, speaking and reading tasks were administered to each student individually. Students were assisted in doing the given language tasks by way of cues, prompts, or by re-phrasing the question. The purpose was to capture the linguistic potentialities of the learner and to understand processes in language development.

Reading

Ability to read accurately and comprehensively is an important skill that enables students to become academically successful. To understand any curricular area, meaningful reading and comprehension of the text is required. It is a well established fact that children who do not learn to read and comprehend in the early school years experience severe difficulties in studying other school subjects too. In the present study, the reading task had two major components: One, ability to recognize words and read accurately; two, ability to comprehend a given piece of text in a contextually meaningful frame. Both the abilities were assessed.

Reading Accuracy

The task on reading accuracy essentially consisted of reading a list of select words of high, medium and low spoken frequency of usage. Some of the target words were without ekk, some with ekk, and others were consonant clusters with different ekk,. Reading accuracy was evaluated in terms of correctly read words. The reading section of the test was administered to each student individually by the researcher. The researcher made a copious note of student's performance in terms of difficulty in identifying alphabet and ekk,, recognizing word, pronunciation, and reading strategy. A detailed analysis of reading errors was undertaken. Some of the widely observed reading errors were:

Phonological Errors were responses that shared phonology (speech sound) with the target words, that is, those responses that sounded similar to the target letters of the word, but were not its exact pronunciation and intonation. For instance, reading the target word vtxj vtkxj .

Orthography is the relationship between sounds and letters, the way letters and diacritic symbols (ekk) occur sequentially in a word to represent the sounds of a language in spelling. These errors occurred as they had a visual resemblance to some of the target letters of the word. Many children were unable to differentiate between visually resembling words: e vkj Hkk, ?k vkj /k, t vkj ;; i vkj Q. This led to

error in reading the target word, for instance, the target word Qy was read as Qy; cj as 'kj, vkleku as lkeku, Hkktu as ektu, etc.

Mixed Errors were the responses that shared both phonology and orthography with the target words and so could not be placed in the category of either phonological or orthographic errors. Many such errors were observed:

- Responses in which part of the letter was deleted: ckjkr was read as ckr; vtxj was read as vxj; uje was read as ue, and so on.
- Errors in which the initial and final boundary phonemes of the target word were preserved, but the vowel diagraphs which made up the middle phoneme of the target words were inaccurately pronounced: for example, misreading the target word ckfj'k as cj'k, ljx as ljx, Hkktu as Hktu, dku as dku.
- Partial recognition of word structure: cjlkr was read as cjl, bejrh as bej
- Partial knowledge of and use of one-to-one letter to sound consonant: can recognize i, Q but not i, i, ik
- Inability to read not so commonly used alphabets such as N] Hk] =h] 'k etc. Many children from class 2 were not able to read the alphabets, while most children of class 3, 4 and 5 were able to read the uncommon alphabets.
- Errors in reading matras: Many children faced problems in identifying matras separately. Some read the matras through random guessing. There were some children who could not distinguish between] m ¼ ½ and Å ¼ ½ and b ¼ f ½ and b ¼ h ½. Identification of matras was easier when they were combined with alphabets, but problems were faced by children even in that form. For example, some children read word fdrkc as d... d e NkVh b dh ek=k .....fd. This reflects their lack of understanding of matras as vowel sounds which are combined with different alphabets. Across all classes, from 2nd to 5th, reading alphabets and words with matras was problematic. Difficulty with matras was evident both in identification and its correct pronunciation. For example, some children read the word b ¼f ½ eyk;e as ey;e. In general, children were more at ease in reading words with a single matra than with multiple matras. They also showed better competence at reading four letter words with no matra or a single matra than three letter word with double matras.
- Reading of half alphabets: Many students, especially of classes II and III also faced difficulty in reading half alphabets as in cru and b'oj and so on. They read cru as "cru" and got stuck at b'oj. Some children did not read the fcUn in words such as ljx. Many students read it as "ljx". Students of class IV and V were comparatively more at ease in reading half alphabets.

What is alarming is that 42% of class 4th and 33% of class 5th students face difficulty in identifying ek=k,, uncommon words and reading three to four lettered words with ek=k,. Persistence of this inability to accurately read the specified words is likely to have serious implications on comprehending and meaningfully engaging with the textbook contents of other school subjects.

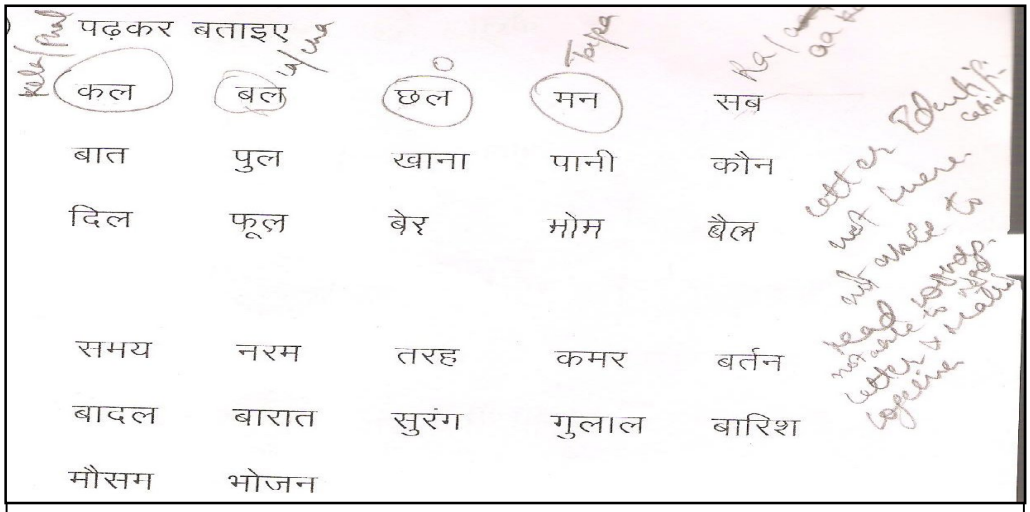


Image HA.1: The image highlights the problem faced by the student in letter identification.
Source: Script of class II student, Basti School

The data also provided an insight into the nature of reading strategies drawn upon by children for recognizing words--reading words through a sequential letter-by-letter decoding in left-to-right direction; reading words by assembling phonetic pronunciations; using visual cues to read words; and simply guessing words on basis of some partial knowledge. Many children, specifically in 2nd and 3rd class resorted to reading words in a disjointed fashion, reading one alphabet at a time. For example, many children read the word dljr *as* dk... lj... jk... rk... dr. This could be due to their inability to read all the alphabets strung into a word, their unfamiliarity with the word, or lack of practice in reading long words. Even words having matras were read in the same fashion- some children read word Hkkrtu as Hkk ij vk dh ek=k... Hkk..t..u. This reflects their lack of understanding of matras as vowel sounds which can be combined with different alphabets.

Reading Comprehension

Reading comprehension is a process that exceeds phonetic assimilation and visual decoding; it entails intellectually responding to the text, asking questions, creating mental images representing the meaning of the text, and interpreting the text. After reading, the process of reflection continues, and if there is a need, text is reread. To understand children's level of reading comprehension, a short story was given as a comprehension task. The story was followed by five questions; two of which were multiple choice types, two were short answer type and one was an open-ended question to judge children's subjective perceptions, responses and experiential meaning they construct from the given text. Questions were graded in a manner which checked their level of comprehension.

> *dgkuh if<, vkSj mUkdj nhft,*
> lyek cktkj e viuh lgyh leu l feyhA lyek u leu l dgk] "leu ! vkt ej ?kj pyA ge nkuk lkFk e [kyxA" leu lyek d ?kj vk xbA nkuk u jLlh dnhA

It was found that as children have difficulty in identifying alphabets, matras and recognizing even the frequently used words(as reported in the preceding section), only 15% of children of class 2nd and 50% of class 3rd were able to read and meaningfully engage with the text. However, what is alarming is that 25% of class 4th and 22% of class 5th children cannot still read and comprehend the simple text. Girls fared far better than boys on the reading comprehension task. Another observation is that even if children could fluently read the target words, they did not know the meaning of words such as Ny, ljx, dljr, eyk;e, the words drawn from their Hindi textbook. Such instances of non-comprehension of simple words and text continued till 5th class. This is a dismal scenario as inability to read and figure out the contents of a text invariably lead to learning difficulties in other school subjects. Further, a higher frequency of correct answers in multiple choice questions suggest that children have more experience in passively answering questions than in finding ideas in a text. This also links up with the observation that direct oral questioning is the dominant strategy for teaching reading comprehension.

Written Language

Writing has occupied too narrow a place in language development school practice as compared to the enormous role that it plays in children's intellectual and social development. Traditionally, writing has been reduced to mechanical acquisition of motor skills, rather than considering it as an intellectual activity of internalizing a system of symbols and signs for organizing and expressing one's thought processes. Keeping in mind this expansive notion of written language, assessment tasks in the present study had four components: one, assessing children's ability to reproduce the target words in symbolic form; two, spelling task ; three, ability to convert spoken words or thoughts into written language—by way of constructing meaningful sentences; and four, grammar tasks.

One of the writing tasks (Question No. 5) required students to copy a set of six words of varying difficulty level. The words were taken from 2nd class SCERT Textbook. Some of the words like

lk/kkue=h] jlxYyk] vkj vxLr were selected to judge children's ability to copy long words having either a half alphabet or bindu. About 77% of children in 2nd class, 83% in 3rd class and 89 % children in 5th class were able to reproduce the target words. Girls did better than boys across all the classes on the word reproduction task.

The second part of question 5 was on writing correct spellings. In this task, incomplete words were given along with a picture of the object. Pictures were given as cues to help children identify the target word and spell it. Some children could not understand the nature of the task and sought clarification. The spelling ability ranged from 54% in class 2nd to 78% in class 5th. The common spelling mistakes were writing fpfM;k as fp;k; fxyklI as Xyklf.

Another sub-task (Question No 4d) in the spelling section was to identify the correct spelling. From a given set of frequently used words such as eVj and ejV, jkVh and

jVh, children were asked to indicate the correctly spelled word. 54% of first graders and 23% of second graders faced problem in distinguishing the correct spelling from the wrong one. The girls did better than the boys across the classes and the two schools. However, what is worrying is that poor spelling ability is persisting till class 4th and 5th, specifically in the Basti School. It was observed that poor spelling ability of children largely stemmed from their failure to identify and read the target word; weak understanding of connection between word and its phonetics; and lack of practice resulting in poor visual memory for correct recall of the target word.

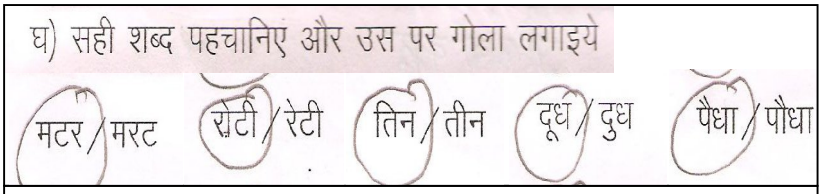


Image HA.2: The image highlights the way some students attempted the question

Another task in written language was to assess students' ability to construct sentences on five commonly used words (Question No 6). The nature of the task had to be explained to most of the children. When asked to make a sentence or okD; with the given word, many children appeared puzzled as they did not know the meaning of the word okD;. They were then asked to write a line on the given target word. A marked variation in qualitative nature of constructed sentences was observed. Some of typical responses on the task were:

- ability to verbally frame the sentence but inability to write it; largely observed in class 2nd
- making meaningless sentences such as tych er, preponderance of this type in class 2nd and 3rd
- constructing routine sentences with minimal vocabulary and syntax. For example, for the word ?kj a large number of students have made the sentence "ejk ?kj cgr vPNk g" ; for fluek they have written "e dy viu nkLrk d lkFk fluek n[ku x;k FkkA Such sentences were constructed largely by class 4th and 5th students.
- framing of a grammatically correct sentence by correct usage of spelling, punctuation and syntax. Instances of such sentences were few, and they were from the Pant Nagar School. These students were able to meaningfully structure their ideas in a coherent framework.

A few tasks (Question No 4 a,b,c) were framed to probe into children's basic understanding of grammar and other linguistic rules that are needed to construct syntactically correct sentence and text structure. The tasks looked into children's knowledge of singular-plural usage of words; and antonyms-the opposite words. The tasks were largely done verbally by the 2nd graders and to a considerable extent by the 3rd graders. 46% of 2nd graders could match the antonyms correctly. The figure climbed up to 78% for the 5th graders. The girls out-performed boys across all classes and the schools. However, a lot of 2nd and 3rd graders found task on singular-plural usage difficult. Only 19% of 2nd graders could partially do the task and that too

verbally. The problem continued at the higher level as only 50% of 4th graders could attempt it. This could be explained as most of the children are poor readers and spellers, and in plural usage in Hindi, various matras are evoked. For instance, for changing fcYYkh to fcfYy;k, children should have sufficient knowledge of not only of the spoken language but also its spelling.

Some additional worthwhile observations: Many children in class 2nd made meaningless and undifferentiated lines, on being probed what these lines symbolize, they mouthed phrases that seemed as though they were thinking and writing. For young children, writing is a basic discovery—namely that one can draw not only things but also speech. Hence, it becomes understandable that many children have used words from their native language or dialect, Bihari, Bengali, and Oriya in spelling and sentence construction tasks in Hindi. The task analysis on written language suggest that scribbling, writing, framing two-three word phrases and meaningful construction of simple sentences have to be viewed as different moments in an essentially unified process of development of written language. This finding holds an immense pedagogic possibility.

The major trend that seemed to be emerging from written language task analysis is that writing is largely perceived as a mechanical skill of passively reproducing symbolic form of alphabets and words. This has resulted in non-productive engagement with the text. This is evident as 46% class 2nd children commit spelling mistakes and 65% were able to construct two-three words sentences. The classroom observations support the data as practice of inertly copying words and text from the Blackboard was the dominant teaching-learning approach in both the schools, specifically the Basti School. It was also one of the teachers' strategies to keep the class passively engaged. As a consequence, children's natural ability to use writing as an intellectual way to organize and communicate their thought processes was hampered. This inability continued till class 4th and 5th as only 67% fourth graders were able to make sentences—that too of preliminary nature. There is a need to seriously reflect on worthlessness of such futile exercises that only involve children's motor abilities and not the cognitive ones.

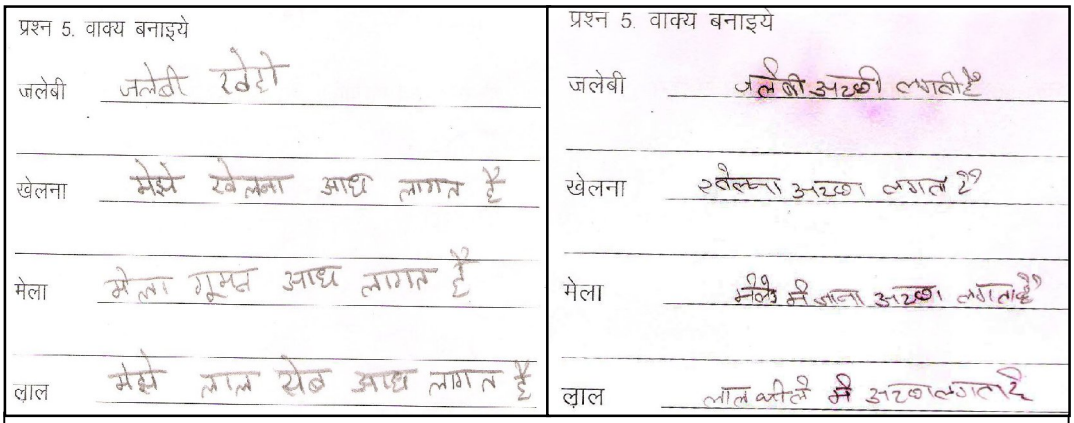


Image HA.3 & 4: The two images typify the kinds of sentences students constructed.
Source: Scripts of class, IV and V of Basti School

Listening

Based on the insights gained during the pilot phase, the listening comprehension text was kept very simple and brief. A concise account of a girl's visit to zoo was narrated. At the end of narration, a few comprehension questions were asked. The first three questions were factual in nature while the other two aimed at getting the students' personal imaginary response to the story. The story was narrated to each child individually by the researcher who made a copious noting of children's recounting ability. Children's responses revealed their natural awareness and closeness to animals and birds; with preference and fondness for animals scoring over birds. In response to the open-ended question, children confidently described in detail their visits to the zoo, India Gate, or the other interesting places visited by them. The field observations point to children's ability to concentrate, to be attentive to the minute details and to recall the narrated account. Thus, their flair for listening and fluency in the spoken language is quite commendable.

Spoken Proficiency (Articulation Ability)

To assess children's proficiency in spoken Hindi, an illustrative picture was chosen. The picture represented a scene at a local tea-stall and was replete with visual details which could be described verbally. Almost all children were able to articulate a coherent story or a plot underlying the picture in Hindi. Children's responses reflected a lot of diversity which further indicated variation in their visualization and imagination. For example, there is one man in the picture who is reading news paper. Some children said ***"wo note gin raha hai"***, others said ***"haath mein kappa liya hai".*** Some children of class 2nd described things observed in the picture in piecemeal fashion and described the cycle in great detail such as ***"ek cycle khadi hai"***, ***"cycle ka handle hai"***, ***"ek seat bhi hai"***, ***"do pahiye dikh rahe hain"***. Some of the children, particularly those in class 5th were perceptive enough to notice the frown on the shopkeepers face and said ***"ye dukaandar hai. Gusse mein hai. Usko dono aadmiyon ki baat sun ke gussa aa raha hai"***. Children of class 2nd and 3rd limited themselves to the description of objects, people and their actions in the picture. However, some children of class 4th and 5th were able to establish a relationship between the two men and said ***"ye dono dost hain, baatein kar rahe hain"***, ***"ye aadmi chai wale aadmi to padha raha hai"***, ***"ye usko chutkula suna raha hai, isliye dono hans rahe hain"***. Variation in responses from class 2nd to 5th indicated a continuous progress in children's ability to organize their thought processes and articulate them meaningfully. Children' enjoyed doing this task.

Concluding Observations about Students' Performance at Level-I: Hindi

At level-I, the learning tasks were largely structured around schooling competencies as specified in curricular framework and textbook for class 2nd children. The data, both qualitative and quantitative suggest that children are at an early stage of language development. They have high oral proficiency to articulate in Hindi, have fairly reasonable listening ability to attend to language details, but their reading and writing skills are rudimentary. They experience difficulty in identifying letters and matras. Weak understanding of matras tends to limit their reading and comprehension ability; and being the poor spellers, their ability to construct and write syntactically correct and

Table HA 1. Overall Performance in Percentages in Hindi: Level I

Competencies	Class 2nd			Class 3rd			Class 4th			Class 5th		
	G	B	C	G	B	C	G	B	C	G	B	C
LISTENING COMPREHENSION	**96**	**100**	**98**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Comprehension of 5-6 line story												
Answering fact based questions	96	100	98	100	100	100	100	100	100	100	100	100
Capturing reader response to the story	96	100	98	100	100	100	100	100	100	100	100	100
SPEAKING	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**
Picture description in 4-5 lines												
Fragmented description of the picture	100	100	100	100	100	100	90	79	83	50	88	70
Holistic description of the picture	0	0	0	0	0	0	10	22	17	50	13	30
READING COMPREHENSION	**62**	**57**	**59**	**80**	**85**	**82**	**96**	**79**	**86**	**98**	**81**	**91**
Identification of letters with the help of pictures	100	97	98	100	100	100	100	100	100	100	100	100
Identification of letters without matra and without pictures	88	68	76	86	100	92	100	100	100	100	100	100
Identification of matras without letters	34	38	36	86	90	88	90	57	71	80	75	79
Identification of letters with matras	54	41	47	86	80	84	100	72	84	100	75	89
Reading of 2 letter words with pictures	97	100	99	100	100	100	100	100	100	100	100	100
Reading of 3 letter words with pictures	97	97	97	100	100	100	100	100	100	100	100	100
Reading of 4 letter words with pictures	83	84	84	100	100	100	100	100	100	100	100	100
Reading of 2 letter words without matras	71	64	67	86	90	88	100	100	100	100	75	89
Reading of 2 letter words with matras												
Reading of two letter words with single matra	54	52	53	79	90	84	100	72	84	100	75	89
Reading of two letter words with double matra	54	51	53	86	80	84	100	72	84	100	75	89
Reading of 3 letter words without matras	58	48	52	76	100	87	100	79	88	100	75	89
Reading of 3 letter words with matras												
Reading of 3 letter words with single matra	45	38	41	62	70	66	100	72	84	100	75	89
Reading of 3 letter words with double matra	41	35	38	59	60	60	100	72	84	100	75	89
Reading of 4 letter words without matras	58	42	49	76	80	79	100	79	88	100	75	89
Reading of 4 letter words with matra												
Reading of 4 letter words with single matra	40	35	38	69	80	74	100	72	84	100	75	89
Reading of 4 letter words with double matra	37	35	36	52	70	60	90	65	75	100	75	89
Reading of words with half alphabet	33	35	34	59	70	64	90	72	79	100	75	89
Reading of words with bindu/chandra bindu	0	4	2	62	70	66	100	65	80	100	75	89
Reading of 5 line story with comprehension												
Able to read the text independently	42	32	36	79	70	75	90	79	84	100	75	89
Choosing correction option in multiple choice questions	85	78	80	62	80	70	90	65	75	90	75	85
Writing answers in one line or few words	79	71	74	100	90	96	90	72	80	90	75	84
Response to the story	75	75	75	100	90	96	80	72	75	100	75	89
WRITING	**61**	**53**	**56**	**77**	**65**	**71**	**80**	**61**	**69**	**85**	**70**	**78**
Copying / writing of words with visual cues	96	81	87	93	90	92	100	79	88	100	88	95
Word completion with the help of pictures	80	67	72	86	90	88	100	79	88	100	75	89
Writing of 5 sentences												
Construction of simple routine sentences	58	54	56	79	60	69	100	72	84	100	75	89
Construction of sentences expressing higher order thinking	11	10	10	50	20	35	20	15	17	40	42	41
GRAMMAR AND OTHER LANGUAGE SKILLS	**53**	**50**	**51**	**66**	**67**	**67**	**83**	**71**	**76**	**90**	**79**	**85**
Identification of correct spelling	60	58	58	86	80	84	100	72	84	80	88	84
Identification of singular/plural numbers	24	26	25	27	30	29	60	50	54	90	75	84
Identification of antonyms through match the following	74	67	70	86	90	88	90	93	92	100	75	89

Legend: G: Girls, B: Boys, C : Combined

meaningful sentences is also severely constrained. However, with each successive class, children's language ability improves with girls performing better than boys across all language tasks. By end of the 3rd class, children have started spelling high frequency words, constructing three to four word phrases as their knowledge of Hindi grammar and sentence structure is emerging; and meaningful comprehension of simple text has also begun to firm up (Table HA 1).

What is worrying is that certain specified shortfall in linguistic facility continued till class 4th and 5th in one or the other language area: inadequate knowledge of matras; weak spellings; inability to write illegibly; poor reading and comprehension abilities; and impoverished skill of using language as way to intellectually communicate one's thought processes. These learning difficulties need to be urgently addressed. Language being the prime medium and axis around which contents of the other curricular areas are structured, persisting language deficits are then bound to have an adverse impact on children's schooling success.

LEVEL 2

The assessment tasks were largely structured around language competencies of class-four children as specified in the curricular framework and SCERT textbook in Hindi. The same conceptual framework and underlying rationale that shaped framing of assessment tasks at level-I was followed. Thus, assessment tasks were organized around four language functions: Speaking, Listening, Reading and Writing. The test at level-II was administered to students in class 4th and 5th in order to map the processes of language development on a learning continuum and to identify specific learning difficulties. The data was both qualitatively and quantitatively analyzed.

Reading

The reading tasks had two main components: One, ability to recognize words and read accurately; two, ability to comprehend a given piece of text in a contextually meaningful frame. Both the abilities were assessed.

Reading Accuracy

The task on reading accuracy essentially consisted of reading a list of select words of high, medium and low spoken frequency of usage. Some of the target words were without matra, some with matra, and others were uncommon consonant clusters. Reading accuracy was evaluated in terms of correctly read words. The test was administered to each student individually by the researcher. The researcher made a copious note of student's performance in terms of difficulty in identifying alphabet and matras, recognizing word, pronunciation, and reading strategy. A detailed analysis of reading errors was undertaken. Some of the observations about children's reading difficulty and commonly occurring errors are:

- Uncommon Alphabets: Children's facility in identifying individual alphabets and recognizing words was fairly well developed. However, children faced problem in reading uncommon alphabets like {k, = and K and many others in this consonant family. Children also

experienced difficulty in decoding visually similar looking pair of alphabets such as ?k and /k, ; and Fkk, tk and Kk. Another relevant observation was that children read alphabets not in isolation but in context of the word in which that alphabet was located. For instance, children read K as in Kkuh; = as in f='kk.

- Knowledge of Matras: Children's difficulty in identifying matras continued in class 4th and 5th also. It was observed that children were better off in recognizing matras when they were used with alphabets rather than in isolation. They were getting confused between NkVh b and cMh b and NkVk m and cMk Å. Most children could read words with matras but when asked to identify matras used with alphabets or words, they got puzzled. For example, they read ?kh as f?k but when asked which matra is used, some of them said "vk dh ek=k yxh g". They had better ability to read single alphabet with a matra, or small words with a single matra .Many children could not read a long word with multiple matras. For example, many children faced problem in reading the word "e[kkVk". There were a small percentage of children who could not read words with matras at all.
- Half Alphabets: Children faced a lot of problem in reading words with half alphabets. Very few children could read the words leL;k and 0;olk; successfully. Similarly problems were faced in reading vFk and ior too. Many children read them as vVk and ior or iorh, respectively.

Reading Comprehension

In reading comprehension task, a number of mental acts are set in to motion: ability to recognize individual words, their phonological awareness, attaching meaning to the word and ability to go beyond the text for making inferences based on the text and knowledge of the wider world. In the present study, a short text was given to fourth and fifth graders to understand their level of reading comprehension. The text was followed by five questions: two of which were multiple choice questions based on factual information provided in the text, two were short answer type and one was an open-ended question to judge children's imagination and experiential meaning they construct from the given text.

Some of the significant observations were: Most class 5th and many of class 4th children could read the given text by themselves, without any assistance. There were a few children, largely in class-four in the Pant Nagar School and in class-four and five in the Basti School who could not read the story independently. In such cases, the text was read to the students by the researchers, reading comprehension task then became a listening comprehension. Almost all children could comprehend the story through listening mode and were able to answer comprehension questions.

dgkuh if<+, vkj mÙkj nhft,:
,d fnu [kkfyn viuh vEeh d lkFk ey e x;kA ogk cgr lh ndku lth FkhA ogk ,d xCckj okyk Hkh FkkA [kkfyn xCckj oky d ihN&ihN py iMkA rHkh mlu n[kk fd mldh vEeh rk mld lkFk ugh gA og Mj x;kA yfdu ml ;kn vk;k fd vEeh u dgk Fkk fd ey e [kk tku ij og ,d txg [kMk gkdj mudk brtkj djA og ml [kn << yxhA

Some of the children, who could read the text by themselves, got stuck at certain unfamiliar words and searched for its phonological coordinates and literal meaning for making meaningful sense of the sentence. brtkj was one of such words. Another observation was that children were hesitant in answering the open-ended question which required them to carry the story further. Many of them had to be explained the nature of the task. In spite of the repeated explanations, they continued to be perplexed by the task and hence, did not attempt it. Many other children gave a very simplistic answer by writing conclusion in 2-3 words. What was baffling was that while children were able to correctly answer the factual questions, they were not at ease in attempting a question which made a demand on their imaginary and creative faculties. A plausible explanation is that children had practically no exposure to the language activities that can activate their visualization and imagination abilities. The classroom observations support this explanation as rote memorization and drilling are the dominant teaching-learning practices that are deployed by language teachers.

Written Language

An expansive conceptual framework and underlying rationale that shaped framing of assessment tasks at level-I was followed. The writing assessment tasks at level-II had three components: one, spelling task ; two, ability to convert spoken words or thoughts into written language—by way of constructing meaningful sentences; and three, grammar tasks.

In the spelling task (Question No 4), from a given set of frequently used words such as fdlku and dhlku; c[kkj@c[kkj and c[kkjh, children were asked to identify the correctly spelled word. 54% of fourth graders and 23% of fifth graders faced problem in distinguishing the correct spelling from the wrong one. The girls did better than the boys across the classes and the two schools. However, what is worrying is the persistence of poor spelling ability among class 4th and 5th learners, specifically in the cLrh School. It was observed that poor spelling ability of children largely stemmed from their failure to identify and read the target word; weak understanding of connection between word and its phonetics; and lack of practice resulting in poor visual memory for correct recall of the target word.

Another task in written language was to assess students' ability to construct sentences (Question No 8) on five commonly used words: ?kj, lnj, i<uk, ndku, and ?keuk. Sentence construction entails an active interplay of two distinct abilities, linguistic and cognitive. The former requires an understanding of rules of grammar usage, appropriate selection of word (vocabulary), correct word order, and punctuation. Equally important are children's imagining and other mental processes to frame a meaningful phrase or sentence. However, data clearly point to children's poor linguistic knowledge: First, children could not understand the nature of the given task. When asked to make a sentence or okD; with the given word, many children appeared puzzled as they did not know the meaning of the word okD;. They were then asked to write a line on the given target word. Two, majority of the constructed sentences were either not coherent or were text bookish, ritualized and clichéd responses which reflected their poor linguistic understanding. Nature of responses is in

turn a reflection on passive, rote- memorization and examination-geared schooling practices. On a flip side, children were able to verbally articulate their rich views on certain target words such as ?kj and fluek . This indicates that children have fluent proficiency over the spoken language but their written language lags.

Children's ability to mentally organize their thought processes and express them in the written language was further assessed by asking children to write a few lines about their friend (Question No 9). Here they have performed better than the previous question. Some children have personalized the write up by giving in salient details of their relationship with their friend. For example, some children have written ***"meri dost bahut jiddi hai" or "mera dost mujhe apna kaam dikhata hai"***. The number of such children however is not very high. Most of them have stuck to giving routine descriptions such as the name, age, class, etc of their friends or have expressed their liking for their friend. The limited nature of children's responses imply that children have never been given structured experience to imagine, verbally articulate their visualization and further express it in written form. The classroom observations support that there is no language culture of 'imagining, talking and writing' in the schools.

A few tasks (Question No 5, 7) were framed to probe into children's basic understanding of grammar and other linguistic rules that are needed to construct syntactically correct sentence and text structure. The tasks looked into children's knowledge of nouns, adjectives, tenses, and adding suffix to the target word. 67% of the 5th graders and 63% of the 4th graders had a reasonably good understanding of grammar. The girls out-performed boys across all classes and the schools. However, task on adding suffix to the root word was the most difficult, 79% of 4th graders could not do it. The task on noun-adjective was well attempted; almost 92% fourth graders could easily do it. Children's understanding of tenses needs to be strengthened as 33% fourth graders experienced difficulty in selecting the appropriate tense. They got confused between the past, present and future tenses used in the paragraph. In many cases, children have seemed to pick up a random choice rather than on the basis of any informed understanding of the task. By and large, children were quite capable of constructing semantically correct sentences. An additional observation is grammar is largely taught as a standalone or an add-on language activity and is given minimal importance in production of written language. There is a need to meaningfully link grammar with other language areas.

Listening

For listening comprehension, a fantasy story was narrated to students which were followed by a few comprehension questions. The first three questions were factual in nature while the other two aimed at getting the students' personal imaginary response to the story. The choice of story was guided by the consideration that older children would be able to distinguish between fantasy and reality. The story was narrated to each child individually by the researchers. After narrating the story, comprehension questions were asked. Almost all children were able to comprehend the story and answer the questions successfully barring one student who could not understand the story even after three narrations.

One remarkable aspect noticed during the task was that children's personal responses to the story not only revealed their ability to comprehend a text well but also to link it with their lived realities. One of the questions asked the students about the things from the story they would like to have in their school. Most children stuck to the details as specified in the story such as ***"chocolate ki deewarein, kheer ka talab, pariyan padhane aayein"*** and so on. However, some children linked the story with their lives and mentioned things which were not there in the story. For instance ,one child responded, "***khel ka maidan chahiye jismein hum khel sakein aur achchi building".*** Another child said, ***"hume achchi teachers chahiyein jo achcha padhayein, hume pyaar karein, daantein maarein nahi".***

Spoken Proficiency(Ability to Articulate)

This task was designed to assess children's oral proficiency in spoken Hindi and ability to cogently articulate their thought processes. For this, six sequentially arranged picture frames were shown to children and were asked to construct a story based on these frames. Most students could make a story out of the pictures provided. Some worthwhile observations were: Many 4th class children, instead of constructing a comprehensive story out of the pictures, described each picture as a standalone event. Due to this, a sense of continuity was missing in their narrative. Eg. ***"Ye uthi. Fir jhoola jhoolne lagi. Billi ro rahi hai. Ped pe chadh rahi hai. Billi pe pass pahunch gayi. Dono khel rahe hain".*** This indicates that children's ability to visualize and imagine is fairly well developed but ability to linguistically express it is lacking. However, most of the 5th graders were able to meaningfully link the pictures to develop and articulate a reasonably coherent story.






Concluding Observations about Students' Performance at Level-II: Hindi

Level-II learners have reasonably well developed proficiency in understanding and articulating the spoken language. They have an extended vocabulary, can formulate basic sentences, have a fairly good knowledge of the phonetic spelling patterns, and

can follow a series of oral directions to complete a task. They can construct simple sentences to create a short narrative for practical purposes. They can read and meaningfully comprehend simple texts. However, their written language has grammatical and syntactical errors involving tenses, complex sentence construction and idiomatic expressions (Table HA 2).

Reflecting on finer details, identification of matras is the major source of reading difficulty, with 47% of 4th graders and 37% of 5th graders still struggling to accurately recognize them. Failure to identify matras resulted in poor word recognition; as much as 47% of fourth graders could not read letters with double matras, severity persisted in the fifth class also. However, reading of words improves when scaffolding in the form of pictures is provided. The problem in reading words with half alphabets and bindu or chandrabindu continues; 55% of 4th graders and 50% of fifth graders are still experiencing difficulty in visual decoding and phonetic pronunciation of these letters. 79 % of fourth graders are able to comprehend and meaningfully engage with the short text. In writing, surprisingly, 4th class students have done better than 5th class students; but in both classes children had a poor ability to construct syntactically correct sentences. Children's understanding of grammar and other language rules has started to firm up; 92% of 4th graders were successful in matching words with suitable adjectives and choosing the right form of tense; however, frequency of spelling errors is still on the higher side, with 29% of 4th graders and 25% of 5th graders continue to be weak in spelling. Girls have performed better than boys in all areas of language across the classes and the schools.

Suggestions for Strengthening Practices for Language Development

The Assessment Study clearly established that school-going children in the Nizamunddin Basti have high oral proficiency to articulate in Hindi, have fairly reasonable listening ability to attend to finer details in language, but their performance in reading and writing is worrisome. Weak understanding of matras tends to limit their reading and comprehension ability; and being the poor spellers, their ability to construct and write syntactically correct and meaningful sentences is also severely constrained. On the flip side, with each successive class, children's language ability improves with literacy skills emerging in many children and firming up in quite a few learners. However, these findings have to be viewed against the fact that these socially disadvantaged children enter school without a strong background in familial literacy. It is in this context, the schools should use a wide variety of language intervention programs to enable children to become successful, confident readers and writers.

Some of the intervention strategies for supporting language development are:

First and foremost, literacy-rich environment should be created in the school for providing children with occasions for sustained engagement with the reading activities, forums for articulating their views and imagination and creating other meaningful ways for supporting emergent literacy. Emergent readers should be given as much exposure to print as possible. This will help them in letter identification and will later on help in developing writing skills. Picture books should be used to promote listening and comprehension abilities. A wide variety of other reading resources can be meaningfully

used to initiate children in culture of reading. Authentic texts such as newspapers, magazines, advertisements, and banners can be used for this purpose. This will also help in situating classroom learning within the students' contexts.

A culture of 'constructive talk' should be created in the classroom. It will support the development of oral literacy in children by enriching their listening and speaking skills. Storytelling is an effective way to articulate children's imagination and to build their confidence in using language. It develops children's concentration, attentiveness, visualization and imagination, extends vocabulary, develops memory, builds social cohesion, and offers access to a vast range of community's traditional and historical narratives.

A due emphasis should be placed on strengthening children's comprehension abilities and for this, they should be encouraged to summarize what they have read and certain portions of the text can also be enacted in class. Similarly while discussing texts, children should be encouraged to construct their own meanings of the text and then shared meanings can be negotiated between students and between students and teachers through dialogue. Further, language learning should be linked with children's personal lives and with their contexts so that continuity between home and school learning is established. This can only happen when children's personal experiences and the meanings they have given to those experiences are held valid in the classroom.

A library or language resource room should be established in the school to provide opportunity to children to read, share, and display their emergent reading behavior. Further, a period should be slotted in the school time-table where children read for pleasure or the teacher reads out to the whole class. Children should be given confidence to compose stories and informational articles in emergent forms.

Emergent writers should be given the experience of touching, feeling and holding paper and pencil. They should be given the freedom of even scribbling on paper if they wish to do so. Ability to write is not akin to a mechanical skill of passively reproducing and copying, it is an intellectual way of organizing and communicating one's ideas. Hence, inert form of any copying activity should be discouraged and children should be provided with active writing experiences that allow the flexibility to express one's views in any nonconventional forms of writing at first and over time move to conventional forms. Space for self expression in speech as well as in writing has to be created in classrooms.

Finally, to help children develop language skills and overcome barriers to literacy, teachers should take special efforts in working with children individually and in extending support to parents for participating in their children's literacy development.

Table HA 2. Overall Performance in Percentages in Hindi: Level II

Competencies	Class 4th			Class 5th		
	G	B	C	G	B	C
Listening Comprehension	**100**	**97**	**99**	**90**	**100**	**96**
Comprehension of 10-12 line story						
Fact based questions	100	100	100	90	100	96
Capturing reader's response to the story	100	95	98	90	100	96
Speaking	**62**	**63**	**63**	**67**	**57**	**61**
Story telling with the help of picture frames						
Able to make sense of and describe the picture frames	93	95	94	100	92	96
Factual description of pictures	77	86	81	74	77	75
Weaving a narrative with the help of picture frames	16	9	13	27	0	13
Reading Comprehension	**78**	**65**	**72**	**82**	**70**	**76**
Identification of single letters without matra and without pictures	90	75	83	90	92	92
Identification of matras without words	54	51	53	55	68	63
Identification of single letters with matras	78	65	73	84	75	79
Reading of 2 letter words with pictures	97	100	98	92	92	92
Reading of 3 letter words with pictures	97	100	98	100	75	88
Reading of 4 letter words with pictures	97	100	98	92	92	92
Reading of 2 letter words without matras	90	69	81	92	75	84
Reading of 2 letter words with matras						
Reading of two letter words with single matra	77	65	73	84	67	75
Reading of two letter words with double matra	74	58	67	84	60	71
Reading of 3 letter words without matras	86	69	79	92	75	84
Reading of 3 letter words with matras						
Reading of three letter words with two matras	81	54	69	84	67	75
Reading of three letter words with three matras	75	64	69	92	75	84
Reading of 4 letter words without matras	69	65	69	92	75	83
Reading of 4 letter words with matras						
Reading of 4 letter word with single matra	65	62	65	84	67	75
Reading of 4 letter word with double matra	54	51	53	75	67	71
Reading of words with half alphabets	43	47	45	49	52	50
Reading words with bindu/chandrabindu	79	69	74	92	67	79
Reading of 8 line story with comprehension						
Able to read the text independently	86	65	77	59	67	63
Choosing correction option in multiple choice questions	86	62	75	92	75	84
Writing answers in 1-2 lines	75	62	69	75	67	71
Capturing reader response	54	24	40	59	29	42
Writing	**45**	**41**	**44**	**31**	**45**	**38**
Making 5 simple, comprehensive, independent sentences						
Construction of simple, routine sentences	96	71	86	67	84	75
Construction of sentences expressing higher order thinking	4	25	16	0	43	25
Writing a coherent passage in 4-5 lines.						
Construction of simple, routine sentences	61	51	58	57	67	63
Construction of sentences expressing higher order thinking	29	18	23	10	9	8
Suitable organization of content	36	38	36	20	22	21
Grammar and Other Language Skills	**68**	**57**	**63**	**72**	**63**	**67**
Identification of correct spelling	82	58	71	84	67	75
identification and matching of nouns with suitable adjectives	96	86	92	92	84	88
Adding suffixes to a root word	25	18	21	27	23	25
identification and choosing of correct tense form in a passage	68	64	67	84	77	80

Legend: G: Girls, B: Boys, C : Combined

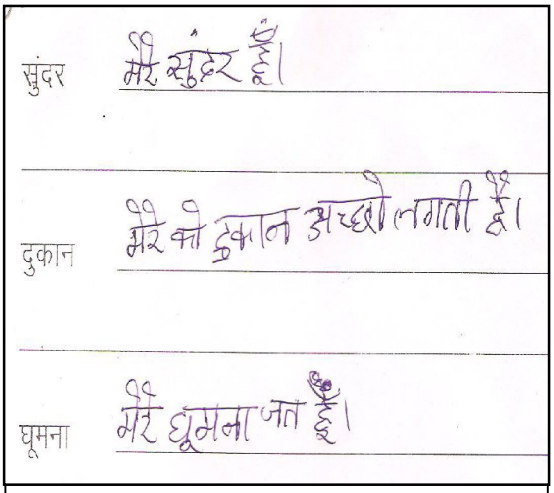


Image HA.5: Some representative sentences
Source: Script of class V student, Pant Nagar School

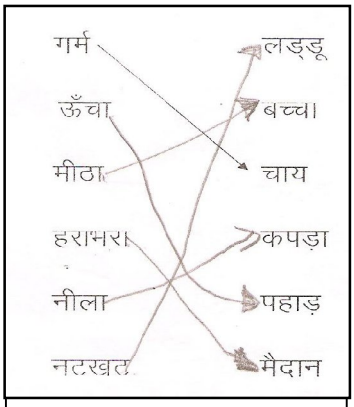
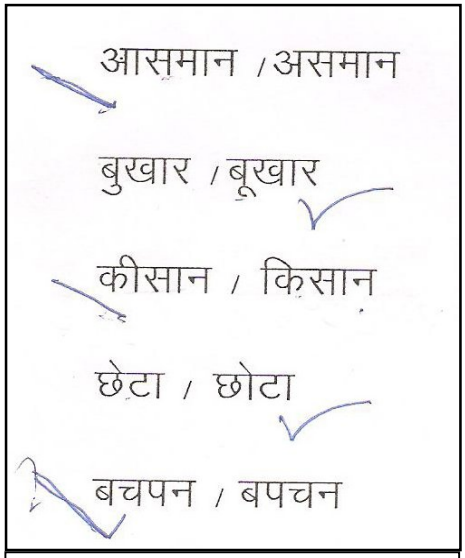
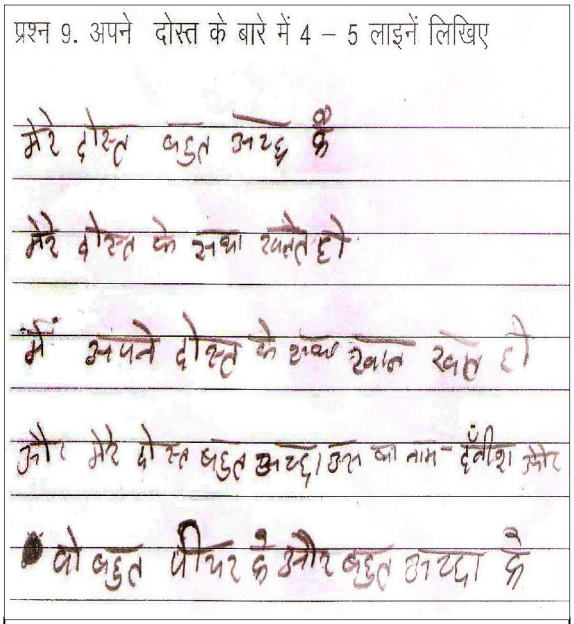


Image HA.6: Students' responses show lack of clarity regarding adjectives associated with certain nouns.
Source: Script of class IV student, Pant Nagar School



HA.7: Confusion compounded by problem in reading as reflected in the random way in which the question on spelling has been attempted.
Source: script of class IV student, Pant Nagar school



HA.8: The image highlights the way in which some students attempted the question demanding free expression.
Source: scripts of class IV student, Pant Nagar school

Urdu

An important objective of Urdu teaching is to awaken children's interest and pride in Urdu language and its rich literary legacy. Historically, Urdu was a language of Neo-Aryans (1000 A.D) and got firmed up as *'Khariboli'*, a vernacular language around Mathura region in the Northern India. During the inception phase (1000-1300 AD), it was enriched by appropriating words and idiomatic expressions from Arabic, Persian, Sanskrit and Portuguese languages. The language gained a distinct linguistic sophistication by blending local cultural traditions and disciplinary knowledge. Urdu is written in Persian script. It is different from Hindi in the sense that it does not have its own repertoire of alphabets; and its alphabets are largely drawn from Arabic, Persian (37 alphabets) and Hindi (14 alphabets). Further, it is written from right to left because of its historical lineage derived from the Sumerian tradition—languages such as Arabic and Persian belong to this lineage in which script is written from right to left.

In Urdu language, grammar is used in form and ways as it exists in Arabic, Persian and *Khariboli*. Its script is '*Nastaliq*' that gained prominence in the time of Shah Jahan, the Mughal ruler, and is perhaps the best and most beautiful way of scripting in Urdu. '*Nastaliq*' is also the way in which prescribed school textbooks in Urdu are scripted. These distinct features of grammar and script were kept in mind while framing the assessment tasks in Urdu.

Against this backdrop, learning achievement tests in Urdu for levels I and II were constructed to assess children's proficiency in Urdu in terms of basic language functions: listening, speaking, reading and writing. In addition, some formal areas of language like its syntax, sentence structure, grammar and everyday understanding of language were also looked in to. The focus of the tests was on identifying children's specific learning difficulties, common misconceptions, and their strengths.

Children's proficiency in Urdu language was also mapped around the same way as it was done for Hindi:

- Ability to listen and articulate: It was assessed through the task of listening to a story and giving answer verbally.
- Ability to read and comprehend: This was assessed through task of reading and making context-specific meaning of the given text; and answering a set of questions.
- Ability to write: This was understood through tasks that assessed functional purpose of writing as well as its imaginative and creative expression.
- Language rules and grammar: This was assessed through tasks on correct usage of words, spelling, sentence construction, singular-plural, antonyms, etc.

For the test construction, SCERT textbooks served as the reference point as they were the prescribed teaching-learning resource in the school. However, results of the pilot try out were appalling. Children lacked even the basic ability to identify alphabets; needless to say their next level competency in reading and writing was severely limited. Thus, assessment tasks were largely firmed up to understand children's emergent understanding of Urdu; and task complexity was also scaled down. For assessing

competencies in Urdu language at level-I, a test consisting of 15 items was developed. The test was given to all the students across classes- 2nd to 5th who have Urdu as a medium of instruction, or as a subject. The level II test had 22 items; and was administered to class 4th and 5th students.

For task analysis, all the competencies were collapsed into broader categories: 7 categories at level I; and 8 categories at level II. Listening, speaking, reading and writing were the broad categories of analysis .The performance of students was analyzed on each competency on the basis of a three point performance scale*: 'known'*, *' partially known'* and *'not known'*. Those, who gave correct answers, were kept in the 'known' category; partially correctly answers were kept in the category of 'partially known properly'; the category of 'not known' was assigned to those students who were not able to do the test questions. The same analysis procedure was followed at both the levels. The need for designing such a framework of analysis was necessitated by the distinct nature of processes in the Urdu language that lends itself more for marking qualitatively graded responses located on a continuum scale rather than in absolute terms of right or wrong; pass or fail.

The Urdu test was conducted in the Nizamuddin Basti School only as it offers Urdu as a language, and also a medium of instruction. The sample of participants was as follows:

	Level - I	Level – II	Total
Class II	15	-	15
Class III	04	-	04
Class IV	10	05	15
Class V	05	05	10
Total	34	10	44

Learning Proficiency in Urdu: An Emerging Picture

The data, both qualitative and quantitative projected quite a dismal picture. At level I, the elementary level, most of the 4th and 5th graders were struggling to develop even a rudimentary knowledge and understanding of Urdu. Children were experiencing all sorts of learning difficulties in: identifying, sequencing, structuring and placing of alphabets with and without '*nuqta*' (dots), with particular sign and with similar sounds; confusion in direction in which letter had to be marked; inability to recognize letters; flawed and incorrect pronunciation; improper knowledge of predecessor and successor letters. In addition, children had infirm and inconsistent understanding of small forms of letters that constrained their ability to read and write (reading of the text, bifurcation, adjoining, making words from the letters). However, oral grammatical ability of the students at level II was found to be quite reasonable. The learning difficulties assumed frightening severity in 2nd and 3rd graders; they literally had no clue about structure of language, its oral rendition and comprehensible writing was simply out of their reach.

The assessment tasks also provided an opportunity to children to self-realize their standing in Urdu. For many a children, particularly 4th and 5th graders it was both an eye opening and traumatic experience as they could figure out how poorly they have fared in Urdu, their mother tongue even at the elementary level, level I. This resulted in many of the older children from shying away or absenting themselves from taking level II test.

These very children insisted that they be tested in Hindi and Math instead of Urdu—a natural response to regain their self-esteem and confidence (In fact, only ten students took level II test, that too reluctantly and half- heartedly). Keeping in view that when children's foundational knowledge of Urdu is not secured even at Level I coupled with failing experience at level II, it was decided to merge limited insights gained from level II into level I findings for building a more informed perspective in strengthening teaching-learning of Urdu in the Basti School. Thus, data is presented in form of specific learning difficulties experienced by children and gaps in their understanding of Urdu language, rather than a level-wise analysis.

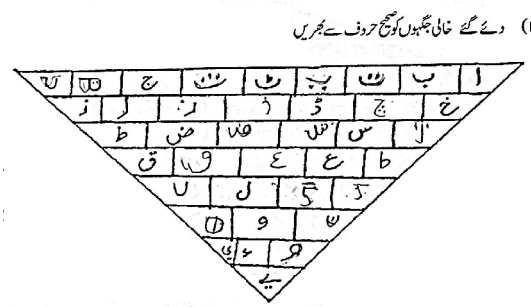
Specific Learning Difficulties

Identification of Letters

Ability to recognize words and read accurately is an essential prerequisite for reading and comprehending a given piece of text in a contextually relevant framework. It takes in to account identification of alphabets, knowledge of '*nuqta*' (dots) at proper place, identification of family of letters and recognizing letters by which a word has been formed. Almost all the students, from grade 2nd to 5th had an infirm knowledge of Urdu alphabets that crippled their ability to read and write. Not a single student in whole of the school could claim proficiency in correctly identifying and reading all the 51 alphabets in Urdu language.

The classroom observations hint that one of the reasons for non-identification of alphabets is the conventional and also the convenient way of teaching Urdu through drilling practice. Children are made to copy and reproduce randomly written alphabets from class black-board or from their text book, without building any conceptual understanding. The sheer inertness and mechanical nature of task bores and de- motivates children to an extent that they usually end up blindly copying it without giving a thought to the underlying conceptual processes. In absence of regular feedback from the concerned teacher, children's natural spontaneity to learn linguistic essentials and nuances of Urdu, their mother tongue looses momentum.

What is more worrying is that inability to identify and recognize letters persists till class 5th; thus impairing children's ability to read, comprehend and write.



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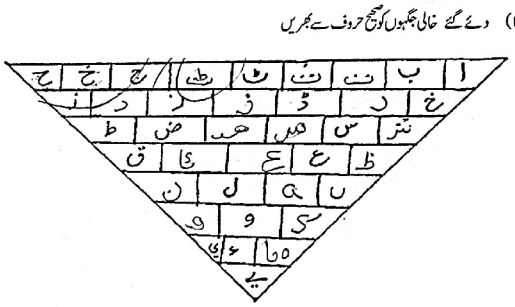

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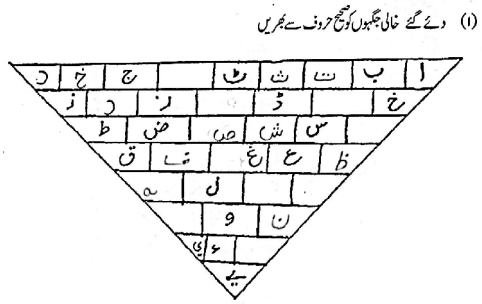

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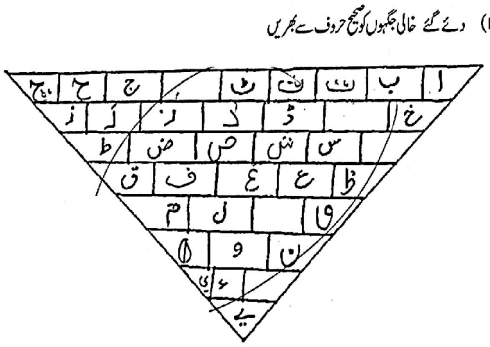


Picture: 4

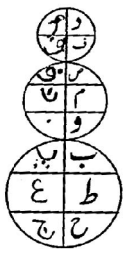
(***Picture 1, 2, 3 and 4*** shows the problem of students with identification, sequencing, structuring of alphabets. All pictures are from level I of the test.)

Sequencing of Letters

A word is a unit of language that is formed by sequencing of alphabets in a pre-ordained way. Difficulty in sequencing of the alphabets in a word emerges from inability to identify and recognize the same. Students, across the classes were not able to write the alphabets in sequence and could not identify the predecessor and successor letters because of lack of comprehensive knowledge of all the alphabets in Urdu. It was seen that they could not identify small form of letter representation which are essential for adjoining letters to form words in Urdu. This creates hurdles in reading and writing correctly. Similarly, identification of predecessor and successor letters can not be done properly, unless the complete sets of alphabets are known to the students.

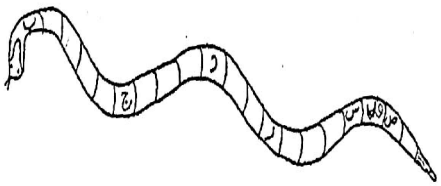
Again, this can be linked to the teacher's pedagogical practice of giving the complete sets of alphabets to the students at one go to be blindly copied or reproduced. However, the conceptual fact that Urdu language has families of letters having similar structures in writing but are differentiated on the basis of sounds and '*nuqtas*' (dots) is not duly emphasized in the course of teaching Urdu. Invariably, children are often confused in associating letters with specific pronunciation.

(۳) دیے گئے نقشے میں جو حروف ہیں ان کے سامنے آنے والے حرف لکھیں۔



Picture: 5

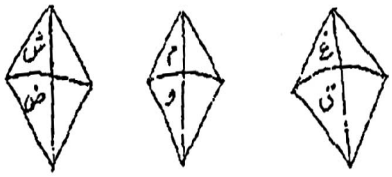
(۴) اس تصویر میں جو حرف لکھے گئے ہیں ان کے آگے اُسی بناوٹ کے دوسرے حروف لکھیں۔



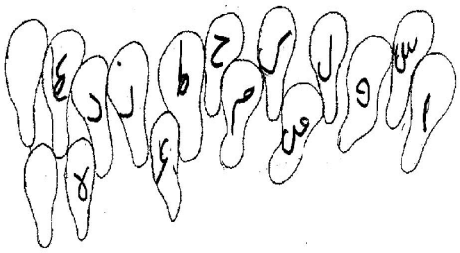
Picture: 6

(۱) دیے گئے خانے میں وہ حروف لکھیں جن پر نقطے نہیں ہوتے۔

(۵) نیچے پتنگ میں جو حروف لکھے گئے ہیں اُن سے قبل آنے والے حروف لکھیں۔



Picture: 7



Picture: 8

(***Picture 5*** shows problem with successor letters at level II. ***Picture 6*** shows problem with identification of family of letters at level I, ***picture 7*** shows problem with predecessor letters at level I and ***picture 8*** shows problem with identification of letters without '*Nuqta*' (dots) at level II)

Writing

Unlike Hindi, writing tasks in Urdu largely focused on assessing children's ability to reproduce the target words in symbolic form. The trend in poor performance continued in writing of Urdu also. Difficulty in writing Urdu stems partly from distinct nature of Urdu script: some letters are written from right to left, some are written from left to right, where as some are written from upwards to downwards; some of the letters have a merging tendency where as some are written in capital forms and do not merge with other letters to form word (s). The basic structuring and writing of letters in its correct direction remained a problem for most of them. The problem further gets complicated as most of the children were largely ignorant about writing of small forms of letters; and without knowledge of small forms of letters, words cannot be formed in Urdu. Non identification of small forms of letters makes it difficult for the students to merge letters to form words. In general, students across classes were unable to identify such letters utilized for forming words. Inadequate and unguided practice further marred children's ability to correctly reproduce structure of a given letter. Simply copying does not provide the students with the technique or understanding that is required. To illustrate, Haneef, a fifth grader could not write his name in the proper direction; he did not have any clue from where the letter should begun, further he also mixed-up writing his name in English-from right to left, instead of left to right.

Lack of thorough knowledge of alphabets, small forms of letter and merging them to make words also made written grammar difficult for students. Although, children have

a fairly reasonable understanding of simple grammar but this could only be verbally articulated. Similarly, they could construct simple sentences in Urdu but could only scribble them. Children were also stumbling in their effort to represent numerals in Urdu.

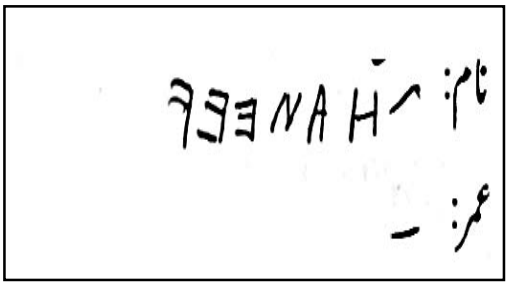


Image: 9

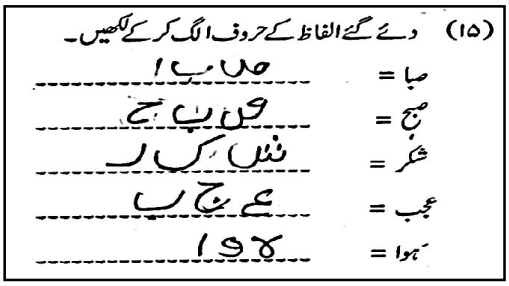


Image: 10

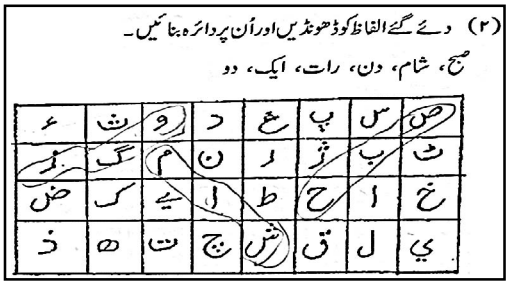


Image: 11

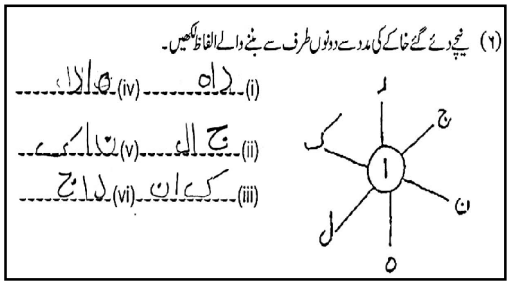


Image: 12

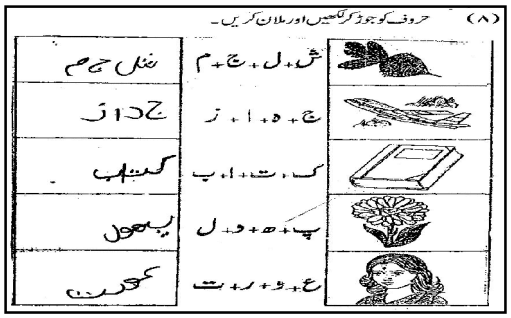


Image: 13

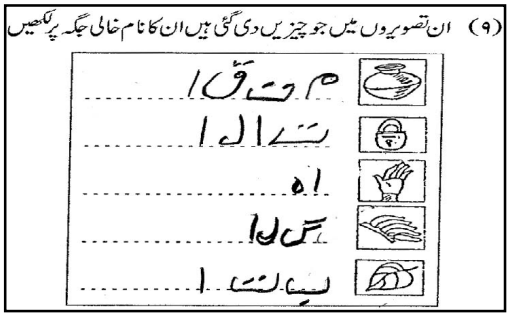


Image:14

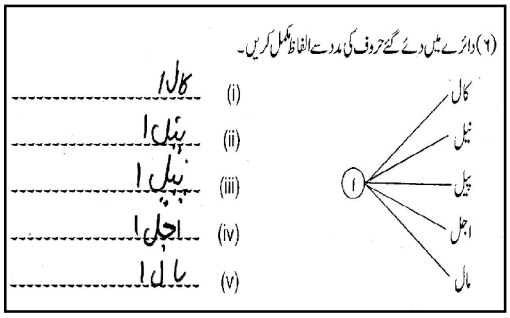


Image: 15

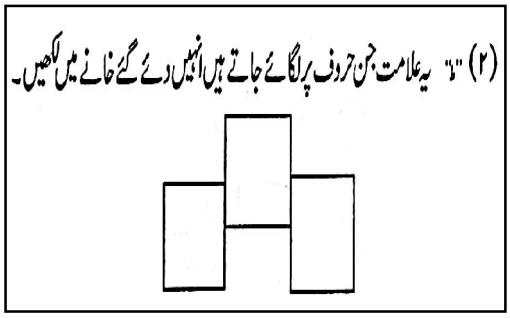
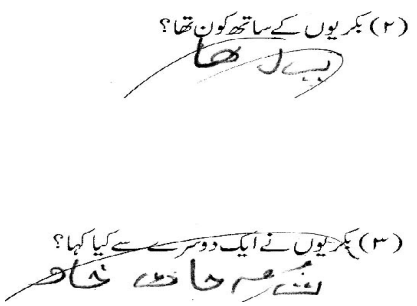
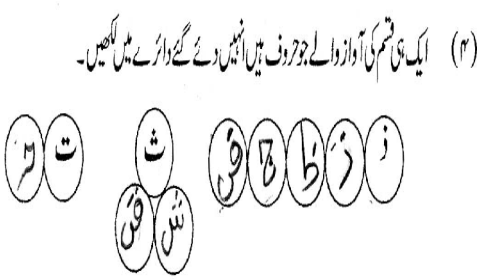


Image: 16

(***Image 9*** shows the mistake in structuring of letters at level-I, ***Image 10*** shows difficulty in recognizing letters at level- I, ***Image 11*** shows difficulty in bifurcation of letters at level I, ***Image 12*** shows difficulty in adjoining letters to form words at level-I, ***Image 13*** shows adjoining letters on the basis of cue to form words at level-II, ***Image 14*** shows difficulty in forming word at level-II, ***Image 15*** shows difficulty in words making at level II, ***Image 16*** shows difficulty in identifying letters with particular sign at level II)



Picture: 17

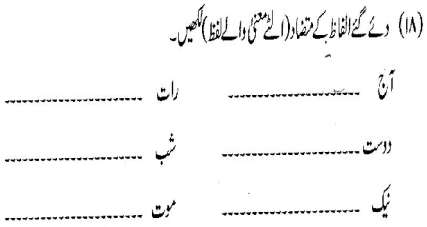


Picture: 18

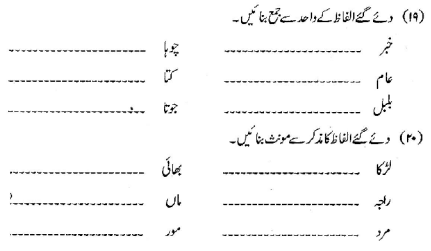
(***Picture 17*** shows difficulty in grammar at level II, ***picture 18*** shows difficulty in identifying similar sound letters at level II)

Listening and Reading Comprehension

Almost all the students showed very good understanding of listening comprehension and orally asked questions were correctly responded with clear articulation. However, children's diction and pronunciation needs further clarity. Reading skills are an important tool that enables students to be academically successful; reading is thinking cued by written language. However, most of the students were unable to read the given story and make sense of it due to their inconsistent knowledge of alphabets and small forms of letters. This reading disability adversely impacted their written expression also.



Picture 19



Picture 20

(***Picture 19 and 20*** show difficulty in noun/ pronoun/adjective/ verb/change of gender/antonym)

Concluding Observations and Suggestions for Strengthening Urdu Teaching

Statistically speaking, children in the Nizammudin Basti School had poor and improper knowledge of Urdu alphabets: 74% of 2nd, 50% of 3rd, 44% of 4th and 20% of 5th graders could not identify and internalize simple sound alphabets in its totality. The reading disability gains severity at level II as only 15% of 4th and 35% of the 5th class student had some preliminary understanding of the complex sound alphabets system; the majority are still struggling to comprehend essential nuances and complexities of written Urdu language (Table UA 1 & UA 2).

Non identification of simple and small alphabets proved to be the major stumbling block in firming up of children's writing abilities: 81% of class II, 77% of class III, 74% of class IV and 60% of class V students could not legibly write the given task at level I. What is worrying is that even at level II, 79% of 4th and 66% of the 5th graders were not able to do the written task. This shows that with increasing level of task difficulty, non-performance also intensifies.

Not even a single student from class 2nd to 4th was able to read and meaningfully comprehend the given piece of text. However, 20% of 5th class students were with great difficulty able to read level I text. Of the total sample, four students of class V made some effort in reading level II task, but faltered in it. The probable explanation is that reading of the text is contingent on the ability to correctly identify the alphabets and merging of the letters for word formation; as identification remained the major problem area, the students thus could not cope up with the reading task.

On the fillip side, children have high oral proficiency to articulate in Urdu and fairly reasonable listening ability to attend to finer linguistic details: 73% of 2nd, 100% of 3th , 40% students of class 4th and 60% of class 5th responded correctly to level I listening tasks. Similarly, at level II, 100% of class IV and 60% of class V students gave correct response. Surprisingly, class three children out performed the class four and five children. One plausible reason could be because of 'non-detention' policy, children are routinely promoted to the next class without addressing their learning difficulties.

However, these findings have to be viewed in the larger context of teachers' pedagogic beliefs and practices, socio-cultural context of Nizamuddin Basti, parents' perceptions about Urdu, and children's mental intent in learning Urdu. In parents' interview it emerged that they want their children to pursue schooling in either Hindi, or in English medium: Hindi, for sheer logistic reasons—admission to class 6th is assured in any government secondary school; the same does not hold for Urdu medium children. Parents also expressed their desire for making English the medium of schooling as they think it is the language of higher-college level education, for becoming computer literate, gaining any decent job and in general, social status attached to speaking of English. Parents also perceive that Urdu in today's time is linked to limited economic opportunities and moreover it can be learnt at home or at *Madarsa.* Children in the Nizamuddin Basti School also seconded their parents' views. They simply want to obtain working knowledge of Urdu for largely reading Holy Scriptures and to communicate in Urdu. This to some extent explains children's low motivation and lack of interest in learning Urdu seriously.

The other coordinate of poor performance in Urdu can be traced to teachers' pedagogic beliefs and practices. In Headmaster and teachers' interviews it clearly emerged that they do not hold children and their families in high social esteem, denigrate them and perceive that children of such social lineage are intellectually incapacitated to gain much from schooling. Steered by this social construction that the Basti children are 'dull', 'dumb', 'lazy', and 'passive', teachers have adopted the pedagogic practices that tend to reinforce social identity of these children: Mechanical rendition of lessons; directing children to passively copy the lesson as developed on black-board without clarifying the underlying conceptual rationale; near absence of

'hands-on' experiences and interactive learning situations; ignoring children's specific learning difficulties; no regular feed-back to children on their performance; and in general building a classroom culture that does not excite children to think and apply knowledge constructed by them. All these measure further de-motivate children and they lose their zest to learn Urdu.

Taking cognizance of undercurrents and dynamics underlying teaching-learning of Urdu, a slew of strategic measures should be adopted to strengthen children's performance in Urdu. These measures have to be designed while keeping in mind that there is a growing demand for English as a medium of schooling; and knowledge of Urdu is being largely seen as a cultural symbol, a language of religious, and to some extent literary discourse. Two distinct area around which efforts may be centered are: one, teachers' perceptions and beliefs; two, teachers' pedagogic knowledge of Urdu. Teachers should be sensitized towards learning needs and aspirations of the Basti children through seminars and workshops. Through such forums, social stereotypes about learning potentialities of disadvantaged children should be deconstructed; and a positive shift in their mindsets should be realized.

The study findings also hint at teachers' inadequate understanding of nuances of Urdu language and meaningful ways of enacting in the classroom. Some of the broad areas around which concerted efforts can be organized are:

- Sensitization of teachers towards the students and the community since language usage flows from community, dialects and culture
- Teaching-learning strategies which are effective with primary school learners
- Understanding of nuances of Urdu as a language and issues involved in its teaching and learning
- Preparation of interactive teaching-learning resources which augments emergent understanding of Urdu
- Diagnosing learning difficulties in Urdu and evolving strategies to deal with them

These measures will enable teachers to engage themselves more meaningfully in the teaching- learning processes, build their confidence, and deconstruct the preconceived notion of the learners and their background. It will also enrich them with the constructive ways of teaching linguistic basics in an interactive manner as traditional methods of teaching of Urdu are not only boring for children but also distracts and build negative feeling towards the subject.

Some of the pedagogic ways that are specific and effective for teaching Urdu to elementary learners are:

- For better and efficient learning of Urdu, 'classification of letters on the basis of family' is an important step. Family of letters can be made according to the readiness level, learning background, and needs of students. As there is no fixed way of organizing alphabets, one of the suggested ways is bifurcating alphabets on the basis of : group of families (e.g. '*bay*' '*jeem*' '*daal*' '*ray*' '*seen*' '*swad*' '*toe*' '*ain*' '*fay*' '*kaaf*' '*ye*') as well as nuclear family (e.g '*alif*' '*laam*' '*meem*' '*noon*' '*wao*' '*hay*'); direction of letters such as left to right (family of

'*bay*' and so on), right to left (family of '*jeem*' and so on), top to bottom (family of '*kaaf*' and so on) and bottom to top (family of '*swad*' and so on).

- As weak and inconsistent understanding of 'small forms of letters' is the major stumbling block in Urdu reading and writing , all those letters that have short forms should be regularly practiced according to the family categorization. This will enable learning short form of alphabets in minimum time. While teaching the short forms of alphabets to the students, families of letters should be taken sequentially so that conceptual rationale underlying sequencing of letters is correctly grasped and understood by students. This approach will also help in identifying the predecessor and successor letters easily.
- Word-formation was another difficulty area. A thorough understanding of 'merging of letters' is an essential prerequisite for correct word-formation. Therefore, it is suggested that at least two families should be taught simultaneously to form two or three lettered simple words, e.g. '*ab*', '*ba*', '*aap*', '*bap*' and so on. This can then be further extended to other families for word formation and expanding vocabulary.
- Proper representation of sound is very important in Urdu. Since pronunciation remained another problematic area where students had made mistakes, it also requires attention. There are 14 'compound letters' in Urdu which have been borrowed from Hindi sounds. Compound letters should be taught after teaching of simple sound letters. To teach the compound letters such as '*bha*' '*dha*' '*dhha*' '*kha*' '*thha*' and so on, separate practice is needed as two sounds have been merged to make one sound and utilize '*do chashmi hay*' from Urdu alphabets. Similarly, 'Vowel Points' are the half aspirated sounds and work as activators of sounds. Without them no words can be formed. If the vowel points are changed, the meaning gets changed. For example '*gul*' means flower, '*gal*' means talk, '*gil*' means soil. The structure for writing these words in Urdu is the same, separating it with vowel points only. Therefore, regular practice of the 'vowel points' is very important for the formation of words in Urdu language. Such words should be identified according to the levels and then be practiced.

Adequate attention should be made in the area of 'similar sounding letters' in Urdu such as '*alif*' and '*aien*', '*tay*' and '*toe*', '*zaal*', '*zay*', '*zwad*' and '*zoe*'. These letters should be highlighted and taught specifically. For teaching such letters, practice in speaking and writing is necessary. Similarly, some representations of sounds which are not common in Hindi and English exist in Urdu as 'independent sounds'. These include for example '*khay*', '*sheen*', '*fay*', '*qaaf*' and so on. Such letters need to be practiced in speaking and writing. Pronunciation of similar sound or different sound letters and words should be taken simultaneously with teaching family of letters. Special emphasis should be given on the pronunciation of similar sound letters.

- Writing was other significant lacunae in children's understanding of Urdu. The Assessment Study clearly established that weak knowledge of alphabets coupled with unfamiliarity with the small form of letters' representation had an adverse impact on children's reading and writing ability. It is suggested that learning how to merge and bifurcate letters into words and words into letters will rectify and solve the problem to a large extent. Adequate knowledge of simple sound letters is equally important. Simple sound alphabets in Urdu have dual nature i.e. having a merging tendency and a non-merging tendency. The merging tendency letters have short forms with an exception of sound '*toe*' and '*zoe*'. The non-merging tendency letters (e.g. '*alif*', '*daal*', '*ddal*', '*zaal*', '*ray*', '*rre*', '*zay*', '*zzay*', '*wao*') have no small forms and they neither merge with themselves, nor with other letters to form word (s). However, other letters may merge with them to form word (s).

Table UA1: Presents the Performance Analysis of Students (in percentage) in URDU: Level-I for Classes, II, III, IV and V on Seven Competencies

S.No	URDU - Level 1		Class 2nd			Class 3rd			Class 4th			Class 5th		
	Competencies	Q.No.	Combined			Combined			Combined			Combined		
			K	PK	NK	K	PK	NK	K	PK	NK	K	PK	NK
			N = 15			N = 4			N = 10			N = 5		
1.	**Identification of Letters**		**4**	**22**	**74**	**0**	**50**	**50**	**0**	**56**	**44**	**0**	**80**	**20**
1.1	identification of alphabets	**1a**	7	0	93	0	0	100	0	20	80	0	80	20
1.2	knowledge of Nuqta at proper place	**1d**	7	80	13	0	100	0	0	100	0	0	100	0
1.3	identification of Family of letters	**4**	0	7	93	0	100	0	0	100	0	0	100	0
1.4	identification of letters by which word has been formed	**2, 10a**	3	0	97	0	0	100	0	5	95	0	40	60
2.	**Sequencing**		**7**	**18**	**76**	**0**	**33**	**67**	**0**	**33**	**67**	**0**	**67**	**33**
2.1	sequencing of alphabets	**1b**	7	0	93	0	0	100	0	0	100	0	0	100
2.2	identification of successor letters	**3a**	7	53	40	0	100	0	0	100	0	0	100	0
2.3	identification of predecessor letters	**5**	7	0	93	0	0	100	0	0	100	0	100	0
3.	**Writing**		**9**	**10**	**81**	**8**	**14**	**77**	**13**	**14**	**74**	**19**	**20**	**60**
3.1	structure of Alphabets	**1c, 3b**	7	67	27	0	100	0	5	95	0	40	60	0
3.2	identification and writing of small Forms of Letters	**6a**	0	0	100	0	0	100	0	0	100	0	0	100
3.3	merging tendency in letters	**7, 9b,13a, 13b**	0	0	100	0	0	100	0	0	100	0	10	90
3.3	independent tendency in letters	**6b, 9a, 12**	7	0	93	33	0	67	33	0	67	33	13	53
3.4	writing words on the basis of pictures	**11**	50	0	50	25	0	75	50	0	50	60	0	40
3.5	writing brief answers	**15b**	0	0	100	0	0	100	0	0	100	0	20	80
3.6	bifurcation of letters	**10c**	0	0	100	0	0	100	0	0	100	0	40	60
3.7	structure of Alphabets	**1c, 3b**	7	67	27	0	100	0	5	95	0	40	60	0
4.	**Speaking**		**38**	**37**	**25**	**50**	**25**	**25**	**20**	**55**	**25**	**30**	**45**	**25**
4.1	pronouncing of Letters	**1e, 10b**	3	47	50	0	50	50	0	50	50	0	50	50
4.2	answering questions orally	**14b**	73	27	0	100	0	0	40	60	0	60	40	0
5.	**Counting in Urdu**	**8**	**0**	**0**	**100**	**0**	**0**	**100**	**0**	**0**	**100**	**0**	**0**	**100**
6.	**Listening Comprehension**	**14a**	**73**	**27**	**0**	**100**	**0**	**0**	**40**	**60**	**0**	**60**	**40**	**0**
7.	**Reading Comprehension**	**15a**	**0**	**0**	**100**	**0**	**0**	**100**	**0**	**0**	**100**	**0**	**20**	**80**

K= Known, PK= Partially known, NK= Not known

Table UA2: Presents the Performance Analysis of Students (in % age) in URDU: Level-II for Classes IV and V on the Eight Competencies

S.No	URDU - Level II		Class 4th			Class 5th		
	Competencies	Q.No.	Combined			Combined		
			K	PK	NK	K	PK	NK
			N = 10			N = 5		
1.	**Identification of Letters**		**15**	**75**	**25**	**35**	**55**	**10**
1.1	without Nuqta	**1a**	20	80	0	0	100	0
1.2	with Nuqta	**3a**	0	100	60	20	80	0
1.3	with particular sign	**2a**	40	20	40	100	0	0
1.4	with similar sound	**4a**	0	100	0	20	40	40
2.	**Sequencing**		**0**	**30**	**70**	**20**	**45**	**35**
2.1	sequencing of alphabets	**1b**	0	60	40	0	100	0
2.2	sequencing of letters with one Nuqta	**3b**	0	60	40	0	60	40
2.3	sequencing of letters with particular sign	**2b**	0	0	100	80	0	20
2.4	sequencing of similar sounding letters	**4b**	0	0	100	0	20	80
3.	**Writing**		**7**	**14**	**79**	**7**	**27**	**66**
3.1	structure of alphabets	**1c**	0	100	0	0	100	0
3.2	finding missing letters	**5**	0	0	100	0	0	100
3.3	joining letters to form words - merging tendency	**7,11,14 b**	0	0	100	0	20	80
3.3	joining letters to form words- independent tendency	**6,14a**	50	0	50	50	10	40
3.4	forming words on the bases of pictures	**8b, 9 ,10, 12b,13b**	0	0	100	0	20	80
3.5	answering Questions in written form	**21b**	0	0	100	0	20	80
3.6	bifurcation of 3 Lettered Words	**15**	0	0	100	0	20	80
3.7	structure of alphabets	**1c**	0	100	0	0	100	0
4.	**Recognizing Pictures**	**8a, 12a, 13a**	**100**	**0**	**0**	**100**	**0**	**0**
5.	**Grammar**		**0**	**8**	**92**	**0**	**20**	**80**
5.1	noun/verb/preposition	**16**	0	40	60	0	20	80
5.2	Adjective	**17**	0	0	100	0	20	80
5.3	Antonyms	**18**	0	0	100	0	20	80
5.4	singular/plural	**19**	0	0	100	0	20	80
5.5	Gender	**20**	0	0	100	0	20	80
6.	**Reading Comprehension**	**21a**	**0**	**0**	**100**	**0**	**20**	**80**
7.	**Listening Comprehension**	**22a**	**100**	**0**	**0**	**60**	**40**	**0**
8.	**Speaking**	**22b**	**100**	**0**	**0**	**0**	**40**	**0**

K= Known, PK= Partially known, NK= Not known

The teacher should draw children's attention to these finer nuances of the language and keep on focusing on the same while teaching. An ample practice of such letters should be given to students to further strengthen children's linguistic foundations. Another observation was that as children are concurrently learning English, Hindi, and Urdu writing, their emergent knowledge in all the three languages tend to get mixed-up. For instance, most of the students have written the capital form of letters even while merging the letters to form words. In English, the first letter of each word remains in a capital form where as in Urdu in contrast, the last letter of each word remains in capital form. A regular practice in mixing of letters, merging and bifurcating letters will reduce the frequency of writing errors.

The other general suggestions for supporting Urdu teaching-learning are:

- Teaching of numerals, simple sentences and dictation of small sentences will strengthen the writing power of the students. For imagery level testing, students should be given tasks such as name of flowers, name of fruits, and name of birds and so on. Text book reading should be done after teaching simple sentences. Additional books of the same difficulty level may also be used. Grammar should be taken simultaneously while the reading of the text begins. It should begin simply from speech and its parts, synonyms, antonyms, genders, numbers, phrases and so on. Language practice should be integral to all Urdu classes.
- Teacher primers and work sheets for language practice in Urdu must be specifically developed and used. The grills and slabs in the school building may be utilized as a teaching tool for teaching Urdu in the same manner as they are used for other subjects. The Urdu section should be held separately for further advancing language development. Additional scaffolding in form of in-house remedial teaching is necessary for bringing students to a satisfactory level. Poetry, recitation, book reading, enacting simple plays in Urdu should be the other curricular activities for restoring children's confidence in Urdu.

Chapter 3
Classroom Practices and Processes

The previous section provided a detailed understanding of achievement levels in Mathematics, Hindi, and Urdu across classes in both the schools in terms of children's competencies and specific learning difficulties experienced by them. It was but logical to link student-performance to school practices and processes to develop an insight in to how the classroom learning environment is built up, teachers' methods of engaging the learners, their understanding of the curricular subject and its pedagogy, teachers-students relationship, nature and use of teaching learning resources and ways of classroom management-all dialectically interact to influence children's thinking and learning.

In this limited ethnographic study, data were collected at the levels of organization of classroom practices, pedagogical beliefs of teachers, and curriculum as enacted and experienced by learners. A transcript of the language of classroom transaction yielded an insight into the processes of communication, both verbal and non-verbal, through which meaning is conveyed and negotiated. Each lesson observation session was followed by an interview with the concerned teacher to probe into wider aspects of his/her views on children's thinking and learning. We recorded and collected examples of children's work. Thus collated observations were written into analytic vignettes which are interpretative accounts of children's positioning within specific school practices.

Classroom observations were done in both the schools through formal and informal processes. The basic idea was to capture the processes as they unfold naturally. In the formal observations, Mathematics, Hindi and Urdu classes were observed for the entire duration of the teaching period. Care was taken to ensure that representative and adequate number of classes was observed in each subject in both the schools. At an informal level, wider observations regarding school culture and classroom dynamics were collated whilst administering achievement tests. Thus, an informed perspective about school practices and processes was built by considering:

- actual and verbatim account of classroom discourse and processes
- teachers' pedagogic beliefs and practices
- school culture as specific to each of the two schools

As the larger objective was to understand how school culture, teachers' perceptions and ways of teaching shape children's thinking and learning, the present chapter is organized in to two sub-sections: The first sections focuses on the classroom discourse and processes, and the overall school culture and dynamics; the second section is on the views and perceptions of the headmaster and teachers.

What the Classroom Observations in Mathematics Revealed

Lower Primary Classes

In the mathematics classes observed in both the schools, the relationship between the teacher and the students emerged as a crucial factor in determining the nature of children's engagement with mathematics in the class: Wherein the teacher were seen to be freely interacting in the classroom with her students, learners came across as relaxed, motivated and as equal partners in constructing classroom discourse; wherein the learning environment was regimented and strict, learners were passive, reclusive and largely disengaged from classroom processes.

With regard to ways of teaching, the predominant classroom activity was children copying down numbers and tables from either the blackboard or the book. The entire period was spent doing this. The only interaction between the teacher and her class-three students was when she gave instructions at the beginning of the class, *"look at the blackboard, and correctly copy the questions"*; and towards the end, *"do the first questions of exercise 2.3 in your note book".* An interesting observation from the Basti School: whereas students' notebooks showed that they had written numbers up to 1000, however, on probing, children confessed that they did not have much numeral knowledge. The level I achievement test validated the observation; children indeed lacked advance numeral knowledge at the third class. This mindless exercise was perhaps the teacher strategy to keep children busy so that she in the meanwhile attends to the other chores. No effort was made to energize classroom proceedings by bringing in either appropriate teaching-learning resources or children's experiential knowledge; or ensuring that children have been able to comprehend what they had copied from their books and the blackboard. The classes were thus characterized by mechanical learning, representing a traditional classroom structure where each learner continues to sit at his or her seat quietly, albeit passively and do what he/she is directed to do. Most the mathematics classes in the Basti School reflected this pattern.

Many such accounts of regulated classroom discourse were documented. These accounts reveal that the major aim was to didactically convey a mathematical concept and let pupil practice as much as possible. Drill and memorization were the mainstay strategies to enable students acquire procedures – recipes for step-by-step solutions to mathematical problems – without understanding their conceptual rationale. It is shaped by the pedagogical belief that pupils should be presented with propositional facts,

Box 3.1: Pant Nagar School, Class II-Math

The class started with a game in which students were called to the teacher-desk in front of the class and then blind folded. The student was given a set of objects such as a duster, chalk, pencil, eraser in his/her hand which he/she was required to recognize. Whenever a student was able to recognize the object correctly, the rest of the class was asked to clap for him/her. The activity was interspersed with questioning about different shapes and students were encouraged to identify the other shapes around them as well.

The concept of protractor as an instrument to measure angles was also introduced in the class. The teacher introduced the concept of shapes and corners according to the readiness level of the students.

Students were actively involved in the class and paid attention to the teacher. There was an eagerness to learn and participate in classroom processes.

principles, and rules of action which are to be learned, memorized, and then applied. Knowledge is largely a factual matter that is simply to be 'listened to' or 'absorbed'.

In contrast, in some classes, in the Pant Nagar School, such as the one described in the Box 3.1, the teacher and students were seen to be active and co-partners in the classroom processes. The students showed a level of excitement at being a part of the classroom proceedings and there was a general environment of cheerfulness and motivation to learn. The classroom did not fit into the traditional structures of discipline and orderliness, there was noise and movement but they were both productive as the learners were actively involved in doing the tasks and enthusiastic to learn. The teacher was resourceful in using readily available material such as dusters, pencils, pencil boxes, erasers, etc as TLM which helped to generate curiosity and interest in students.

From the classes observed in the two schools, it seems obvious that classroom processes and teachers' notions of how children learn and their understanding of teaching methods have a direct influence on the learning achievement of children. Where the teacher presumes that students need only to learn through rote, students find mechanical methods of learning to be dull and boring and tend to lack interest in learning. In such situations, it seems safe for the student to sit still and follow instructions unquestioningly. Such practices have promoted a culture of silence, allowing students to spend their time in school without learning, as long as they are not troublesome to the teachers. On the other hand, where teachers ensure active involvement of the students in the class, by linking classroom content to what children see in their world around them, a culture of learning is developed, ensuring that each child in the class is an equal and active partner in building classroom discourse. Difference in teachers' ways of organizing learning experiences in math reflected in student-performance across the two schools; the Pant Nagar School children outperformed the Basti School children in their basic number knowledge and understanding.

The focus of mathematics at the lower primary level (classes I, II and III) is to ensure that children are able to develop a fairly reasonable knowledge and understanding of numbers, basic mathematical operations, shapes and measures. Further they should be able to link the mathematical concepts they develop through school learning to their everyday life experiences. It therefore would not just be significant to know, for example, that the number 'eight' is represented by the symbol '8', as it would be to know *how much* is eight? Similarly, emphasis needs to be placed on understanding the applicative aspect of mathematical operations. Where and why particular mathematical operations (addition, subtraction, multiplication and division) are used; conceptual rationale underlying them; and computational accuracy in performing these operations should be emphasized. To do so, it is imperative to hold children's intuitive insights and experiential knowledge valid and give it a legitimate space in lesson building.

Upper Primary Classes

The classroom observations at the upper primary level (class 4th and 5th) hinted at varying teachers' pedagogic perceptions associated with educability of socially disadvantaged children and corresponding ways of teaching them.

Box 3.2: The Basti School, Class IV-Math

The teacher entered the class and instructed the class to keep quiet. She then sat at the teacher's desk and asked all children to memorize the multiplicative tables. She then asked each child to take turn and recite the tables to her. This was interspersed by frequent instructions to maintain silence in the class. A child who was not able to recite the table was slapped; was made to stand in a corner for memorizing the table. Towards the period-end, the teacher solved a few questions involving basic mathematical operations on the blackboard and asked students to copy them in their notebooks.

The classroom episode in Box 3.2 is an illustrative account of 'multiplication' as enacted and experienced by the Basti School children. In the class described in the box, children were not allowed to interact with each other, to seek clarifications, or even recite tables to each other. It is worth noting that children in class IV are struggling to remember the multiplication tables of 2, 3 and 4. Children were finding the act of memorizing tables a dull, boring, and a routine task; nothing intellectually challenging and interesting. The children were unable to understand meaning and context of the numbers that they were rote memorizing. After the teacher left, the children started asking the researcher, *"Why would two nines be eighteen?"; "Why is product of a number multiplied by zero is zero?"* earnestly seeking clarification to their unaddressed doubts. Perhaps the teacher held that memorization is the only way of teaching something to socially disadvantaged and hence intellectually incapacitated children. In teachers' interview it indeed emerged that most of the Basti teachers perceive that these children cannot gain educationally.

An imminent need is to question the validity of such pedagogic practices which fail to bring spontaneity, enthusiasm, curiosity or joy to the children's sense of inquiry and are not tenable as the basic assumptions of how children learn. Why are children compelled to experience pedagogic practices which consider them as inert and unable to construct meaning on their own?; Why should learning be rendered into an act of boredom for them?; Why should mathematics be rendered into a fear inducing subject? These are some of the issues that need to be seriously raised and addressed.

Of equal significance is the fact that the teaching learning process put into place by the teachers also did not take into account the social, cultural and educational context of students and their educational needs. In fact, the classroom processes seem to be working independently of the children's background. Most mathematics classes in the school embodied these characteristics.

In the Pant Nagar School, it was observed that the teachers often took up activities such as relaxation exercises at the beginning of the class to create a positive ambience for learning. These activities were more common for classes held after the mid day meal distribution. To ensure that all children participate in the classroom processes, some students were asked to come and solve questions on the board while the others solved them in their notebooks. For introducing a new concept, such as decimals and

mathematical operations on decimals, students were encouraged to bring examples from their everyday life such as buying things and then they were meaningfully linked to mathematical principles. This helped students to link classroom processes to their life outside the school. However, in many instances, students were not given a chance to share their own experiences and perceptions in the classroom. This may have been due to shortage of time in completing a topic. In one of the classes observed, the teacher ensured that each and every child in the class of twenty five students got a chance to solve atleast one question on board. Such strategies are reassuring, especially for the weak children that they are equally important and are being 'counted in' building of classroom discourse.

An emerging conclusion is when teaching-learning practices are largely geared to rote memorization and drilling practices, children tend to become inert, reclusive and lose interest in the subject. What is worrying is that these curricular experiences not only induce passivity and blind acceptance to authority, but convey implicit messages to children that lower their self-esteem and identity. Children who experience such school processes may come to accept future positions in which 'seem appropriate' to their social class, gender and ethnicity. Their future opportunities and rights as individuals might thus be limited by school practices. In contrast, where the teacher makes a conscious attempt to build an environment conducive to learning, link content to children's lives and ensure classroom participation of each child, children tend to be actively engaged in constructively contributing to building of classroom discourse , enjoy the subject and process of learning it. They are likely to become self-critical, reflective and life-long learners capable of taking a position and cogently articulating their views on an issue.

What the Classroom Observations in Hindi Revealed

In this section, observations of some prototypical Hindi classes at the lower and upper primary levels are discussed in terms of classroom processes, as they were enacted and experienced by children.

Lower Primary Classes

Class II, The Pant Nagar School

The class II had 34 students. The teacher initiated the class by asking some questions from the students; most of the learners sat motionless. Some 'fill in the blank' statements were written on the board, which the children copied quietly in their notebooks. Then the teacher opened the textbook from which she read out a story. The class kept listening. Surprisingly, the students had their textbooks in their bags. After reading a couple of lines from the text, the teacher posed some routine questions. The students maintained their silence, leaving the teacher to answer her own questions. There was very little evidence of comprehension of the story.

The teacher did attempt to link the story with the students' real lives. The chapter was about a girl who finds studying a very difficult task as compared to the work of honeybees or trees and so on. Apart from small comprehension questions, the teacher kept asking questions such as "*aap logon ke padhai aasan lagti hai ki mushical ? (Do you find studying easy or difficult?)* ?" , or "*bade ho kar kaun kaun teacher banana chahta hai?*"

(*Who all want to be teachers when they grow up*?) These questions evoked a lot of response from the students who were quiet earlier. The teacher sometimes asked specific students to respond to a question. She rephrased her questions in different forms of language expression to elicit response from the students. The focus of teaching was on the comprehension of the story. The teacher was supportive and her tone was friendly. Occasionally, she tried to crack jokes in the class to put those children at ease who were a little hesitant while answering. The overall atmosphere seemed conducive to learning. It was a relaxed and cheerful class.

After a brief discussion about the chapter, the teacher wrote the questions and their answers on the blackboard for children to copy, which children did sincerely. At a time, one question and its answer were written. All children were focused on completing their task. They were discouraged from talking to each other or asking each other for help. Occasionally children were scolded for being inattentive, or talking to each other. They were asked to approach the teacher for any kind of help they might need. The teacher alternated between sitting and taking rounds in order to help the students with their work. She gave them instructions regarding neatness, indentation, spellings and so on.

By linking the chapter with the personal lives of the students, the teacher brought out a sense of immediacy with the text which in turn facilitates a better understanding of it. Many a times whenever children got stuck or felt hesitant, she provided suitable scaffolding to help them arrive at the right answer. Efforts were made by her to make the class interactive. The atmosphere of the classroom was non-threatening as the teacher tried to keep the atmosphere light and focussed. Her scoldings were not harsh and seemed more like comments on children's work. By taking rounds she kept supervising children's written work. However, more questions pertaining to children's personal response to the chapter could have been asked. This would have helped evoke a better response from the class. Similarly, peer learning would have also helped in evoking a better response. By discouraging children from asking each other for help, this important tool of learning was not used at all.

But the above class was one kind of typification of teaching Hindi. There were other classes where leanings towards behaviorist patterns of learning were evident. Teachers attempted to drill things into the minds of the students by making them copy from the board, somewhat negating the semantic aspect of language learning. Adequate opportunities to use and manipulate language were not provided. Corporal punishment was also visible in the classes of some teachers.

Class II, The Basti School

In the second grade of Basti School, children of Hindi and Urdu medium were sitting together in the same class but in separate rows. Fifteen minutes after the class had begun; there was no sign of the teacher in the class. The children were sitting idle and talking among themselves. The green writing board bore the date of the previous working day.

When the teacher came, she looked for something in her cupboard. An assistant teacher also joined her. After moving in and out of classroom twice, the teacher frowningly asked the children if they have finished talking and if she now can resume

teaching. It was a ridiculous remark as this was the first time she was interacting with the children. She wrote the date on the board; and out of the blue started asking questions such as how many months are there in a year, how many days are there in a week. Most of the children appeared disinterested as they could not make sense of what is going in the class; and started murmuring among them. This infuriated the teacher; she started shouting at the learners and hit one of the students on the back with English textbook.

The teacher was the only one in the class with a textbook. Later on it was found that very few children had their textbooks with them which they had kept in their bags. Most of them did not carry it to school. The teacher wrote four words in total on the board. These words were written first in English, then Hindi and then Urdu. While writing the words, the teacher focused a lot on capitalization of letters. After writing each letter she asked for example, "*ye kaun sa wala "f" hai? Chhota ki bada*?" The teacher also asked students to identify the alphabets she was writing. Children were getting stuck here as well. For example when she wrote small 'i'on the board and asked children to identify it, the class remained quiet. After a lot of hesitation, one of the children said "i *hai*". It was evident that at the beginning of grade II children had not learned the basics of English language. Similarly the teacher wrote the words in Hindi and Urdu, explaining the use of *matra* verbally to children. As the teacher asked questions from the children only a handful sitting in front were responding. The others were either sitting silently or doing something else. After writing all the four words, the teacher asked the students to copy these words in their copy-ten times. Another observation was that the teacher erred in writing a word in Hindi; and that mistake was getting replicated in children's work.

Throughout, the general atmosphere of the class was that of disinterest, both on the part of the teacher as well as students. The teacher's attention was focused on a few children who were responding. The rest were sitting idle or getting restless. As was later observed, children had made several mistakes in copying words from the board. They had made mistakes in word formation and *matras*. These problems were not addressed in class. This also puts a question mark on the utility of such an exercise.

There was minimal interaction between the teacher and students. No dialogue between the teacher and the students ensued. It seemed that the work was being done just for the sake of it. Those children who could not write themselves should have been helped by the teacher. Instead that job was relegated to more able students of the class. This not only covers up gaps in children's learning, this also makes children learn helplessness and takes away motivation from them to make an effort. The teacher's low motivation level was underscored by her exasperation as she told children twice "*pagal kar dete ho tum loge*". In such a laid back and not so positive set up how children can learn is something that needs to be pondered upon.

Class IV, The Basti School

The class began ten minutes after the lunch break got over. The teacher came to the class and asked the children to quietly take out their books and notebooks. There were 16 students in all. She asked them to open a particular page of a particular chapter in their Hindi textbook and asked them to copy one passage from the book. As children

settled down to work, the teacher seated herself on chair getting up occasionally to see whether students were copying the passage properly or not.

Children were sitting at a distance from each other. They were not sitting in pairs as usually is the practice in classrooms. They were doing their work very quietly. Whenever they turned to look into each other's notebooks or talked to their friend, the teacher shouted at them and threatened to hit them. In a period of thirty minutes, she hit eight children and scolded them many times. Children were instructed repeatedly to copy the paragraph neatly without any mistakes. She also asked them to practice writing difficult words by writing the word many times. One of the students whose work was untidy was scolded by the teacher and told "*agli baar ganda kiya na to bahut pitai karoongi*" (I'll hit you if you do untidy work again). Nearly twenty minutes after this writing task, the teacher dictated the same paragraph to students notwithstanding the fact that they had already copied it. She read out each sentence thrice. In between, she told children how 'comma' and 'dash' are written in symbols. The meaning of these punctuation marks and their usage was never explained. It appeared as if the passage was being drilled into the minds of the students. Children seemed to be learning 'copying' rather than language skills.

Throughout the class, there was no reference to comprehension of the passage. Not a single discussion took place regarding the meaning of the passage that the children were copying mechanically. No questions were raised by the children regarding the contextual meaning entailed in the passage. During dictation it was observed that some children were hiding their notebooks from their teacher. Later on it was discovered that these children were not able to write anything that their teacher was dictating. The teacher repeated each line thrice but still they could not write a single word. They only managed to scribble a few random alphabets. This puts a question mark on the utility of such an exercise which is purely behavioristic in nature and may not result in any kind of learning especially since many of them are at a very elementary level in their language abilities. It was substantiated by the children who could not write even a single word dictated by their teacher. Further, the teacher's behavior was authoritarian throughout the class and her tone was rude. Corporal punishment seemed to be an integral part of regular classroom processes. There was no student- teacher interaction or dialogue facilitating learning. The teacher kept scolding students for each doubt they sought to clarify and for each mistake they made. All of these are antithetical to children centred teaching learning processes which are supposed to characterise educational practices at the elementary level. They also undermine the importance of a facilitative teacher student relationship as the basis for optimizing learning.

Similar practices were evident in other Hindi classes, observed at other times as well. A behaviorist approach to learning was largely adopted with the primary focus being on drilling things into the minds of the students. Students were seen either copying from their books or from the board where their teacher had done some work. In one of the observations in class III, students were made to read two letter words without matras written on the board. These words were from their textbooks. While they were reading these words mechanically, there was no discussion about the meaning of these words. They kept reading them turn by turn while the teacher sat eating snacks. In another language class, the teacher herself spelled the word incorrectly on the board. As

children passively copied 'teacher's work', that mistake was replicated by the entire class. There was no questioning. The process of engagement with the text in general was missing in all the language classes. The students and teacher did not seem to engage in a dialogue even where it was necessary. There was no sharing of meaning, explanations or perspective building. No 'student ownership' of the lesson emerged. The classroom teaching seemed remote from the contexts of the learners too. There were no linkages between textbooks, classroom teaching and learners' contexts. This was reflected in the achievement levels of students as can be seen from the tables appended.

Class III, The Pant Nagar School

A Hindi class was in progress where the teacher was sitting on her chair and the students were busy talking and playing among themselves, or copying word meanings written on the board. The noise level was considerably high due to which the teacher was losing her temper and was shouting or hitting the students.

After ten minutes, the teacher started checking students' copies as they finished their work. The students were scolded for doing dirty work or not maintaining their copies properly. As she was doing that, lots of children were sitting idle. The overall atmosphere of the class was that of disinterest and purposelessness. One child who was talking was pulled by the teacher by his sleeve, slapped and sent out of the class. Another child who sought permission to go to the washroom was told "*school mein yahi sab karne aate ho. Toilet, khana aur pani*". After another ten minutes the teacher got up to write one exercise on the board. As she was rubbing the board, a child asked her to wait as his work had not finished. The teacher asked him to shut up and said *"tere hisaab se class chalegi ab?"* The exercise was done verbally with the whole class and then the students were asked to copy it in their notebooks twice.

Throughout the class, both the teacher and the student seemed disinterested in the happenings of the class. The teacher didn't seem to be enjoying her work and looked listless. She seemed to be whiling away time. The children seemed bored and restless. The teacher-student interaction was limited to students taking teacher's permission for something and the teacher scolding them back. The students copied word meanings from the board; were not given any follow up exercise to put these words to use. So how much of it they learnt is questionable. Throughout the period, the teacher's aggression towards children was a little alarming. Whatever the reason for her bad temper, she was taking it out on students. Such a behavior on the part of the teacher can only succeed in instilling fear and disinterest towards learning which shatters the whole notion of a teacher being akin to child's guardian in school.

The classroom observations in both the schools revealed that language teaching is grounded more towards a behaviorist approach based on rote, drill and practice. The Pant Nagar School is more learners centered than the Basti School as there is a healthier student teacher interaction and a more performance oriented attitude towards learning which makes both students and teachers work hard towards achieving goals. This is reflected in the achievement levels of students. Teaching learning material is put to better use in the Pant Nagar School. Corporal punishment is meted out to students of both the schools.

Classroom is a physical and intellectual space where learners of varied abilities co-exist. In such a space, a shared meaning of texts is constructed. Each child brings her own set of experiences to the classroom; and as texts are read, children construct their own meaning out of it. In such a situation, a dialogue between teacher and students and among students themselves is required where a consensual meaning of the text is constructed. But if the teacher imposes her own meaning on children, then the democratic space of the classroom is controlled by domineering authority of teacher that children do not question which further hampers children's learning.

What the Classroom Observations in Urdu Revealed

Since Urdu is taught only in the Basti School, classroom observations were confined to one school. While many Urdu classes were observed, a detailed description of one class each in class II, and V are being provided as exemplifications of the general trend. A time wise record of what transpired in the classes was recorded as follows:

Class II, The Basti School

The class was a mix of students of Urdu and Hindi medium. Students who neither had Urdu as a medium nor as a subject were also sitting in the same class. On enquiring from the teacher, it was found that there is no separate section for Urdu medium. The class strength was of 16 students, 8 boys and 8 girls.

9: 10 am: At the beginning of the class, the teacher seated herself on a chair at one corner of the class near the window. The benches were dirty and the students were sitting unevenly wherever they could find suitable place. Most of the students were sitting idle. Some had their copies open and were scrawling to pass their time.

9: 22 am The teacher got up and went to the board. She started writing some text from the book on the board. While writing, she did not inform the students about what they were supposed to do. It was largely unreadable and hard to decipher. No teaching-learning material was utilized through out the period. After finishing the writing work, the teacher went back to her chair. No instructions were still given to the students, even though she had finished writing on the board.

9: 33 am The teacher snoozed for a while and then gave her first instruction to the students in a very soft voice. '*Ise copy kar lo*' (copy it down). Some of the students started copying the text mechanically.

9: 40 am Another teacher entered the class and started chatting with the Urdu teacher. Both of them stood near the window and talked in hushed voice till the period was over.

9: 43 am The teacher erased the board and wrote names of the days and months on it. Once again no instructions were given. After finishing writing on the board she left the class. The students did not bother to take notice of it this time; they resumed their frolicking activities.

Till recess no teacher had come to the class and the students were either sitting idle, sleeping, and playing or simply whiling away. Post recess, the strength of the class was reduced to ten students. The class that was supposed to start at eleven O'Clock could not be held on time as the teacher only made her appearance at twenty passed eleven; and that too without a feeling of guilt or regret for being late. She was unconcerned about the missing children as if it was the regular feature. No significant teaching or learning happened.

Class V, The Basti School

No teacher could be seen in the class even after fifteen minutes of the commencement of the period. All this while, a mix of class IV and V students were sitting idle in a disorderly fashion. She finally came ten minutes before the period would have got officially over. Taken aback by the researcher's presence, she started mouthing routine instructions to the students: Fifth graders were asked to practice counting from 100 to 1000; and 4th class students were asked to write all the alphabets of Urdu. Urdu and Mathematics were being taught simultaneously. Meanwhile, she corrected some student notebooks, almost in an indifferent fashion, checking nine copies in four minutes.

What was appalling was that the teacher not even once made an effort to establish some meaningful contact with students; her piercing glaze ensured that students remained seated and occupied. This strategy of 'keeping children busy' seemed to be the dominant pedagogic practice. Sadly, children were seen to be struggling even in writing alphabets and simple words; they were largely scribbling no-sense words without any clue about directionality and structuring of word. Their knowledge of Urdu counting was practically non-existent.

Students were not able to identify the letters or words written on the board or else where. Generation of new words did not take place during the observation of the class. It is also noteworthy that the combined classes of different grades are held simultaneously, something for which teachers do not seem to be particularly equipped. Two subjects were being taught simultaneously in the class due to which none of the subjects and the students studying them got adequate attention. Post lunch, the teacher was least bothered that most of the students have not come back. However, not much teaching took place in the post-lunch session also. It was obvious that 'culture of teaching' is not instituted in the school; and children are paying penalty for it. The observation is substantiated by dismal performance of children in Urdu across the classes.

Some Concluding Remarks on Classroom Discourse

These classroom accounts clearly bring out the ubiquity of 'recitation script' as the dominant pedagogic practice espoused by the teachers. The pedagogic formulation of recitation and expository teaching was justified by the teachers in their interviews. The Hindi teacher viewed it as the only way to establish routine, structure and order in a fairly large class, especially when majority of children are first- generation learners. However, implicit with in teachers espoused ways of teaching are their assumptions

and beliefs about educability of socially disadvantaged children. The Urdu and Mathematics teacher attributes poor academic performance of children to their inferior mental make-up and underprivileged family background: illiterate parents, large family-size, parental apathy, lack of consistent family income, criminal affiliations, and so on. She regards children of such uncouth lineage to be misfit in school and strongly holds that teaching these children is not going to make any difference to their life-options: "they will remain beggars, rag-pickers and petty thief, no matter what and how you teach". She often thrashes children to discipline them and maintain decorum in class. However, they also mildly conveys that 'discovery', 'activity', 'enquiry', and other learner-centered methods they learnt in their teacher-training program are simply non-realizable and futile in the 'realistic' setting of an urban slum school.

Pedagogic Beliefs and Perceptions of Teachers

An attempt was made to understand the perspective of teachers of both the schools, the headmaster of the Basti School and the acting headmistress of the Pant Nagar School through interviews and focussed group discussions with them on the following themes:

- how they define their role profile
- their notions about children's thinking and what constitute effective teaching-learning processes
- issues related to discipline and evaluation of children's progress
- their understanding of the socio-cultural background of their learners and how it
- interfaces with their capacity to learn
- their views on and experiences of their learners and PTM meetings
- measures adopted by them to create a conducive learning environment in the school

Teachers reported their role in school to be of a dual nature. While their primary responsibility continued to be teaching students in the classes allotted to them, they also emphasised having to discharge a vast load of additional administrative work. With respect to their teaching function, their role encompasses classroom teaching, organizing of co-curricular activities, games and sports and a number of record maintenance tasks related to their students.

There was a universally held perception that their work profile was very heavy and totally skewed towards administrative responsibilities which included distribution of mid day meals, medical check ups, disbursement of scholarships and other student grants, admissions and withdrawals, maintenance of fund utilization registers, student tracking systems etc to name a few. Every teacher had to undertake a major responsibility and 'deliver' as per the expectations of the government. The teachers of both the schools showed us that for a single function of mid day meal distribution, four sets of record keeping entries had to be made which consumed more than an hour per day!

Thus, teachers at both the schools were seen to be overburdened with administrative work which often proved to be a hindrance to their teaching roles. They have not been

able to synthesise both the functions into their role as yet and are also somewhat poor at time management. Some teachers in the Basti School were also seen to use the excuse of the administrative work to not teach.

In the Pant Nagar School, while the teacher also complained about administrative overload, yet they had evolved a culture and working mechanisms whereby even in their absence from the classroom for finite periods of time, students were given academic work to do or study on their own, so that learning continued to happen. This was observed by us during our schools visits. Of course the teachers felt that if a clerical or administrative cadre was set into place in each school, then their students' results and achievements would take a real upswing. Thus, there was genuine concern about how to find time and methods to discharge their primary function of teaching among all the teachers- a culture of task commitment which was part of an inherited legacy from the previous principal. There was also concern to preserve the reputation of being a 'model school'. In the Basti School the sense of belongingness and school pride are not so well developed. The Head Master can probably work towards building them up. In fact what needs to be understood is that the larger the challenge, the more satisfying it is if some positive changes take place in the school on account of teacher and Head Master inputs. Job satisfaction has to thus be re-defined as emanating from the nature of work done and coping with challenges, rather than from only the tangible rewards of being in government services, as is the case at present.

An important point relating to the role profile of teachers is what they understand the expectation of the Head Master from them to be. In the Pant Nagar School, this expectation enabled them to discharge both functions- academics and administration. In the Basti School, the Head Master has to play a more enabling role in this regard. At present the focus is more on administrative dimensions at the cost of academics. Also, he tends to be pre-occupied with systemic stressors, accounting for non-performance. In fact he was of the view that three years of election work in Delhi- Municipal Elections, Assembly Elections and Parliamentary Elections had taken a toll on his teachers. Probably some re thinking on the messages he communicates through his leadership to teachers need to be worked upon. He tends to carry strong pre-conceived notions and beliefs about the Basti community which percolate to teachers and somewhere give them a sense that no amount of work that they do will change the learning achievement levels of the students since they come from a very deprived background and their parents are not really interested in their education. When asked about the potential of the PTA to generate better school-community interface and networks, however and to change the attitude of the community, he was open to the idea. Likewise when asked whether the native, adaptive intelligence which the students of his school display in vast amounts can be tapped as resources to build up learning potential and academic standards once again he was open to the idea. Thus, there is scope for Head Master training in leadership and institution building processes, particularly with respect to the school culture and ethos.

All the teachers believe that the teaching learning process is more effective with the use of teaching learning material. Teachers at the Basti School reported that teaching aids were not available and that those that were available in school were not used as they were packed in one room because of on-going construction work. At the Pant Nagar School, teachers believed in creating an environment that supported learning. The

school has been recently whitewashed and the teachers are now ready to display hand crafted material on the walls of their classrooms. There is a visible sense of classroom pride. At the Basti School, teachers expressed the need for further training in the preparation and use of TLM, particularly in the context of the BALA intervention, given that classrooms provided a lot of spaces and material that could be used for students' learning. They had some ideas about how to use the grid squares, stone writing boards, scales etc, made through the BALA intervention, but felt that they needed training in more effective us of these spaces, especially in making them an integral part of the teaching-learning process. At present, these spaces are unutilized or at best carry students' random scribbling!

Teachers at both the schools affirmed that use of activities and play-way method improved learning. They mentioned using various activities in the class regularly to improve students' learning. However, many teachers, particularly at the Basti School expressed a need for in-service refresher courses that would help them to learn new ways of teaching and refresh what they had learnt in their pre-service teacher training programmes, especially from the constructivist perspective which they were not familiar with.

Further, teachers expressed discomfiture with the evaluation and promotion policies dealing with students. They felt that merely coming to school should not be the only criterion of promoting students to higher classes. However, rules of Delhi administration made it compulsory to promote students till class V. This created a gap between what students at classes IV and V knew and what they were required to know. Many students had a weak foundation in school subjects. This coupled with irregular attendance in classes has led to multiple levels of learning within the same class. In the Pant Nagar School, some teachers have clubbed the students of various sections of the same class together according to their achievement levels. The work is thus divided between two teachers to facilitate learning across all levels. In the Basti School, some teachers expressed the need to group students according to abilities in their classes. Although they plan to do so in the new session, at the beginning of the session they are still unsure of how they can actually organize it (more elaboration is provided in concluding remarks section).

With regard to evaluating students, teachers need to understand that irrespective of systemic policies, the classroom is their own sphere and students' progress is thus their responsibility. Exposure to process based evaluation approaches and observation profiles needs to be given to them so that they can view evaluation differently.

On the issue of discipline, teachers subscribed to both care giving and firm handling approaches. They said that while they did not really like to hit children, at times there was very little choice. They admitted to using corporal punishment when it became necessary. Their notions of a disciplined child involved him/ her coming to school on time, respecting teachers and following their instructions. Classroom observations revealed that students who did not ask questions were considered more obedient than those who did. Teachers' view of students was also influenced by what they knew of the students' behaviour outside school premises. If they found a child to be misbehaving outside school, they were quick to judge him/her to be disrespectful. At times this judgment led them to label some children as indisciplined, insincere and

useless. Such labeling led to lower expectations of academic achievement from these students. there is thus a need to address issues of labeling in terms of the repercussions they have on teacher expectancy effects. Alternatives to punishment which induce positive behaviour in children also need to be discussed. It is also significant to note that labeling and primitive discipline measures can leave indelible marks of intellectual status and low self-esteem among students which in itself is antithetical to the purpose of education.

The teachers and Head Masters have developed an understanding of the background of the students in both the schools. They are aware of their social background, their standard of living and parental occupation. Class teachers were particularly aware of the family backgrounds of the students in their class. However, they were unable to elaborate on how and why this understanding is critical to classroom processes. They did not have a notion of 'learning' being contextually embedded and still carried on with universalistic beliefs. This needs considerable attention.

Many teachers were of the view that the background of the students, coupled with parental apathy towards education was the root cause of students' low learning levels. They also reported many cases where students dropped out of school before completing class V and moved to other parts of the city or the country. In the Basti School, it was observed, that teachers were quick to label children of migrant labourers and *fakirs* as low achievers. In such cases, they used children's background as an excuse for their low achievement levels. Thus, the need for caution and teacher sensitization.

Teachers at the two schools presented contrasting views on the nature and significance of Parent Teacher Association (PTA) meetings. At the Pant Nagar School, teachers said that the PTA forms an important forum for providing feedback of children's performance, post admission orientation, and discussion of cases of low attendance. PTA meetings thus essentially served the need base. On the other hand, meetings with parents were not held regularly in the Basti School. The school principal and teachers remarked that parents often came and asked uncomfortable questions about regularity of classes and their children's learning levels, both of which were poor; secondly they carried a mindset that no amount of work done with parents in the PTA would lead to any change. This needs to be looked into very seriously. As mentioned earlier, when examples of other schools with an equally challenging community were given to them, highlighting positive changes, they then agreed to re-consider their position. The PTA records of the Basti School showed routine periodic PTAs, but the attendance was low.

Interactions with teachers have thus emphasised the need for training in three important areas. They need to be provided refresher courses in classroom management particularly with multiple levels of learning, pedagogy, and preparation and use of Teaching Learning Material (TLM). In addition, they also need to be sensitized towards community needs and contextual issues as also towards the hazards using corporal punishment for disciplining. Further, they need to be trained to perceive their roles more expansively to encompass teaching, organising co-curricular activities and completing administrative work. The trainings received by them so far have given them some stand alone, discrete skills and ideas but synthesizing them into practical

situations and integrating them into their work profile, still need attention. More issues related to teacher development follow in the subsequent section.

Concluding Observations

Some significant inferences drawn from the classroom observations across subjects and teachers interviews which reflect the school culture in general may be summarised with a related set of recommendations as follows:

- Children in every class have varying levels of competence and difficulty, but teachers' homogenise them and are not able to deal with the multi level variations. One centralized teaching task is used for all students, irrespective where they are positioned on the learning continuum. There is no notion of dividing the class into sub groups according to the learning abilities and competencies of students and engaging them in accordance with these, especially so in the Basti school. In the Pant Nagar School, there are some attempts by few teachers to cater to this. In class V, for instance, the two teachers, instead of operating with their designated sections, have re-organised their classes by student's abilities. One teacher deals with the lower ability level while the other with the higher ability level. This is a collaborative arrangement which they have evolved for Mathematics and Hindi. One teacher of class III reported using 'pairing strategy' in which one higher level ability student is paired with a lower level ability one and then collaboratively made to learn. There are a number of strategies which may be used across subjects for this and it merits immediate attention, there is a need to make this an important component of the teachers' enrichment programme and in service training. In the primary classes it is expected that there would be abundance of the activity based approach to teaching. While some classes in both the school reflected this, there were an equal number of classes situated in the tradition of rote and drill. This needs to be looked into. Further, activity based teaching requires TLM development drawn from the teachers' resourcefulness. Capacity building on this aspect is necessary. In the Pant Nagar School, some teachers showed us charts on different subjects which they had made, but TLM needs to be understood in a more expansive form to include all concrete aids and materials which augment learning. Knowledge of flash cards, abacus, stone, stick and pebble bundles, activity worksheets etc were all known theoretically to teachers in both the schools, but were not visible in practice. A clear effort needs to be made in this direction. It is also important for teachers to understand that charts are not for ornamentation and decoration of the classroom but instead a potent means of nurturing learning. They can thus be simple and teacher generated as long as they are purposeful.
- There is a wide discrepancy between the weekly plans which teachers write in their planning diaries and what they actually cover in the class. Their weekly plans have a semblance of course coverage according to the prescribed curriculum but in effect this does not happen. They do whatever they wish in their class, often very elementary aspects because of the challenge of learner diversity. This needs to be looked into urgently, since the hierarchy (spiral) on which learning is organized does not get addressed and students are likely to go ill prepared to the next class.

- There is also a wide gap between what the copies of children embody and how much they actually know which emerged clearly in the achievement tests, as well. Because of the culture of copying from the board and books in their copies, the copies show evidence of wide course and content coverage. In reality, often children are not even able to read what they have written. This brings out the need to re-orient teachers to what constitutes 'effective learning' and the different pedagogic approaches which can be used to enable it. Basic understanding of pedagogical issues, how children learn, think and make sense of the world, what the role of the teacher ought to be, etc need to be addressed in their training programmes. The pedagogic flavour of each subject needs to find space as well. Suggestions for this have already been given in the preceding section.
- Corporal punishment is used in fair proportion in both the schools, but visibly more in the Basti School. Its impact on children's motivation and self esteem is not thought about. Teachers need considerable sensitization and education on issues of discipline, classroom management, and how to create effective learning environments in their classrooms. In the Basti School, the teacher-student relationship, the classroom culture and the motivational levels of both the teacher and the students need considerable attention. They reflect a very laissez-faire approach. The Pant Nagar School reflects a more facilitative scenario which may be attributed to a cultural legacy generated by the previous Head Master who had put into place well organized systems and a culture of work and task commitment. However, the teachers here also need exposure to contemporary issues in discipline and classroom management.
- That school is a place where children's personality development takes place does not seem to be recognised or valued in the Basti School. No attention is given to their orderliness, behaviour and language and communication, manners etc. Neither are their talents and abilities appreciated and catered to. There is scant attention given to their self-esteem, attitudes, dreams, aspirations or difficulties- all of which are vital to the process of education. In the Pant Nagar School, the school culture reflects more system, order and task orientation. Teachers take pride in pointing out the co-curricular and sports achievements of their students. Children are not seen loitering around or going away during school hours. Even if there is no teacher in the class, there is a culture that children remain seated within their classes and keep themselves engaged with their books. The assembly takes place regularly, unlike in the Basti school as was observed by us and told to us by some of the children. It is important for the Basti staff to understand that however disturbed the school is in terms of infrastructural repair and renovation, all the institutional processes and systems within a school, particularly the school assembly, co-curricular activities, games and sports, cultural celebrations etc have a legitimate sanctity and serve to build attitudes, values, a sense of belongingness and opportunities for students' self expression and development. they must thus be a part of the school's culture and tradition. The leadership role of the head of the institution is vital in this. In fact, the school assembly is a very powerful institutional mechanism through which a sense of belongingness and institutional identity can be infused. The assembly also carries considerable potential for leadership development, confidence building, crativity, an attitude of secularism and most significantly teacher-student bonding.

- Likewise, co-curricular activities need to be understood in terms of their complementarity to classroom teaching. There is a generalised notion held by teachers that co-curricular activities deal with inter house, inter school and zonal competitions in fixed games and activities as is the structure followed by MCD. They need some re-thinking and re-orientation on this and actually need to know what the nature of co-curricular activities should be at this level. Many teachers in the Basti school expressed inadequacy in being able to organize cultural programmes because they felt that teachers' themselves should know how to sing, dance, act etc before they can guide such programmes. They this need training on two aspects- firstly, dispelling the myth that co-curricular activities must culminate in a cultural programme or winning of prizes and weaving in the co-curricular dimension into their role profile.
- There are a number of beliefs held be teachers associated with students' evaluation which need attention. The tendency to be guided by the promotion policy of the government has created a view that teaching and evaluation are pointless since students will get promoted unconditionally, anyways. There is thus an urgent need to re-orient them to evaluation being a feedback process and a means to help children proceed in a guided fashion in their learning. Issues related to continuous and comprehensive evaluation and formative assessment need to be reiterated and woven into their school system.
- Finally, the core of teacher training should be targeting role and work definition which is all encompassing, expansive and infuses in the teacher a sense of responsibility and accountability for making a difference in the lives of several children. The rest will automatically flow from this.

Chapter 4
The School and the Community

The Context

This section presents the perceptions of the community and children about the quality of the education system, schooling practices, curricular experiences and problems and social discrimination if any, which they face in school. Their educational aspirations and the life options envisioned by them have also been included. The community's perceptions were derived through focused group discussions and informal talks held with parents, older siblings who were also the alumni of the Basti School and other opinion makers in the community. Similarly, children's voices and views on schooling were collated through focused group discussions and informal interaction with them.

Community Profile of Nizamuddin Basti

The demographic composition of the Nizamuddin Basti community is very heterogeneous as it is constituted by socio-economically differential strata of Muslim families that have over the years kept on settling down in the area around Humayun's Tomb (Box 4.1). The Nizami families, the original inhabitants of the area claim their historical lineage to the community dating back to the period of the Sufi saint Nizamuddin Auliya, Amir Khusro and the Mughals. They regard themselves as the custodians of the historical monuments and tombs located in the Nizamuddin Dargah Complex. They have large land holdings and are economically affluent. Their children study in Public Schools and so they do not fall into the rubric of the present study.

In the post-partition period, a number of Muslim families moved from Old Delhi and neighboring areas to occupy the tenements vacated by the families that had migrated to Pakistan. These families are relatively well off, are largely in white collar jobs, have stable incomes and are housed in permanent dwelling units, the Pucca structures. Many of the Muslim women teachers in the MCD Schools in Nizamddin Basti belong to this stratum of the community.

However, in the recent past, a large number of socio-economically disadvantaged and geographically displaced families have settled in the area for better livelihood and life options. These families belong to regions as varied as Bengal, Bihar, Jharkhand, Assam and Uttar Pradesh. These migrant families live in squatter settlements along the sewer line, und the bridges, in the parks, encroaching upon any stretch of vacant land in the area. Most of them work in the informal sector as daily wage laborers, rag pickers, rickshaw drivers, cooks, painters, vegetable vendors, domestic helpers and beggars. They are not protected by labor laws, earn below the minimum wages and work under exploitative conditions. They have little access to health, education or income generating facilities.

Thus this stratum of the community faces considerable hardships in its economic survival. It has to often migrate in a cyclical pattern in search of employment and is constantly threatened with the fear of displacement on account of being the illegal

encroachers on public property. This is also essentially the population that sends its children to the two MCD schools under the purview of the present study. It is this marginalized segment of the community that AKF aims to revitalize by providing quality education, enhancing self-esteem and pride in community inheritance.

Box 4.1 : Community Profile of Nizamuddin Basti

Ethnic Composition: 91 % of households are Muslims, 8 % are Hindus and only 1 % belongs to the other religions.

Type of Housing: 81 % have pucca houses; 16 % have semi-pucca houses; Kutcha / Jhuggi comprises of only 3 % of the households.

Family Size: The average family size is 5.75 and the sex ratio is 925 females to 1000 males.

Occupation of the Households: 12 % in white collar jobs (18 % males and 5 % females); 18 % daily wage earners (32 % males and 4 % females); 16% are self employed (28 % males and 2 % females); 66 % women are home makers; 6 % are students (6 % males and 7 % females); 7 % are unemployed (8 % males and 5 % females)

Monthly Household Income: The median monthly household income is Rupees 8000/- ; 11 % have a monthly income of less than Rupees 4000/-; 11 % have a monthly income of above Rupees 15000/. The remaining others have an income between these two levels.

Source: Aga Khan Foundation

Community Views on Education

Education for economic gains

Most members of the community emphasized the importance of education for getting ahead in life, and reposed immense faith in education for liberating them from the vicious cycle of poverty, denigration and dismal livelihood options. On the basis of their lived realities, they firmly hold that an educated person can lead a dignified life, cannot be easily deceived and is more capable of judiciously sensing and handling unforeseen problems in life. It is with this emancipatory role of education in mind that the community sends their children to school. Examples of statements to this effect are reflected in the narratives like: '*Me and my husband are illiterate…he is a painter and does not get work on a regular basis…life is punctuated with uncertainties…education will at least ensure steady income and stability in the life of my children… all my three children go to school'; 'If my child is well educated, he can successfully run a shop, can do business, or can get a government job'.*

Education for enhancing social worth and self-esteem

Besides enhancing the economic outcomes of education, parents do perceive a number of other benefits accruing to them from education. For them, education is also the basis of improving one's social worth, self esteem and gaining agency. Further, education is envisioned as a potent weapon to deal with civic authorities and defend

one's rights. *'Police does not harass an educated person'; 'If you are educated, you can effectively respond to notices sent by the government'; 'Everybody respects and seeks advice from an educated person'*. Khurshida, a forty-year old house-maker, on the basis of her life experiences says '*…jahilon ke lie is dunia me koi ahmiyat nahi hai…jahil insan kisi ka bhi bhala nahi kar sakta…mere sabhi bachhe school jate hain'* (…There is no place and value of the illiterates in the world… an illiterate cannot help anyone… all my children go to school). Another mother was of the view, '*…achhi padhai bachhe ko 'aadmi' bana deti hai…padhi se izzat milti hai…*'' (Good education makes the child a good 'human being'…through education respect is earned).

Rehana, a proud mother of two high school going children holds that the social status of her family shot up when her son secured over eighty percent in the Board Examination of the Tenth class. On the other hand, Rukhsana, mother of a drop-out son feels disappointed with limited future life options available to her son and enquired about ways of re-instating her son into the education system. The research team came across many such testimonies in the course of their field work.

Interestingly, parents' educational aspirations for their girl children were the same. Tarana, mother of two daughters opined, 'shaadi *apni jagah hai aur padhai apni jagah… shaadi se padhai nahi band honi chahie*' (Marriage has its own place and education has its own… marriage should not hamper education). Sagina, a home-maker holds that in today's economically difficult times, an educated girl is an asset; her marriage prospects and life options also get considerably widened. Similar sentiments were echoed by most of the mothers. This debunks the commonly held view that in the traditional orthodox Muslim families, girls have limited educational opportunities.

Notion of 'quality of schooling'

*'Thik se padhai ho'; 'Padhai ke sath dusre kaam bhi sikhae jane chahie'; 'Bachchon ko pyar se padhana chahiye'; 'Bachchon ko jo samajh me nahi aata unhe samjhana chahiye'; 'Kam dena chahiye'; 'Kam ko janchna chahiye'; 'Khel bhi hona zaroori hai'; 'Teacher ko padhana chahiye'; 'Bachchon se pyaar se baten karma chahiye'.*These narratives illustrate that the community has a well informed perspective on what characterizes 'quality schooling'. Earnest transaction of curriculum, child friendly learning-teaching practices, teacher regularity, well maintained school building along with co-curricular activities like fine arts and sports contribute towards enhancing the quality of schooling experiences. Most of the parents were appreciative of the recent art expression workshop which had taken place in the Basti School. They were also very hopeful that with the on-going renovation of the building, the quality of education in the Basti School would improve considerably.

Hope and despair

During our interactions with the community, it emerged that the parents repose immense faith in the government school system and regard teachers as the crucial factor in maintaining quality in education, building a functional school and steering children towards a better future. As one mother stated, '*As I depend upon a doctor to heal my sick child, I depend upon a teacher to tend and educate my children'*. This dependence on teachers stems from their own limited educational capacities and their

inability to provide requisite academic support and direction to their children to succeed in school.

However, within the same vein, parents did strongly voice teachers' apathy, callousness and a dismissive attitude to the schooling needs of their children also being an existential reality. They were more vocal about lack of initiative, commitment and seriousness of the Basti teachers. One mother said, '*Basti ki madam padhati nahi hai… pant nagar me padhati hai… yahan 'kunji' mangwati hai… kunji se dimag nahi badhata hai… madam ko samjhana chahie lekin wo kunji se bolti hai yaad kar lo… teep kar paas karne deti hai… main to bas apne bacche ko nikal lungi… zindagi barbad kar di bachhon ki madamo ne to yahan*...' (Madams in the Basti School do not teach… but at Pant Nagar they do teach… at the Basti School teachers ask for *'guides'*, the help- books. The 'g*uides'* do not enrich children's mental ability. Madams should make the students understand… children are made to cheat in order to pass the examination. I will withdraw my child from the school… Madams have ruined the life of the children here).

Another mother poignantly said, '*My elder daughter was weak in studies. The teacher instead of helping her to overcome her learning disability forced us to withdraw her from the school. With nowhere to go, my daughter is doing odd jobs now'. 'Madam nahi padhati*, *mera bhai 3 saal se paas nahi ho raha hai… agar teacher padhati to kya paas nahi hota?..mera bhai padhana chahta hai'* (Madam does not teach… my brother is failing since the last 3 years… Had the teacher taught well couldn't he have passed? The teacher is irresponsible). Many similar testimonies were given by the parents, elder siblings and community members about teachers' indifference and lack of interest in reaching out to the children, especially in the Basti School. Laxity in observing timings of the school, absence of a facilitative school culture and lack of teacher accountability, were also highlighted by the community.

Masked within this anguish is the parental frustration stemming from their own educational inability to provide requisite academic support to children to succeed in school, and hence the need to rely on teachers. The community humbly expects teachers to be more responsible, accountable, co-operative and well disposed towards them. However, the teachers and the head-master at the Basti School in turn attributed low quality and poor standards to lack of parental motivation and commitment to the schooling of their children. One of the teachers remarked, '*The parents do not value education as they don't have much of it themselves…Since they don't value education, they do not put values of regularity and hard work in their children…'.* Another teacher remarked, '…*sarkar inke lie kuch bhi kare ye padh hi nahi sakte…ye shaitan ke bachhe hain …kabari wale hain…bhik mangte hain…inki guzar basar to aise hi ho jaegi…talim pakar ye kya karenge…* ' (Whatever the government may do for them, they cannot get educated… they are children of the devil …they are rag pickers, beggars, they will continue to live the same way…what will they do even if they get educated?).

The parents are not welcomed in the school. They visit the school only when specially called to sign some official papers, for receiving the government incentives like books, dress, shoes, etc. or for admitting or withdrawing their children. Even then teachers mistreat them and hold their poor economic status as the cause of the extra responsibility they get saddled with. Many members of the community complained that they did not know what their children were doing in the school and whenever they came to school to make queries, they often found children were unattended and not

studying. When they complain or ask for explanations, they find the attitude of the teachers very negative. One of the parents said '*teacher kilasti hai… kahti hai ki aap ko bulaya kisne*?' (The teacher gets irritated. She says, 'who has called you here?').

The research team observed that in the Basti School, many of the older children run away during the mid-day meal break, not to return on that day. On enquiring from the parents as to why this happens, they hold that the school system and its ways of functioning are promoting truancy among children. They said, 'teacher *se pucho ki unke bacche kyun bhage… parents ko pata nahi hota ki bachhe bhag gae…, madam kyun nahi rokti…*' (Ask the teacher why their students bunk.. Parents are not even aware that their children have bunked the school… Why do teachers not stop the children?). A mother said, 'As the teachers and the Head master come late, children have also started coming late'. However, teachers consider that children come late because of familial reasons; they assist their parents in household chores.

Thus, there seems to be a breakdown of dialogue between the parents and the teachers (Box-4.2) that needs to be urgently addressed.

Box 4.2 : Incongruences in Parents' and Teachers' Perceptions: Resolving the Parallax

In separately held discussions, parents and teachers came up with different explanations for children's non-enrollment, irregular attendance and poor academic performance.

Teachers attributed this to children's adverse home environment, deplorable living conditions, large family size, inconsistent income and migratory nature of families. Alcoholism, substance use and family's livelihood activities further denigrated the social worth of a learner. Teachers linked perceived social worth of children to their intellectual inability to gain significantly from education.

Parents painted a completely different picture. They held that the school is largely dysfunctional as teachers are apathetic to the educational needs and aspirations of their children, do not adequately address the failings of their children, teachers are preoccupied with non-school activities like election duties, engage in social name calling, and make children run errands for them such as buying their groceries, making tea, etc.

The distrust and animosity between teachers and parents have even led a family to withdraw their children from the school. To change this fault-finding and blame-passing mindset, it is suggested that linkages between the school and the community be revitalized through forums like Parent Teacher Meeting, School Management Committee, etc. These forums should not have a 'tokenist' existence but should function as vibrant bodies for collectively solving school problems and strengthening school functioning.

Source: As constructed by the team members on the basis of discussions held with the teachers, parents, community members, school alumni and AKF functionaries.

Voices of the Students

Equally strong and corroborating the views of parents were the voices of the students. What emerged by way of focused group discussions was a keen desire among them to get education for improving their social status, self-confidence, and gaining power. '…*Padhai se izzat milti hai…padhai kaam me aaegi…padhai se hamari zindagi sudhar jaegi… main padh likh kar wakil banna chahta hun…taki main police walon se logon ko bacha sakun*. ' (…through education a person gets respect… education will help us…education will enable us to lead better life…I want to become a lawyer so that I can protect people from the police atrocities). Plenty of such testimonies were found. The

community children visualize education as a means of self-development, social mobility and gaining social recognization. What is creditable is that in absence of any worthwhile 'role model', they aspire to chart a life trajectory that would eventually liberate them from their dismal social existence. They seemed prepared for this struggle.

The Basti children understand the criticality of teachers in achieving their life aspirations, irrespective of how they are being taught or dealt with. They hold their teachers in high esteem. Their deep reverence for teachers and their pedagogic practices came out in various ways: ' *Bahut achha padhate hain';Shishtachar sikhate hain'; 'Class mein games karvaye jate hain' ; 'Koi darta nahin hai. Madam se jhat se puchh lete hain'; 'School aane mein maza ata hai'; 'Madam hum logon ko protsahit karti hain'; 'Jo kamzor bachhe hain, unhe hum miljul kar padha lete hain'.* In the absence of any worthwhile educational culture in their homes, children are largely dependent upon the school for their academic gains. It is in this context that even a little effort by a teacher is held valuable by them. They enjoy coming to the school and being a part of its schooling processes. They appreciate the on-going art activities in the school and felt proud when their work was displayed on the bulletin board.

The confidence with which the children, particularly the girls were able to speak aloud and freely articulate their life views was quite heartening. All of them expressed a range of career options which they aspire for: Police, army, pilot, teacher, business, chef in a five star hotel, pursuing higher studies, etc. To support their claim, children kept showing us their notebooks as proof of their educational zeal and earnest efforts to realize it. It was quite evident that they perceived education as a means to accomplish their life aspirations and also an instrument to improve family's social worth and to augment its income. The children understand that it is an uphill task and they have to struggle hard, more than their economically better-off fellow students. Regularly attending the school, sincerely doing assigned learning tasks and studying at home are some of their ways for negotiating challenges of schooling in an urban slum.

On the other hand, some of the children did voice their humiliating schooling experiences, albeit in a hushed tone. They were often made to feel 'dull', 'unintelligent', 'uneducable' and 'unwanted' by their teachers. They were also asked to do errands for teachers, do menial jobs and were occasionally subjected to physical punishment. We observed Salma, a third-class student in the Basti School. She sat at back of the class with the stoned expressions. On probing, she said, '*Mun nahi lagta, samajh mein nahi atha'*. Negotiating irrelevant curriculum, uninspiring classroom experiences, discontinuity between her lived reality and school knowledge and sheer boredom pushed her to disengage from classroom proceedings. 'Teacher favouritism' was also reported as another discriminatory form of the classroom practices. One of the students remarked, *'Teachers favour those students whose families are able to provide academic support to them by way of tuitions'.* However, no significant evidence of gender discrimination was found.

Concluding Observations

The community in the Nizamuddin Basti aspires for quality schooling experiences for their children and has an informed perspective on what constitutes quality education. To a large extent, education is envisioned by poor parents as a way to enhance their social status and self-esteem, as a means to upward occupational and social mobility, and to gain economically. They further hold that acquisition of the schooled knowledge would strengthen intellectual faculties and hence augment the social worth of their children. However, they feel frustrated when their hope of education as a great social and intellectual equalizer is belied.

The community realizes that certain minimal requirements such as reasonably maintained school building, responsible teachers, engaging curricular experiences and regularity in school functioning are to be met for infusing desirable quality in the education system. However, it is the laidback and indifferent attitude of teachers that angers them the most. Their ire is understandable as they have reposed a lot of faith in teachers to pull them out of the existing social morass in which they are trapped. This dependence on teachers also stems from their own educational inability to provide requisite academic support and direction to their children to succeed in school.

It is in this context that a concerted process of educational renewal has to be initiated in the government schools in the Nizamuddin Basti. It will largely entail measures such as sensitizing teachers toward needs, aspirations and lived reality of urban slum children, making curricular experiences more relevant and engaging so as to improve school's holding capacity, making school functioning more transparent and accountable, building capacity of community in terms of knowledge of their rights, roles and responsibilities, and forging facilitative linkages between the school and community for ensuring regular student attendance and for sharing children's progress. Unless these practices are implemented in an earnest way, an imminent danger is that the drop-out rate will climb up; and in the worst scenario, dejected parents might start believing that their children are not 'intelligent enough' to be in school, and withdraw them from school to be pushed into livelihood and life options that would further make their existence appalling. The Aga Khan Foundation has to play the role of anchoring the process of educational and social transformation on a sustained long term basis.

It is critical is to envision the community as an equal partner in this process of educational and social renewal. The need is to have a 'wider ownership' of the school by taking all the stakeholders on the board: community, parents, teachers, government functionaries, local social activists, etc. The potential to realize an expansive notion of school ownership lies in the forums such as Parent Teacher Association (PTA). The existing PTA is to be re-energized to garner more community support, commitment and responsibility; to build mutual trust between parents and teachers; stabilize school attendance; strengthen school functioning; facilitate collective decision-making; and to establish a more egalitarian social order. For further capacity building of the community, a forum like the 'School-Basti Committee' can be constituted. Through this forum context-specific issues can be addressed which include organizing mobilization drives and awareness campaigns, tracking school-going status of Basti children, considering ways of main-streaming out of school children, strengthening processes of school development, etc.

Chapter 5
Conclusions and Way Ahead

The present Baseline Study was envisioned as an in-depth school study designed with the objective of developing appropriate intervention strategies for enhancing the quality of children's schooling experiences, making school more accountable to the parents, and generating greater community commitment in the functioning of the school. The study aimed to capture a nuanced understanding of the structures and processes, both within and outside the schools which influence classroom practices that in turn shape children's learning, identity and future life options.

The key research areas around which the study was designed were: assessing learning achievement of children in Hindi, Mathematics and Urdu; identifying gaps in their understanding and common learning difficulties; establishing inter-linkages between learners' level and classroom practices adopted by the teachers; contextual understanding and perception of teachers about learners and community they serve; voices of children and the community on issues related to the school and education in general.

The study findings indicate that quite a many school-going children in the Nizamuddin Basti are potentially at risk of dropping out before they complete primary school cycle or, even if they continue to attend school, much is desirable in their level of learning. In general, children had poor knowledge and understanding of numerical system and its operations; their reading and writing skills have yet to firm up; and proficiency in Urdu is severely deficient. However, these findings have to be viewed in the larger context of a dysfunctional school, quality of schooling experiences, motivation and commitment of teachers, and lack of meaningful linkages between school and community. However, on the fillip side, teachers, children and parents are optimistic about the need to change the schooling and familial practices for realizing sustainable educational and social change.

The poor performance across the subjects can to an extent attributed to teachers' pedagogic beliefs and practices. In Headmaster and teachers' interviews it clearly emerged that they do not hold children and their families in high social esteem, denigrate them and perceive that children of such social lineage are intellectually incapacitated to gain much from schooling. Steered by this social construction that the Basti children are 'dull', 'dumb', 'lazy', and 'passive', teachers have adopted the pedagogic practices that tend to reinforce social identity of these children: Mechanical rendition of lessons; directing children to passively copy the lesson as developed on black-board without clarifying the underlying conceptual rationale; near absence of 'hands-on' experiences and interactive learning situations; ignoring children's specific learning difficulties; no regular feed-back to children on their performance; and in general building a classroom culture that does not excite children to think and apply knowledge constructed by them. All these measure further de-motivate children and they lose their zest to learn.

In the overarching framework of Aga Khan Historic Cities Programme (HCP), Aga Khan Foundation should envision its strategic role as that of a key anchor in initiating social and educational renewal processes in the Nizamuddin Basti. It will largely entail measures such as sensitizing teachers toward needs, aspirations and lived reality of urban slum children, making curricular experiences more relevant and engaging so as to improve school's holding capacity, making school functioning more transparent and accountable, building capacity of community in terms of knowledge of their rights, roles and responsibilities, and forging facilitative linkages between school and community for ensuring regular student attendance and for sharing children's progress. Unless these practices are implemented in an earnest way, an imminent danger is that drop-out rate will climb up; and in the worst scenario, dejected parents might start believing that their children are not 'intelligent enough' to be in school, and withdraw them from school to be pushed into livelihood and life options that would further make their existence appalling.

An additional array of approaches and strategies are suggested to strengthen the mainstream education system:

- Linking formal school system with pre-school education; designing school readiness activities that are likely to attract children to schools
- Providing academic support to school teachers through training and pedagogic renewal for improving the quality of education
- Making schooling a joyful experience by infusing contextually relevant meaning into curricular practices; linking classroom practices with children's immediate life situation and environment
- Providing in-school remedial classes that enhance learning level and stem dropout rates
- Self-esteem and self-confidence building programmes for children
- Mobilizing and sensitizing community towards their role in education of their children; empowering the community to articulate their demand of holding school accountable for learning gains of equitable quality
- Forging meaningful linkages between the community and the school that would take the teacher closer to the community, thereby promoting better understanding and appreciation of children's lived reality
- Creating a forum, *'Stakeholder's Forum'* wherein all the stakeholders--parents, teachers, government officials, community members, local social activists, local political leaders, AKF can converge to collectively build and realize the vision for providing quality school experiences and better life options for the Basti children.
- Putting in place an Education Management Information System (EMIS) to systematically plan, manage and monitor progress of the program.

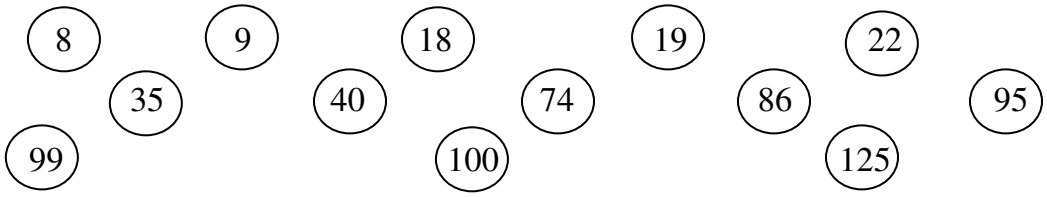
स्तर - 1

नाम : ..... स्कूल : .....

उम्र : ..... तारीख : .....

लड़का/ लड़की कक्षा : .....

पहचानो और बताओ: -



संख्याओं को शब्दों में लिखें:-

26 : छब्बीस

i. 18 : _____

ii. 56 : _____

iii. 75 : _____

iv. 32 : _____

v. 112 : _____

संख्याओं को अंकों में लिखें : -

चौहत्तर : 74

i. साठ : _____

ii. उनास्सी : _____

iii. सत्रह : _____

iv. इकतालिस : _____

v. एक सौ सत्तर : _____

संख्याओं को बढ़ते हुए क्रम से लगायें (सबसे छोटे से सबसे बड़ा) : -

8, 21, 17, 52, 34

8, 17, 21, 34, 52

i. 19, 11, 17, 2, 6

_____

ii. 47, 58, 25, 69, 74

_____

संख्याओं को घटते हुए क्रम से लगायें (सबसे से बड़े से सबसे छोटा) : -

13, 1, 27, 57, 44

57, 44, 27, 13, 1

i. 17, 4, 20, 12, 8

_____

ii. 56, 43, 65, 39, 79

_____

जमा करें:-

i. 15 और 4 :

ii. 11 और 12 :

iii. 23
+ 7
_____

iv. 56
+ 27
_____

घटायें : -

i. 18 में से 3 :

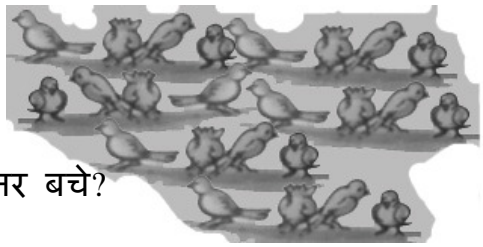
iii. 46
- 8
_____

ii. 17 में से 11 :

iv. 77
- 19
_____

सुफिया के पास 11 रिबन हैं। शायना के पास 7 और आदिला के पास 5 रिबन हैं। बताइए, तीनों के पास मिलकर रिबन हैं?

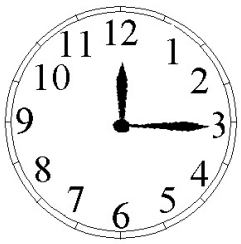
रहमान छत पर 24 कबूतरों को दाना डाल रहा था। तभी 13 कबूतर उड़ गए। बताइए, छत पर कितने कबूतर बचे?



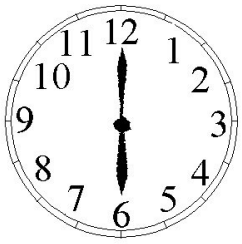
एक गमले में 5 फूल हैं। ऐसे 6 गमले हैं। सब मिलकर कितने फूल हुए?

आपके घर 4 मेहमान खाने पर आए। अम्मी ने उनके लिए 12 रोटियां पकायीं। अगर चारों मेहमानों ने बराबर रोटियां खायीं तो बताइए की एक ने कितनी रोटियां खायीं?

घड़ियों में कितने बजे हैं?

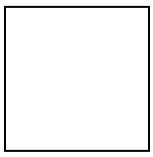


i. 12:15
ii. 3:00
iii. 12:00
iv. 3:30

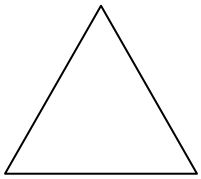


i. 12:00
ii. 6:00
iii. 12:30
iv. 6:30

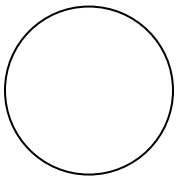
चित्रों को पहचानिये और दाहिनी तरफ़ दिए हुए उनके नामों में से सही चुनकर मिलाइए:-



गोल



रेखा



चौकोर

तिकोन

_____

खाली स्थान भरें-

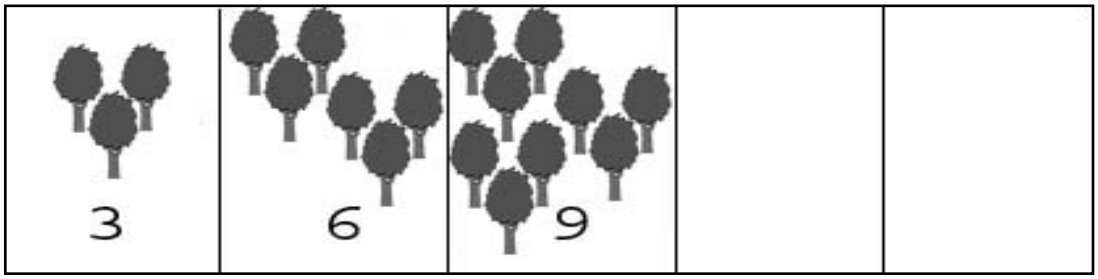
i. 1 साल में_____ महीने होते हैं।

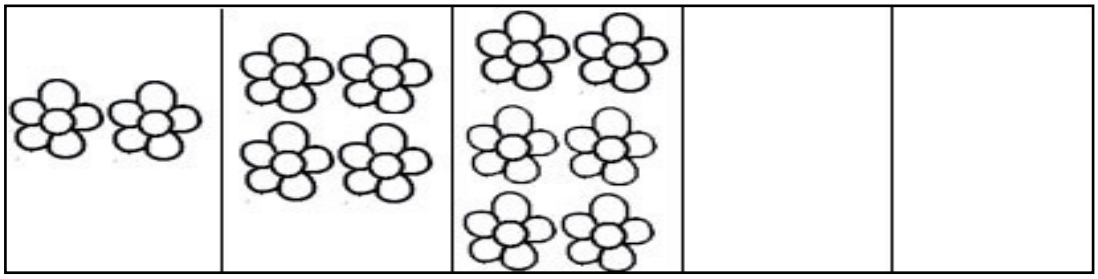
ii. 1 महीने में_____ दिन होते हैं।

iii. 1 दिन में _____ घन्टे होते है।

iv. 1 घन्टे में _____मिनट होते है।

दिये गये चित्रों में पैटर्न को पहचान कर पूरा करें:-





स्तर - 2

नाम : ..... स्कूल : .....

उम्र : ..... तारीख : .....

लड़का/ लड़की कक्षा : .....

संख्याओं को शब्दों में लिखें:-

2461 : दो हज़ार चार सौ इकसठ

i. 79 : _____

ii. 4001 : _____

iii. 167 : _____

iv. 1460 : _____

संख्याओं को अंकों में लिखें : -

पॉच हजार छ सौ इक्यावन : 5651

i. पैंतीस : _____

ii. एक हज़ार दो : _____

iii. चार सौ पचपन : _____

iv. तीन हज़ार दो सौ तीन : _____

.खाली स्थान भरो:-

i. 1700 के पहले _____ आता है।

ii. 289 के बाद _____ आता है।

संख्याओं को बढ़ते हुए क्रम से लगायें (सबसे छोटे से सबसे बड़ा) : -

124, 496, 765, 560, 12, 345

12, 124, 345, 496, 560, 765

466, 546, 116, 396, 426, 66

_____

.संख्याओं को घटते हुए क्रम से लगायें (सबसे से बड़े से सबसे छोटा) : -

245, 23, 492, 764, 176, 601

764, 601, 492, 245, 176, 23

_____

100, 250, 520,390, 410, 330

_____

अधिक (>), कम (<) या बराबर (=) बताइए :-

i. 50 + 50 + 50	☐	100 + 55
ii.5 x 4	☐	5 x 2 x 2
iii. 40 ÷ 4	☐	10 x 0
iv. 40 – 21	☐	20 - 2

नीचे दी गई संख्याओं में 7 का स्थानीय मान बताइए :-

3478

☐ इकाई ☑ दहाई ☐ सैंकड़ा हज़ार ☐

4751

☐ इकाई ☐ दहाई ☐ सैंकड़ा हज़ार ☐

7425

☐ इकाई ☐ दहाई ☐ सैंकड़ा हज़ार ☐

जमा करें:-

29	18	274	1492
+ 14	+ 71	+ 33	+ 639
_____	_____	_____	_____
_____	_____	_____	_____

घटाएँ :-

229	171	1245	1000
- 28	- 38	- 145	- 333

16, 14 और 3 को जोड़ें :-

16 और 14 के जोड़ में से 5 घटाएँ : -

गुणा करें :-

6	18	
x 3	x 10	7 x 4 = ☐

भाग करें:-

3) 30 2) 28 16÷4 = ☐

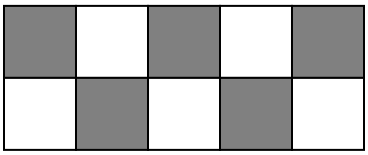
. असलम ने एक दिन में 25 किलोग्राम गोश्त बेचा। अगले दिन उसने 30 और तीसरे दिन 20 किलोग्राम गोश्त बेचा। तीनों दिन मिलाकर असलम ने कितने किलोग्राम गोश्त बेचा?

अगर एक किलोग्राम गोश्त 80 रुपये का है, तो तीनों दिनों में असलम ने कितने रुपये का गोश्त बेचा?

267 बच्चे स्कूल से लाल किला देखने जा रहे थे। 29 बच्चों की बस छूट गई। कितने बच्चे लाल किला देखने जा पाये?

नूराँ के घर में 10 लोग रहते हैं। उसके घर में 8 मेहमान आए। अगर घर में 3 कमरे हैं और हर कमरे में बराबर लोग रहेंगे तो एक कमरे में कितने रहेंगे ?

रंगे हुए भागों को देखकर सही भिन्न और दशमलव पर सही (√) का निशान लगाइए



i. 4 / 10 i. 0.4
ii. 3 / 10 ii. 0.3
iii. 5 / 10 iii. 0.5
iv. 2 / 10 iv. 0.2

i. 4 / 8 i. 0.4
ii. 3 / 8 ii. 0.3
iii. 5 / 8 iii. 0.5
iv. 2 / 8 iv. 0.2

. अगर 1.5 मीटर कपड़े से एक कमीज़ बनती है, तो 4 कमीज़ें बनाने के लिए कितना कपड़ा लगेगा?

सना के घर में दावत थी। वह बाज़ार से 2.5 किलोग्राम चावल ले कर आई। इतने में उसकी बहन, सादिया भी 2.5 किलोग्राम चावल ले आई। घर में कुल कितने चावल आ गए?

अगर एक चौथाई चावल पडोसन ले गई, तो घर में कितने बचे?

खाली स्थान भरें

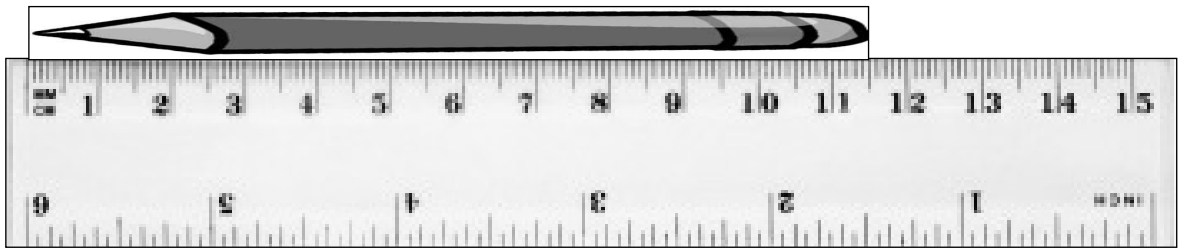
i. 1 किलोमीटर = _____ मीटर

ii. 1 मीटर = _____ सेंटी मीटर

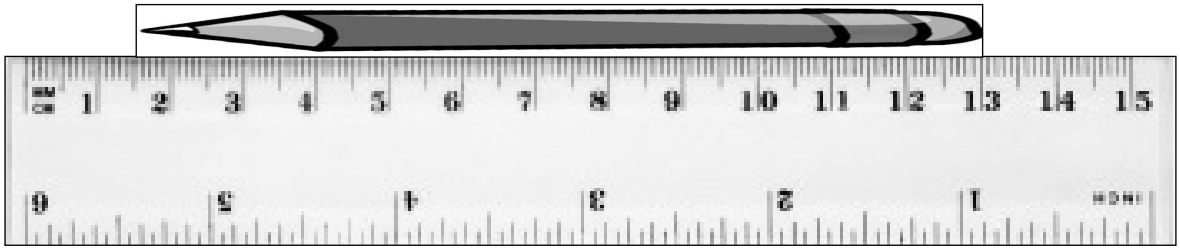
iii. 1 किलोग्राम = _____ ग्राम

iv. 1 ग्राम = _____ मिली ग्राम

नीचे दिए गए फुट्टे की मदद से उसके ऊपर बनाई गई पेंसिलों के माप लिखें: -



पेंसिल का माप



पेंसिल का माप

स्तर – 1

हिन्दी

नाम : ..... स्कूल : .....

उम्र : ..... तारीख : .....

लड़का/ लड़की कक्षा : .....

प्रश्न 1. पहचानिए और पढ़िए

ग 

घ 

ज 

त 

छ 

प्रश्न 2. क) पढ़कर बताइए

छ त्र प फ भ

म भा य ख च

ख) मात्रा पहचानिये

ा ी ु ू

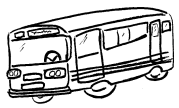
ृ ॅ े ि ै

ग) नीचे दी गए अक्षरों को पढ़िए

ये की है मे बू गि

तू नु लौ पा रो

प्रश्न 3. क) पहचान कर पढ़िये

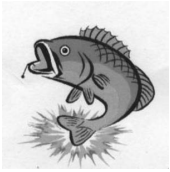
बस 

फल 

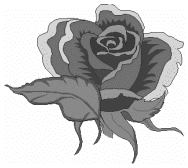
केला 

फूल 

बटन 

मछली 

पतंग 

गुलाब 

नारियल 

ख) पढ़कर बताइए

कल	बल	छल	मन	सब
बात	पुल	खाना	पानी	कौन
दिल	फूल	बेर	मोम	बैल

समय	नरम	तरह	कमर	बर्तन
बादल	बारात	सुरंग	गुलाल	बारिश
मौसम	भोजन			
कसरत	शलगम	हलचल	झटपट	अजगर
आसमान	बरसात	ईश्वर	इमरती	मुलायम

प्रश्न 3. कहानी पढ़िए और उत्तर दीजिए

सलमा बाज़ार में अपनी सहेली सुमन से मिली। सलमा ने सुमन से कहा, "सुमन ! आज मेरे घर चल। हम दोनों साथ में खेलेंगें।" सुमन सलमा के घर आ गई। दोनों ने रस्सी कूदी।

क सलमा कहाँ गई थी?

i) मेले में

ii) पड़ोसी के घर

iii) बाजार

ख वहाँ उसे कौन मिला?

i) उसके चाचा

ii) उसकी सहेली

iii) उसकी अध्यापक

ग सलमा ने सुमन से कहाँ चलने को कहा ?

घ वहाँ उन दोनों ने क्या किया?

च आप अपने दोस्तों के साथ कौन से खेल खेलते हैं?

प्रश्न 4 क) नीचे दिए हुए शब्दों को देखकर लिखिए –

चालाक – .....

शरीफा – .....

लंगूर – .....

रसगुल्ला – .....

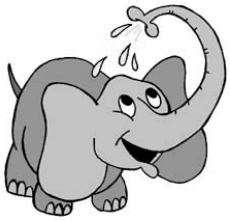
प्रधानमंत्री – .....

अगस्त – .....

ख) नीचे दिए हुए शब्दों को चित्रों की मदद से पूरा करें –

पे + ...

हा + ...



..... + ड़ि +.....

..... + र्सी

कु + ...

..... + ला + स

ग) खाली जगह भरें –

लडकी	–	लड़कियाँ
किताब	–	किताबें
चूहा	–	.....
.....	–	बिल्लियाँ
पेड़	–	.....
बच्चा	–	.....
मिठाई	–	.....

घ) सही शब्द पहचानिए और उस पर गोला लगाइये

मटर / मरट

रोटी / रेटी

तिन / तीन

दूध / दुध

पैधा / पौधा

च) शब्दों को उनके उल्टे मतलब वाले शब्दों से मिलाइये –

मोटा	बड़ा
भारी	मीठा
छोटा	पतला
कड़वा	जाना
आना	हल्का

प्रश्न 5. वाक्य बनाइये

जलेबी खेलना मेला लाल स्कूल

स्तर – 2

हिन्दी

नाम : ..... स्कूल : .....

उम्र : ..... तारीख : .....

लड़का/ लड़की कक्षा : .....

प्रश्न 1. क) पढ़ कर बताइए :-

घ ध क्ष त्र श

भ ज्ञ य थ ज

ख) मात्रा पहचानिये:-

ा ू ं ो ै ी ि

ग) पढ़ कर बताइए:-

घी का नौ सो मि है

है मै फू बु

प्रश्न 2. क) पहचान कर पढ़िए:-

बादल 

बोतल 

चश्मा 

रुपए 

कुँआ 

झोंपड़ी 

दरवाज़ा 

छिपकली 

ख) नीचे दिए गए शब्दों को पढ़िए

रस	डर	कम	रंग	अर्थ
भाषा	नदी	चाँद	झाड़ू	आओ
और	भोर	मैना	बिल	पत्ती

मगर	समझ	शब्द	असर	वज़न
पर्वत	कहानी	विचार	मिट्टी	मुखौटा
ज़रूरी	पत्थर	खटमल	अचरज	
सरगम	खरगोश	चुपचाप	सेवइयाँ	
समस्या	व्यवसाय			

प्रश्न 3. कहानी पढ़िए और उत्तर दीजिए:-

एक दिन खालिद अपनी अम्मी के साथ मेले में गया। वहाँ बहुत सी दुकाने सजी थीं। वहाँ एक गुब्बारे वाला भी था। खालिद गुब्बारे वाले के पीछे–पीछे चंल पड़ा। तभी उसने देखा कि उसकी अम्मी तो उसके साथ नहीं है। वह डर गया। लेकिन उसे याद आया कि अम्मी ने कहा था कि मेले में खो जाने पर वह एक जगह खड़ा होकर उनका इंतज़ार करे। वह उसे खुद ढूँढ लेगीं।

क खालिद अपनी अम्मी के साथ कहाँ गया था?

i) बाज़ार में

ii) मेले में

iii) अपनी नानी के घर

ख मेले में खालिद ने क्या देखा?

i) सजी हुई दुकानें

ii) मोटर कार

iii) भालू

ग खालिद क्यों डर गया था ?

घ खालिद की अम्मी ने उससे क्या कहा था ?

च कहानी में आगे क्या हुआ होगा, उसके बारे में लिखिए।

प्रश्न 4. सही शब्द पहचानिये और उस पर गोला लगाइए:-

आसमान / असमान

बुखार / बूखार

कीसान / किसान

छीटा / छोटा

बचपन / बपचन

प्रश्न 5. नीचे दिए हुए शब्दों को उनकी विशेषताओं से मिलाएँ –

गर्म	लड्डू
ऊँचा	बच्चा
मीठा	चाय
हराभरा	कपड़ा
नीला	पहाड़
नटखट	मैदान

प्रश्न 6. शब्दों को आपस में मिलाकर लिखें

ईमान + दार = ईमानदार

चित्र + कार = ...

फूल + दान = ...

हिम + आलय = ...

गोल + आकार = ...

राज + इन्द्र = ...

प्रश्न 7. सही शब्द चुनकर खाली जगह भरिये :

शबाना आज बहुत खुश है। कल उसका जन्मदिन है। उसकी अम्मी उसकी पसंद की खीर _____ (बनाई / बनाएंगी)। उसकी नानी भी _____ (आईं / आएंगी) । वह उसके घर के पास ही _____ (रहती हैं / रहेंगी)। पिछले साल वह उसके लिए नए कपड़े लाई _____ (हैं / थीं)। इस साल भी वह कुछ ज़रुर लाएंगी। शबाना को लगता है कि कल बहुत मज़ा _____ (आएगा / आया)।

प्रश्न 8. वाक्य बनाइये :-

घर पढ़ना सुंदर दुकान घूमना

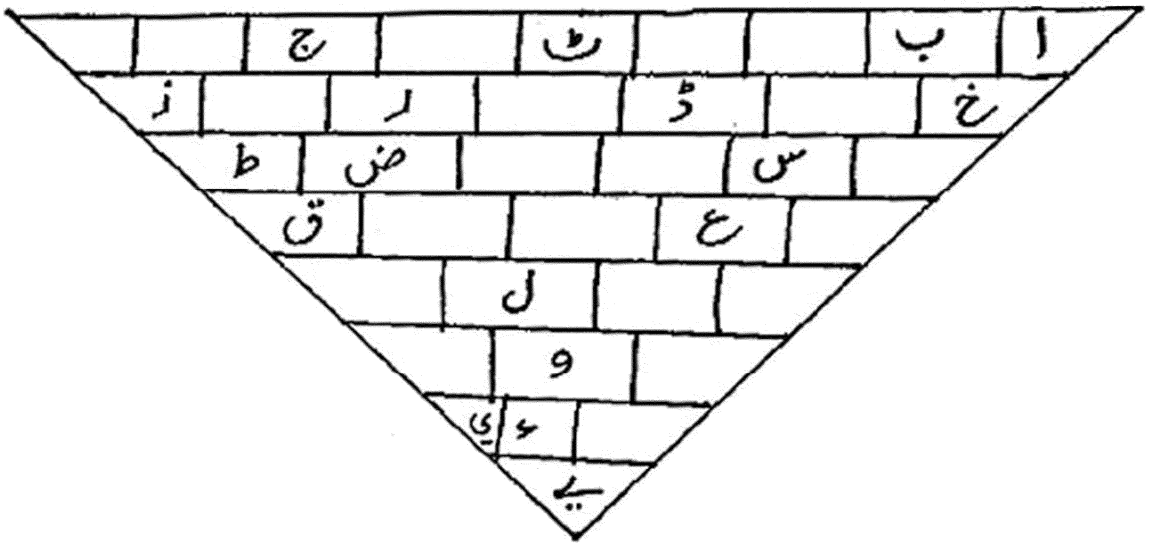
प्रश्न 9. अपने दोस्त के बारे में 4 – 5 लाइनें लिखिए

درجہ۲

نام: اسکول:

عمر: تاریخ:

(۱) دئے گئے خالی جگہوں کو صحیح حروف سے بھریں

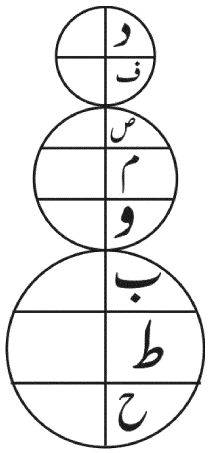


(۲) دئے گئے الفاظ کو ڈھونڈیں اور اُن پر دائرہ بنائیں۔

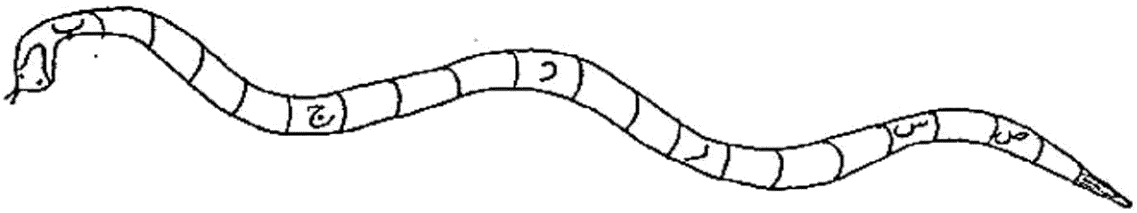
صبح، شام، دن، رات، ایک، دو

ص	س	پ	ع	د	و	ش	ء
ٹ	ب	ژ	ر	ن	م	گ	ز
خ	ا	ح	ط	ا	ے	ک	ض
ي	ل	ق	ش	ج	ت	ھ	ذ

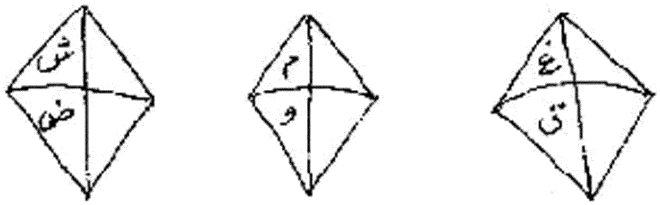
(۳) دئے گئے نقشے میں جو حروف ہیں ان کے سامنے آنے والے حرف لکھیں۔



(۴) اس تصویر میں جو حرف لکھے گئے ہیں ان کے آگے اُسی بناوٹ کے دوسرے حروف لکھیں۔



(۵) نیچے پتنگ میں جو حروف لکھے گئے ہیں اُن سے قبل آنے والے حروف لکھیں۔

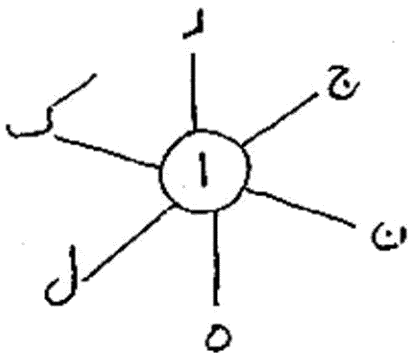


(۶) نیچے دئے گئے خاکے کی مدد سے دونوں طرف سے بننے والے الفاظ لکھیں۔

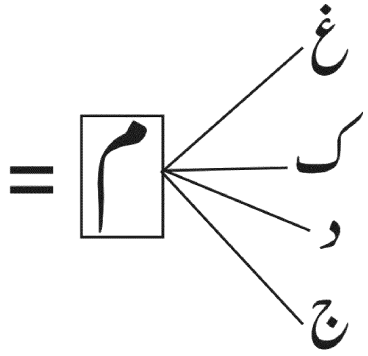
(i)---------- (iv)----------

(ii)----------(v)----------

(iii)----------(vi)----------



(۷) دئے گئے خاکے کی مدد سے لفظ بنائیں۔



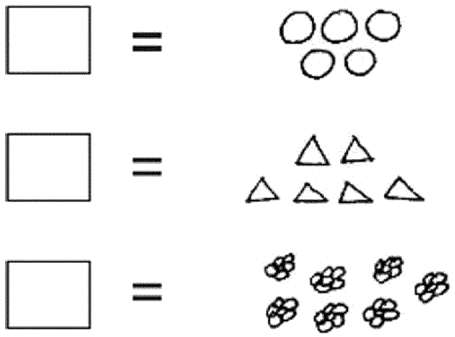
---------- (i)

---------- (ii)

---------- (iii)

---------- (iv)

(۸) بتائیے یہاں تصویر میں دی گئی چیزوں کی تعداد کتنی ہے۔



(۹) ان حروف کو ملا کر لکھیں۔

ا + ب = ----------

ر + ب = ----------

ب + ا = ----------

ک + ب= ----------

س + ب = ----------

(۱۰) دئے گئے الفاظ کے حروف الگ کر کے لکھیں۔

کا = ... + ...

کی = ... + ...

کے = ... + ...

بے = ... + ...

لے = ... + ...

جی = ... + ...

غم = ... + ...

تم = ... + ...

(۱۱) تصاویر کے ساتھ صحیح جوڑ لگائیں۔

انار

ڈگڈی

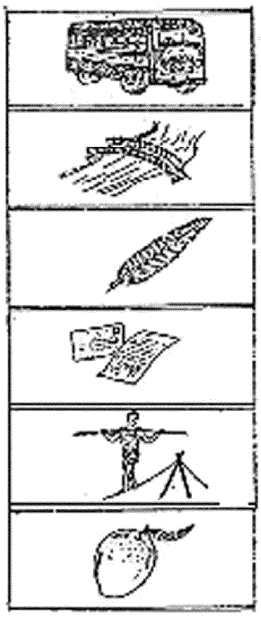
ترازو

خرگوش

پہاڑ

آم

(۱۲) ان تصویروں کو دیکھ کر جو حروف دئے گئے ہیں انہیں ملا کر لکھیں۔



ب + س = ----------

پ + ل = ----------

پ + ر = ----------

خ + ط = ----------

ن + ٹ = ----------

آ + م = ----------

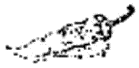
(۱۳) ان حروف کو ملا کر لکھئے اور تصویر سے ملان کیجئے۔

پ + ا + ن ----------

م + ر + چ ----------

س + ب + ق ----------

ڈ + و + ل ----------



اُ + و + ن ----------

(۱۴) گوریلا ماما کی کہانی سنیں اور سوالوں کے زبانی جواب دیں۔

گوریلا ماما

بیٹا! یہ بندر ماما نہیں ہیں۔ یہ بندر ماما جیسے ضرور ہیں۔ یہ ہمارے ملک میں نہیں ہوتے۔ عام طور پر افریقہ میں پائے جاتے ہیں۔ افریقہ ہندوستان سے بہت دور ہے۔ وہاں بڑے اور گھنے جنگل ہیں بندر ماما وہاں رہتے ہیں۔ جو گوریلا کہلاتے ہیں۔ ذرا غور سے دیکھو عجیب انداز ہیں ان کے۔ انسانوں جیسے بھی اور بندروں جیسے بھی۔ یہ ڈراؤنے ضرور لگتے ہیں مگر ہیں بہت نرم مزاج۔ یہ گوشت نہیں کھاتے۔ سبزی کھاتے ہیں۔ یہ آپس میں مل جل کر رہتے ہیں۔ ہیں نہ یہ عجیب وغریب!

(۱) گوریلا کہاں پایا جاتا ہے؟

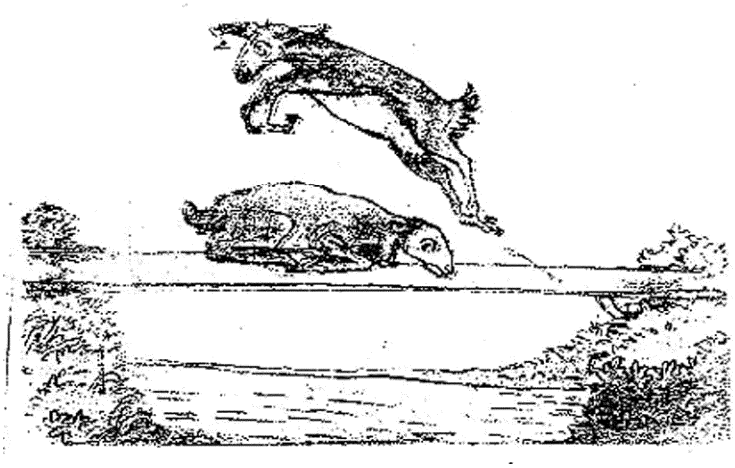
(۲) گوریلا دیکھنے میں کیسا لگتا ہے؟

(۳) گوریلا آپس میں کیسے رہتے ہیں؟

(۴) افریقہ میں کیسے جنگل ہیں؟

(۱۵) اس کہانی کو پڑھیں اور سوالوں کے جواب دیں۔

سمجھ داری



ندی پر ایک پل بنا ہوا تھا۔ پل بہت تنگ تھا۔ پل کے ایک طرف سے ایک بکری آئی۔ دوسری طرف سے دوسری بکری آئی ۔دونوں کے میمنے ساتھ تھے۔ پہلی بکری بولی'' پیچھے ہٹو میں پہلے آئی تھی''۔ دوسری بکری بولی ''تم پیچھے ہٹو۔ میں پہلے آئی تھی'' ۔کوئی بھی بکری راستہ دینے کیلئے تیار نہ تھی۔ آخر بکریوں نے سینگ سے سینگ ملائی لڑتے لڑتے ندی میں گریں۔ ڈوب گئیں ۔دونوں میمنے تماشا دیکھ رہے تھے۔ دونوں نے سوچا اگر ہم لڑیں گے تو ہم بھی گر کر ڈوب جائیں گے۔ پہلے میمنے نے کہا ''میمنے بھیا''، میں بیٹھ جاؤں گا۔ تم میرے اوپر سے گذر کر اس پار جاؤ۔ دوسرے میمنے نے کہا ''ہاں یہ ٹھیک ہے۔'' پہلا میمنہ بیٹھ گیا۔ دوسرا میمنہ اس کے اوپر سے گزر کر دوسری طرف چلا گیا۔ دونوں نے اپنی اپنی راہ لی۔ سمجھ داری سے دونوں کی جان بچ گئی۔

(ا) ندی کا پل کیسا تھا؟

(۲) بکریوں کے ساتھ کون تھا؟

(۳) بکریوں نے ایک دوسرے سے کیا کہا؟

(۴) بکریاں ندی میں کیسے گر گئیں؟

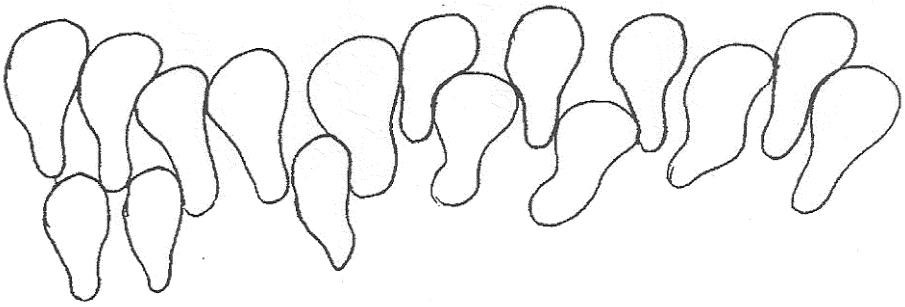
(۵) میمنے نے پل کیسے پار کیا؟

درجہ ۴

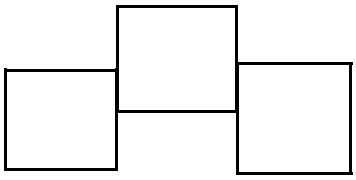
نام: اسکول:

عمر: تاریخ:

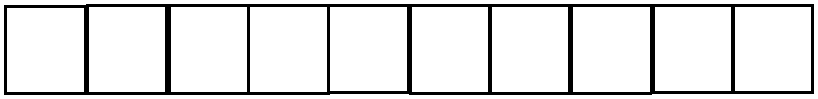
(۱) دئے گئے خاکے میں وہ حروف لکھیں جن پر نقطے نہیں ہوتے۔



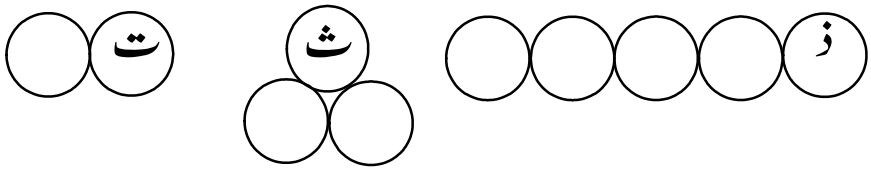
(۲) "ط" یہ علامت جن حروف پر لگائے جاتے ہیں انہیں دئے گئے خانے میں لکھیں۔



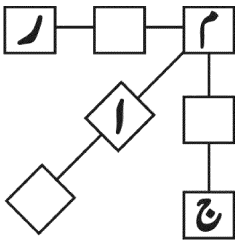
(۳) ایک نقطے والے حروف کو اِن خانوں میں لکھیں۔



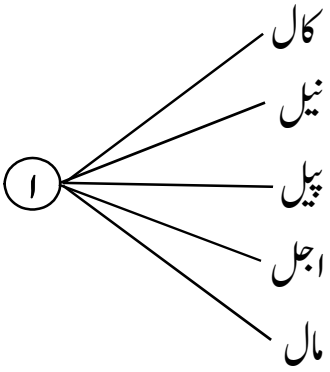
(۴) ایک ہی قسم کی آواز والے جو حروف ہیں انہیں دئے گئے دائرے میں لکھیں۔



(۵) انہیں ملا کر الفاظ بنائیں۔



(۶) دائرے میں دئے گئے حروف کی مدد سے الفاظ مکمل کریں۔



---------- (i)

---------- (ii)

---------- (iii)

---------- (iv)

---------- (v)

(۷) اس معمے کی مدد سے مختلف الفاظ بنائیں:۔

ڑ	ے	پ		ن	د
ھ		ا			ش
ل	گ	ن	ج	ھ	ا
		ی	ت	و	م
ا	و	ہ		ل	

(i)---------- (v)----------

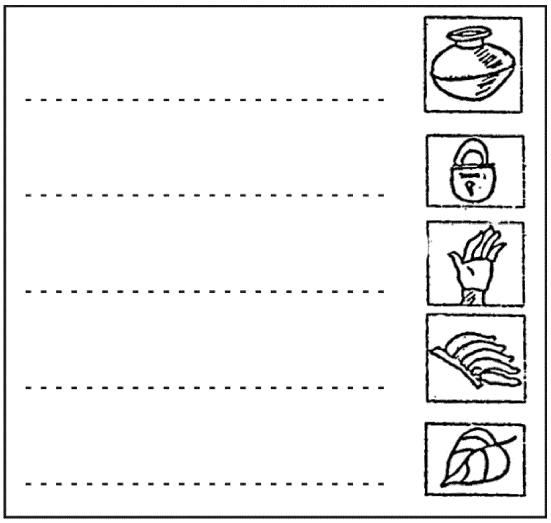
(ii)---------- (vi)----------

(iii)---------- (vii)----------

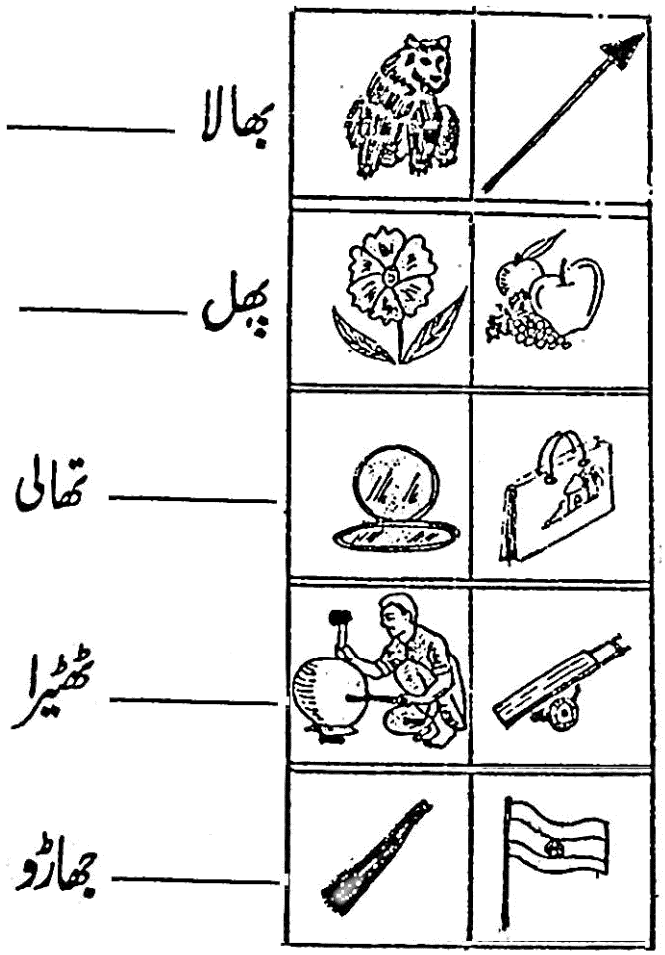
(iv)----------

(۸) حروف کو جوڑ کر لکھیں اور ملان کریں۔

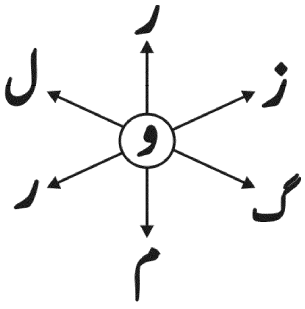
(۹) ان تصویروں میں جو چیزیں دی گئی ہیں ان کا نام خالی جگہ پر لکھیں۔



(۱۰) ان تصویروں میں جن کے نام نہیں دئے گئے ہیں ان کے نام لکھئے۔



(۱۱) نیچے دئے گئے خاکوں کی مدد سے دونوں طرف سے بننے والے الفاظ لکھیں۔

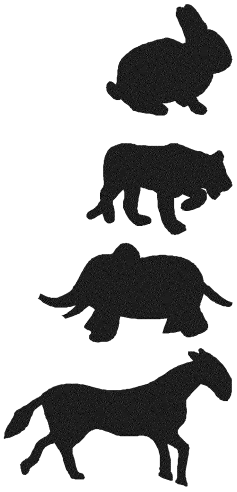


.....(i) .....(ii)

.....(iii) .....(iv)

.....(v) .....(vi)

(۱۲)ان تصویر میں جو جانور دئے گئے ہیں انہیں دیکھ کر ان کا نام لکھیں۔



(۱۳) یہاں جو پھل دئے گئے ہیں ان کا نام لکھیں۔

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(۱۴) دئے گئے حروف کی مدد سے الفاظ بنائیں۔

ش + ا + ل = ----------

گ + ا + ل = ----------

ک + ا + ٹ = ----------

د + ا + ن + ا = ----------

ا + د + ر + ک = ----------

ب + ر + ت + ن = ----------

(۱۵) دئے گئے الفاظ کے حروف الگ کر کے لکھیں۔

صبا = ----------

صبح = ----------

شکر = ----------

عجب = ----------

ہوا = ----------

(۱۶) دئے گئے جملوں میں اسم، فعل اور حرف تلاش کر کے لکھیں

جملہ	اسم	فعل	حرف
۱۔گھوڑے کو پلاؤ۔			
۲۔مزمل کو گھر جانا ہے۔			
۳۔استاد نے سبق پڑھایا۔			
۴۔راجو میدان میں پتنگ اڑا رہا ہے۔			
۵۔رشید گھر میں سو رہا ہے۔			
۶۔ماں سوموار کو دہلی جا رہی ہے۔			

(۱۷) مندرجہ ذیل جملوں میں سے صفت تلاش کر کے لکھیں۔

جملہ	صفت
۱۔یہ رسی لمبی ہے۔	
۲۔ان کا مکان بڑا ہے۔	
۳۔گلاب کا رنگ سرخ ہے۔	
۴۔رشید کے کان لمبے ہیں۔	
۵۔ہمارا استاد موٹا ہے۔	

(۱۸) دئے گئے الفاظ کے متضاد (الٹے معنیٰ والے لفظ) لکھیں۔

آج ---------- رات ----------

دوست ---------- شب ----------

نیک ---------- موت ----------

(۱۹) دئے گئے الفاظ کے واحد سے جمع بنائیں۔

خبر ---------- چوہا ----------

عام ---------- کتا ----------

بلبل ---------- جوتا ----------

(۲۰) دئے گئے الفاظ کا مذکر سے مونث بنائیں۔

لڑکا ---------- بھائی ----------

راجہ ---------- ماں ----------

مرد ---------- مور ----------

(۲۱) اس کہانی کو پڑھو اور سوالو کے جواب دو

ہمارے باپو

باپو کا پورا نام موہن داس کرم چند گاندھی تھا۔ گاندھی جی پور بندر گجرات میں پیدا ہوئے تھے۔ گاندھی جی اعلیٰ تعلیم کے لئے انگلستان بھی گئے تھے۔ ایک زمانہ تھا جب ہمارا وطن ہندوستان انگریزوں کا غلام تھا۔ گاندھی جی نے انگریزوں کے خلاف جنگ کی اور انگریزوں سے آزاد کرایا۔ گاندھی جی سچائی کے پجاری، غریبوں کے ہمدرد تھے۔ وہ بچوں کو بہت پیار کرتے تھے۔ ہم سب ہندوستانی انہیں باپو کہتے ہیں۔ ہندوستانی عوام نے انہیں بابائے قوم کا خطاب دیا تھا۔ آج ہمارا ملک

آزاد ہے۔ہم آزاد فضاء میں سانس لے رہے ہیں۔گاندھی جی آج ہمارے بیچ نہیں ہیں لیکن ان کے اصول سدا ہمارے ساتھ رہیں گے۔

(۱) گاندھی جی کا پورا نام کیا ہے؟

(۲) وہ کہاں پیدا ہوئے؟

(۳) پور بندر کہاں ہے؟

(۴) گاندھی جی کو سب کیا کہہ کر پکارتے ہیں؟

(۲۲) 'بچے کی دعا' نظم سنیں اور زبانی جواب دیں۔

بچے کی دعا

لب پہ آتی ہے دُعا بن کے تمنا میری　　زندگی شمع کی صورت ہو خدایا میری

دور دنیا کا مرے دم سے اندھیرا ہو جائے　　ہر جگہ میرے چمکنے سے اُجالا ہو جائے

ہو مرے دم سے یوں ہی میرے وطن کی زینت

جس طرح پھول سے ہوتی ہے چمن کی زینت

زندگی ہو مری پروانے کی صورت یارب　　عِلم کی شمع سے ہو مجھ کو محبّت یارب

ہو میرا کام غریبوں کی حمایت کرنا　　دردمندوں سے ضعیفوں سے محبّت کرنا

مرے اللہ برائی سے بچانا مجھکو

نیک جو راہ ہو اس رہ پہ چلانا مجھکو

۱۔ اس نظم میں بچے نے کس چیز کی محبت کی دعا مانگی ہے؟

۲۔ زندگی شمع کی صورت ہونے سے شاعر کی کیا مراد ہے؟

۳۔ چمن کی زینت کس چیز سے ہوتی ہے؟

۴۔ پروانوں کو کس چیز سے محبت ہوتی ہے؟

۵۔ آخری شعر میں کیا دعا مانگی گئی ہے؟

۲۔مصرعوں کے درست مفہوم پر صحیح (✓) کا نشان لگایئے

1- لب پہ آتی ہے دعا بن کے تمنا میری

میرے دل میں جو خواہش ہے وہ میرے ہونٹوں پر دعا بن کر آ رہی ہے۔

میری خواہش ہے کہ میری دعا قبول ہو۔

2- دور دنیا کا میرے دم سے اندھیرا ہو جائے۔

میرے دم سے دنیا میں دور دور تک اندھیرا ہو جائے۔

میری وجہ سے دنیا کا اندھیرا دور ہو جائے۔

3- ہر جگہ میرے چمکنے سے اجالا ہو جائے۔

مجھ میں ایسی روشنی ہو کہ میں جہاں بھی جاؤں وہاں اجالا کروں۔

میں جہاں بھی جاؤں وہاں کی روشنی سے چمکنے لگوں۔

4- علم کی شمع سے ہو مجھ کو محبت یارب۔

اے اللہ مجھے علم اور شمع سے محبت ہو جائے۔

اے اللہ مجھے علم کی محبت عطا فرما۔

5- زندگی شمع کی صورت ہو خدایا میری

اے خدا میری زندگی دیئے کی طرح روشن کر دے تا کہ لوگوں کو میں فائدہ پہنچا سکوں

اے خدا میری صورت شمع کی مانند بنا دے