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Textbooks

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"Learning Curve is a publication on education from Azim Premji University. It aims to reach out to teachers, teacher educators, school heads, education functionaries, parents and NGOs, on contextual and thematic issues that have an enduring relevance and value to help practitioners. It provides a platform for the expression of varied opinions, perspectives, encourages new and informed positions, thought-provoking points of view and stories of innovation. The approach is a balance between being an 'academic' and 'practitioner' oriented magazine."

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FROM THE EDITOR

In school, one did not think much about textbooks, except to consider it a tome that must be learnt, whether one understood it or not, in order to pass an examination. Of course, at the start of the school year the arrival of new books was marked by the excitement that new books can generate. Today in a changing scenario, textbooks have assumed a new role and responsibility. We have realised what a textbook must mean and be and do. They are a means in the hands of the teacher to develop critical faculties, to exercise ones rational powers, be secular, committed to examining every issue that we face in society today - class, caste, creed and gender, the environment both physical and societal.

Given the diversity of our large country, this is a challenging task. Addressing the core values that we want to engender in our society which, while having many commonalities, is still so diverse in many ways is no easy task. Textbooks must address these issues - our common heritage, protecting the environment, inculcating the scientific temper by encouraging curiosity, enquiry and reflection, while at the same time cherishing our creative arts: the list is one that touches every aspect of our lives, giving vitality to democracy and equality, encouraging individuality and respecting different choices.

The NCERT and SCERTs have been at the forefront of these changes, incorporating all the many demands made of these books which when used with wisdom and originality have the power to alter society. Erudite committees have sought to bridge the gaps and textbooks today are the result of much thought and discussion. The many aspects which make up of India have been addressed, making textbooks not just printed matter between two covers to be 'mugged' up and reproduced. Unaffordable textbooks with hidden agendas, opaque methods of prescription, guides used to demystify the original textbook - all these have given way to collaborative material which can foster discussion and reflection.

This issue contains thoughtful articles on what textbooks are at present, what they should be, ways of using them optimally, new ideas that they can generate in the teaching of science and environmental science for example are presented. Several of the writers have had personal experience in being part of this process and their articles are very valuable because their articles contain the seeds of how teachers can use them in the best possible way.

Our thanks are due to Rajesh Utsahi and his team who, as always, translated the Hindi articles.

One piece of information I would like to share with our readers is that we have been successful in getting registered with the Newspapers of India and readers may notice a change in the numbering of this issue which will now continue chronologically.

We welcome your feedback and participation in making this magazine both thought-provoking and useful. Please mail the id given below to share your views.

Prema Raghunath
Editor, Learning Curve
prema.raghunath@azimpremjifoundation.org

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Textbook Development Processes – Some Reflections and Learnings

Arvind Sardana

One of my colleagues of many years recently remarked in a conversation, 'You still believe in textbook development with Governments?' This was partly in jest and partly serious. The serious part was that, even after three decades of work in Madhya Pradesh (MP), there appears to be no institutional memory that experiments such as HSTP, Social Science and *Prashika* had taken place. They are all buried, having been formally closed in 2002. The current textbooks often reflect what it was like in the 1980s. For a while we appear to be standing in the same place again. The curricular choices and presentation reflect similar views on knowledge, pedagogy and role of teachers that we had once sought to change. However this is not true for other states and also for the efforts at the national level. We have been invited by many other state governments for being part of teams initiating curricular renewal processes at the state level. Similarly, textbooks especially in science and math prepared by NCERT in around 2005 are being used by other states. MP too, has also adopted these textbooks. Hence similar ideas have come around in a different way, probably in a more lasting manner. This could be debated. But no effort at contextualising for the state, my colleague may retort. Social science is left out, reflecting the priority usually allotted to be subject.

Is the textbook development process a way to broadcast seeds of experience which when watered would surely respond? Of course, we have no way of knowing whether it would be trampled upon, or that a small plant, even if not a full grown tree, would emerge. To be honest, apart from closure of *Eklavya's* programmes in MP in 2002, let us also count the state efforts that have been buried in the recent past, that is, post-1995.

These would include *Lok Jumbish* in Rajasthan (1998), Assam SCERT initiative (2000), Gujarat SCERT science initiative (2002), Delhi SCERT effort (2003), Rajasthan SCERT effort led by the ICICI Foundation (2010). It would be instructive to understand these closures for the combination of reasons they represent. Institutional memory

does not survive, but do the seeds of experience lie buried in some dormant state and often revived by new opportunities? Do they contribute to long term change?

Many of the stalwarts at the state level that we worked with later were initiated into these ideas by the DPEP workshops on primary school education and the *Lok Jumbish* and other programmes. Curricular processes are negotiations and struggles between contending perspectives and can would never be a smooth, uniform path. At the same time it is painful and demotivating to see efforts that require years being buried so quickly because of changes at the political or bureaucratic level. A question that we have asked ourselves, even though we sustained these programmes for over twenty five years is: were we, at *Eklavya*, naive in expecting a linear transition from micro experimental level to macro changes in the system? To quote C N Subramaniam:

'Ironically the spirit of innovation appeared to ebb once the new text books were published, and the other components of the 'package' class room processes, teacher orientation, decentralisation, etc. took a back seat. This meant that the new ideas were seldom implemented on the ground.'

However for those struggling today, what could one suggest as some strategic efforts that might lead these curriculum initiatives towards the larger goals?

Development of a programme, not just textbooks

One of the main lessons from the *Eklavya* experience was that it was a development of a programme for social sciences. Textbooks were a part, demanding and crucial, but not the *end* objective. Changes in classroom processes were an equally important component. This could only happen with teacher dialogue and training sessions. A dialogue on perspective, values and new content. These training sessions lasted fifteen to twenty days in a year. Along with this, since materials were being tried, there was regular classroom follow-up and interaction with teachers. Transaction processes

cannot change without these elements.

In contrast, NCERT and SCERT processes are textbook development teams with a strict timeline to be adhered to. This is a major constraint. Some minimal training and changes for assessment are articulated. However, as our experience suggests, it does not work out. They do not really tackle or build in the other elements of teacher dialogue as essential goals for the development team. *(Batra)* The need is acknowledged and understood, but there is no roadmap for implementation. This is left as a wholly desirable task, like our directive principles of state policy in the constitution: meant to be taken up as subsequent process to the textbook development. The ideas are embedded in the texts without a credible plan for execution. However, in reality, this ends up being ignored. Why does this happen?

Institutional vacuum

At one level, especially in relation to CBSE schools, there is an institutional vacuum. Schools affiliated to CBSE are spread across the country and fall into two categories- one, government schools such as the *Kendriya Vidylayas*, and the *Navodayas* and, two, privately managed schools which use textbooks labelled 'as per NCERT syllabus', with the teacher orientation or training being left to the management of the institution. It is important to note that out of nearly 25,000 CBSE schools, nearly 23,000 are privately managed. KV schools have their *Sangathan* and many private schools have their network, such as DAV, DPS schools or individual schools, which decide on their own individual requirements for orientation. NCERT says it does not have an institutional mandate for this and the numbers are too large for an Advisory Council. The CBSE is the approving authority for the syllabus, but its main functions are affiliation and conducting public examinations. After the preparation of the books some teacher workshops were held, but these are extremely limited. For example at the RIE, Bhopal (part of the NCERT group of institutions) where workshops were held for social science after the new textbooks were introduced, from among thousands in that region, probably only fifteen to twenty schools participated. Where perspective building is required, teacher interaction through television is also not effective.

Thus, the teachers of individual schools have no opportunity for dialogue with those responsible for the perspective and content of the textbooks and

therefore freely interpret these as overloaded and consider many activities as unnecessary. Many of them leave out the questions or activities that could make the class interactive for social sciences. They go back to hunting for snippets of information that can be dictated in the class. The spirit of the text is often overturned. At the same time, since there is no one listening to their views and experience, the overall expectations could be more than what is feasible. They are not allowed flexibility by their managements and appear to be sidelined, with the new textbooks, rather than the structures that hold the processes in place, being blamed.

In such a vacuum, any public discussion tends to take extreme positions – the textbooks are either praised or rubbished. Whatever textbooks survive in a fragile atmosphere, where they have not been debated, mulched with experience and then accepted by the teaching community, many teachers take the textbook materials as tasks to be executed and not something that they believe in. In such an atmosphere teacher indifference grows. This only feeds a cynical outlook. At some teacher orientation sessions I have been given such a showdown by individual school teachers and administration as if I was the incarnation of the NCERT devil whom they could never meet in person! Srinivasan begins his EPW paper on with a quote from a student:

'In April 2014, a newspaper reported the angry reaction of a learner to a Class 10 social science board examination question. This learner wanted to know the details of social science syllabus developers and wanted to kill them (*Rajasthan Patrika* 2014). In 2012, Indian Parliament was adjourned for the "inappropriate" use of materials such as cartoons in social science textbooks published by the National Council of Educational Research and Training (NCERT), New Delhi. This led to a year-long debate on the use of cartoons as a pedagogical tool in school social science textbooks (see, for instance, Singh 2012; Wankhede 2012). Later, the Central Board of Secondary Education (CBSE), New Delhi intimated schools that no questions be asked in board examinations about "visuals" from (read NCERT) social science textbooks' (*Hindu* 2010).

Part of the reason is the indifference of teachers to an issue. Their opinions were not sought. How they used the textbooks was not considered. Visual questions being banned made no difference to them. This teacher indifference stems from no

dialogue with them. For textbooks that offer a change in perspective, dialogue is essential and not something optional to be discovered on your own. For many, the new books do not match their graduate or post graduate course organisation. If dialogue is not possible then I would take my colleague's advice and probably give up on this process.

Could new institutional norms be devised to make teacher dialogue mandatory?

However as an evergreen optimist, I believe that dialogue with teachers could be institutionally organised. Both the NCERT and the CBSE have to set up a combined protocol for this. As a first principle we should reach all teachers, whether they are from government schools or private schools. The effort is to change the culture commonly practiced in the classroom. Here both government and private schools are similar. There is a need to invest in the future and this cannot be done without addressing all teachers. It therefore requires a public effort and financial investment by government. A changed classroom culture is like a public good- it benefits all but it will not happen without public effort.

The NCERT needs to take up the mandate of creating *state resource groups* for schools with the RIEs as the hub. These resource groups would be a mix of people who could be resource teachers themselves, faculty at universities or colleges or NGO personnel with experience in the required area. We have done these processes at different state levels and know that this is feasible. Time, investment and vision in forming subject groups is required. This should be the NCERT's role. At the same time the CBSE has to mandate that every affiliated school, whether government or private, has to send subject teams for these refresher courses. An enabling order is required. The order could bring them in, but to sustain the process academic effort from the NCERT is essential. The training sessions and dialogue have to be engaging so that teachers want to attend them. Although this is more difficult, we need to move to towards eventually creating strong resource groups and teacher peer groups. It is the CBSE asking every teacher to attend training sessions conducted by resource teams set up under the supervision of NCERT and RIE.

This peer group of teachers should be viewed as a collective of professionals and not allowed to be fragmented and isolated by individual school managements. The choice of textbooks or the design for classroom processes or selection of chapters is left open for school managements and their teachers to decide. This is a process of dialogue on content and pedagogy, not a higher authority imposing a uniform format that all schools have to follow and is the true work of a council. A protocol that brings two institutions in a new arrangement is required. Today we are already battling the private market of textbooks and guides that has taken over this space and, is in the long run, isolating teachers. Some state governments have tried this, but they are not able to sustain the process.

Assessment norms first, then textbooks

This dialogue with teachers often tends to become acrimonious. Any discussion on pedagogical methods or content soon turns to the question, 'But this doesn't fit our examination pattern'. This is the real logjam. Unless we are prepared to change our thinking on assessment, the dialogue breaks down. Or the completion of syllabus becomes an end in itself, since a third person would set the examination based on the entire syllabus. Why should teachers not be responsible for assessment of their students? How can most assessments be an aid to learning rather than a means of creating fear and trauma?

How do you assess the interest and learning among children? If one is interested in forms of assessment that aid learning, what do we experiment with? Open book examinations for the Class 8 board exam and the older experience of HSTP for hands-on experiments have set up the goal posts for us. Social science textbooks had a number of case studies and used stories which had questions in between, after every section. This was the active part. These questions were a mix: comprehension, ability to reason with the concept embedded in the story, understanding the visuals and maps, open-ended questions asking for your opinion on a conceptual point. (*Batra & Samajik Adhyan*). Significantly, oral understanding was emphasised along with encouraging children to answer some in their own words in a written form. Teachers worked out their own strategies. (*Prakash Kant*). Many teachers designed small projects or extended these ideas in their school context (*Shobha Bajpai*).

Changes in the assessment process was inherent to the programme and part of the perspective of the textbook being developed. A format was gradually worked out for the open book examination. Over

time, the exercises in the text were examined for balancing expectations. Review by resource people suggested that skill development required more practice than we had embedded and drawing out conceptual issues from stories required more help for the children. At times we had to correct interpretations by teachers that were at total variance from the expected course of the argument. Hence this was not a textbook development project, but a programme for social science where textbooks, teacher dialogue and assessment were considered together.

In most state governments where we have worked on textbooks, the mandate runs out by the time we finish our work for the a of classes. Many times, there are changes at the bureaucratic level that halt or change this process of curricular reform. Even if there is no conscious change in direction and the textbooks are actually being used, teacher training or changes in examination take a back seat. This is not a priority area. We are often told that our 'help' with the process is over. For the rest, SCERT would manage on their own. Thus, reform is piecemeal and runs out of steam. Since this situation has often come up it is clear that systemic reform is not the agenda. It is limited to textbook development.

How could things move ahead? One way would be to reverse the process. In the next round of the curriculum revision process the first mandate with the textbook development teams, whether NCERT\SCERT, should be to change the format for assessment at various levels on the existing textbooks. These systems are evolved with extensive teacher dialogue and, most importantly, Implemented in all schools for one academic year before new textbooks are brought into the system. Hence changes in assessment patterns would become the focus and priority and textbook would be the second step.

Teachers, students, schools and parents would be intimately involved. The negotiation would be animated and participative. This is the challenge before academic bodies and textbook development teams. They need to spend time in helping the system develop an alternative that could be used at a mass scale. It is important to understand that this is the cornerstone of the architecture that we have created. It is the examination pattern that shakes off most innovative experiments and is therefore able to sustain a status quo situation within our culture. Another colleague remarked, 'Are you not suggesting that the tail wagging the dog?'. No, this cornerstone is holding up the arch and, through this, the entire edifice.

We need to negotiate this through dialogue. Textbooks would then work towards this somewhat accepted new norm.

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Arvind Sardana is a member of the social science team at Eklavya. He has been closely associated with curricular team processes at NCERT and with many other state government initiatives. He may be contacted at arvind.sardana@apu.edu.in

Textbooks in Taking Democracy Forward

Hridaykant Dewan

Introduction

The idea of democracy has structured discussion on human societies in recent centuries. It has been a major pillar on which the construction of society is sought to be enabled. There are multiple ways of considering how democracy can be manifest is a society, but there are broad characteristic features that can be considered to be key to the idea of democracy. The Preamble of Indian Constitution considers these to be:

a. Equality of status and of opportunity. This implies equality in terms of participation in all aspects of the functioning of the society

b. Liberty of thought, expression, belief, faith and worship. The wording of this is over-arching and includes not just what is generally known as religion and its practice. Considering these two together implies liberty to be a part of the community of people constituting the country with your own thoughts and ideas

c. The third is social, economic and political justice to all, and the last

d. Fraternity, the feeling of oneness among the citizens constituting the nation.

Ambedkar, a key figure in the process of writing of the Constitution, believed that it is fraternity that is central to the enterprise of building a democratic society. Without substantial gains in fraternity, the other three would remain distant[1]. The democratic citizen, therefore, needs to be able to respect the being of the others and have her own views and ideas that emerge from a belief in equality and justice. This would then enable her to analyse and recognise what would be just in a situation, thus contributing to making choices for the nation. Hence, to have the ability to distill information and judge it for its worth, she needs to feel empathy and appreciate the diversity that exists within the population. We can perhaps add to this list or redefine it in many ways but these are central to a democratic community. There are difficult choices about how to react to challenges to this democratic community, but all these have to be within this framework.

Indian schools, textbooks and democratic citizenship

While considering Indian society and the interplay between education and democracy, we will keep these four pillars in our mind, in particular, the aspect of *fraternity*. The key question is how carefully and creatively the school programme and textbooks address the question of fraternity, as a first step towards making children from all backgrounds and dispositions feel welcome and included. Can they find themselves represented with dignity and with a sense of purpose? Does the school programme leave students with a purpose and a dream on which they can construct their lives?

There is similar worry about the issue of *equality of status and of opportunity*. Can the school make children feel equal and in some way help achieve equalisation among them? Can it shift status differences and bring them on a more even keel? Are the school and the textbooks likely to mix children across backgrounds, becoming catalysts for groups that develop the feeling of being equal and being able to act in that manner?

The initial euphoria about universal education and the possibilities it holds has mellowed down in the last fifty years and it has been quite convincingly argued and empirically shown that the school experience, the curriculum and textbooks: all of these tend to reproduce the same social composition as before. The school, in fact, establishes and reifies it. That the school could provide a space for reducing the existing gaps of income, status and role, as well as build bridges of communication across communities, was shown in the initial year of educational expansions, but slowly the nature of school revealed itself by the systematic separation of children from different backgrounds into different kinds of schools. Even the curricular expectations and the efforts of the teachers in these schools displayed awareness of the wide gap between the backgrounds of the children and held out virtually no hope to those at the bottom. There were, and still are, a few outliers from the low stratum of the community and they

do make it to the next level and escape their fate of being confined to their deprived background. But these are rare exceptions and even though often held out as the models justifying the possibilities in the system, they are actually only a few counter-examples to the general reality of the school and its programme.

Education, textbooks and inclusion

Our education system was/is half meritocratic, and is so in a skewed manner. It does not give all equal opportunities to rise, but is meant to reproduce an amenable and differentiated workforce, both formal and informal. It is stated to allow equal opportunity, but in reality the nature of schools that children from different backgrounds go to, the kind of materials they are provided with, the kind of treatment they get and also the way the school deals with their parents and community, makes the opportunities extremely unequal. The school looks at the language and culture of children from deprived backgrounds with disdain and derision.

School programmes and textbooks focus on the attempt to create, in children, an awe of the system having an unquestioned acceptance of a hegemonic value system. It seeks to develop children into individuals who fit into expected gender, caste and class roles. As mentioned, there have, of course, been opportunities for a few individuals to move up to better economic and professional chances to move up for a few individuals, but there is no equalisation of opportunities across social groups anywhere in sight. Thus, education largely reproduces and legitimises inequality even while producing some rebels and radicals.

And it is this that we see being virulently attacked by strong proponents of inequality and hegemonic stability. Attacks on universities and on textbooks have been routine in the past decades and are becoming sharper and more violent and gaining a wider resonance in a society torn by fear, anxiety, self-centredness, with a desire for excluding and declaring as many as can be as the *other*

Curricula, textbooks and the nation

Curricula and textbooks, too, are affected by this onslaught of a concept of nation, devoid of an acceptance of *diverse people living in it and their practices.* The recent additional emphasis on patriotism has been focused on the borders, parading a sense of superiority and pride in dominating others, including other nations. All this gives a sense of belonging to the nation

without ensuring the commitments that would propitiate such sensibilities as are suggested by the Constitution and a democratic citizenry and has led to reducing further the space for exploration, free expression and exercise of choice. All ideas of critically reviewing the functioning of the state, bringing to the discourse personal experiences contrary to democracy, be it in the curriculum, textbooks, classrooms or the campuses, has come to be considered as acts of sedition. Reflections on the social realities and diverse cultures of the children coming to the school have to be sanitised, and shorn of raw truth by painting it with, at best, the brush of middle class liberalism. But what is even more likely to be seen than that is the vulgar display of upper classes' dominant and hegemonic sense of acceptable and proper behaviour. Even pictures showing children, home, family, their available resources, their dress, what they are playing or doing reflect the rich, the powerful and the elite. It is their manners, their way of life, beliefs and experiences that are seen in the books, excluding the life experiences and choices for the large majority. Their lives and ways of living and their rituals appear, at best, as an exotic lifestyle that is outside the desired goal of the mainstream schools, and most often it is reflected as abhorrent, ignorant and avoidable. School curriculum and textbooks conflate education as development of sensibilities that are most effective in consolidating status quo.

School, textbooks and culture

One important way to do that has been to constantly argue about a superior culture and a superior language linked to it. The languages of the children are not allowed in the classroom for fear that they would pollute the superior language. A fear against allowing children's languages and culture, and having the possibility of its mixing with the dominant language is sought to be created on the erroneous principle of monolingualism as the proper mechanism for being educated and capable. There is an excessive focus on spelling, on pronunciation and improved handwriting. All these are required for efficient workers in a system where ideas developed and decisions and choices will be made by those who may not have the skills to do any of this. Large numbers are needed to transcribe, to attend to customer calls and to do other such things requiring repetition and concentrated rule-following. Yet teachers (perhaps as they have come to believe wrongly or perhaps because it a part of their current identity) conduct the classrooms

in a manner such that students are oppressed by mindless repetitions, copying and avoidance of all aspects of their culture, identity and language. The only correct way of development seen by the school for any child is to escape from her reality around her and seek individual salvation by attempting to ape the ways and manners of the elite.

Nai Talim an alternative?

Nai Talim made some ineffectual attempts to create an alternative definition of education and essentially came up with the conclusion that the textbook is to be aligned with the ambience (social, cultural, economic and political) that the child grows up in and is to be constructed with the teacher. Later formulations notwithstanding, in the early principles of *Nai Talim*, the importance of the child's language and of a common language of communication was an essential element. However, *Nai Talim* and the linked theories of development unfortunately could not adequately address the need for modernism and a change in political and economic status quo. Their idea was that all children work together with their hands in different forms of manual work. They must learn around their environment and through issues that are relevant for them and their community. The community leads the school programme and the school is placed in the economic, social, and linguistic context of the child. All this would help in blending children and communities and link the learning children to the economy in a meaningful fashion, and children would grow up respecting all forms of manual labour, their language, culture and their whole being. They will be more rooted and not lose themselves by chasing mirages. These are perhaps crucial aspects which, if it had been possible to incorporate them properly, could have led to a concept of justice and opportunity that is more equitable.

The *Nai Talim* idea had, however, also flagged the problem of the difference between being literate and what they euphemistically called being being educated. They warned that the education that schools provided led to greed for power and for wealth, a desire to exploit and a feeling of being superior to the rest. It did not help imbibe, or develop, a feeling of inclusion, compassion, sharing, cooperation and a sense of equality. It did not make students change or want the world to change. Rather, it only enabled them to be exposed to more consumerist desires, strive for a greater share for themselves and climb over others to reach coveted places.

That education does not develop an urge to promote equality, justice, liberty and freedom is also argued by others. Even if there are justified reasons given for the need for equal opportunity, space for expression of ideas, feelings, religions dispositions and for justice and the students argue about them, discuss them and write about them fluently, these do not reflect in their sense of action. The knowledge they have does not translate into a desire for making a difference to the world. It does not encourage them to work towards equality of opportunity, justice and freedom of expression and of prayer. It also does not increase the fraternal feeling.

The challenge of education is therefore to build a public education system and textbooks that would be able to make a more rigorous attempt at developing a fraternal feeling and a sense of inclusion. They can also depict in some manner equality of opportunity and a sense of justice, freedom and liberty, expression of ideas and common forms of prayer.

Can education make a change?

The period of the last fifty years in India and in the world has been one of intense effort to educate everyone and then the pressure of ensuring that this happens with quality. As Anyon points out, quoting extensively from the work of other scholars, an analysis of the progress of education and movement towards equitable opportunity across countries and the nature of the governance of the education systems and their processes, suggests that these systems and processes are led and peopled in a manner that it is impossible for them to change status quo. He and many others have argued that we must recognise that whatever we do, the effect it might have is limited. The larger influence comes from the family, the society around and economic necessities. For children to develop a feeling of inclusion and a sense of equality of opportunity requires changes in social and political behaviour.

It is not easy to reflect equality in the short time children are at school through one set of textbooks, when the larger social processes, rituals and the vast set of literature available are predominantly encouraging superiority for oneself and disdain for the rest. The freedom and liberty of expression and religious practice requires a sense of empathy and humility, and also requires that children be heard and provided space to explore their ideas and thoughts. They need space to speak their mind

and receive encouragement for what they have learnt and thought. Even when wrong, they need to be given reasons as to why they should change what they think. So it is only through fair dialogue that they can learn the importance of other views. It is only when they themselves, their ideas and fancies are worked with through concern, rational conversation and patience that they will experience the purpose of such exchanges. The manner in which the school, textbooks and the ambience around reflects childhood and deals with it also needs to be re-examined. Developing children with respect and concern for others cannot happen unless they feel respected and see others being respected and cared for.

Current textbooks and challenges

Textbooks in India have always been hegemonic and skewed, reflecting as desirable and aspirational elite modes of living. They exclude the majority of children from their content in subtle and sometimes fairly gross ways. I will just give a few common examples:

 * *Woh garib tha par imandar tha* (He was poor, yet was honest).

In a similar vein *Aadivasi jungle mein rahte hein aur kand mool khate hein* (Tribals live in the forest and eat fruits and roots.)

or *Ladki hote hue bhi wah ladkon se sab khel khelti thi* (Despite being a girl she played all boy's sports.)

or *Ladki hote hue bhi bahadur thi'* - (Despite being a girl, she was brave).

Diwali Bharat ka tyohar hei aur id hamare Mussalman bhai manatehein - (Diwali is a festival of Bharat and Id is celebrated by our Muslim brothers)

Besides this, stories of kings and their battles, replete with myths and tales of their courage, are scattered across books with hidden, subtle messages about the undeserved hardships they had to go through when they lost some battle. Sometimes, it is described as if they were so unfortunate that they only had dry bread. This, in a country where the midday meal in schools is a means to support survival of children and prevent extreme malnutrition, seems grossly unequal.

In addition, textbooks in general are very kind to the rich and the powerful, depicting them generally as nice, kind and generous people and are loathe to discuss the poor and the inequity, the injustice, the terror and the exploitation unleashed by the rich on the majority. They cannot talk of real examples of caste discrimination or about the ways in which people and resources are being exploited. They do not reflect the poverty and the deprivation of people or their struggles to improve their condition, but only reflect what the state wants to convey to take forward its agenda. The conflict over textbooks when regimes change is only around some of the superstructural elements of culture and history. The rest of the information, including the choice of knowledge and the manner of its presentation, remains unchanged. There is no attempt to build an alternative that uses the knowledge of the community in any way, not even to examine and test its veracity. The possibility of attempting to move towards greater participation in the functioning of the democracy and inclusive participation of children from all backgrounds recedes far into the background.

In the absence of any meaningful representation of the realities of the majority of children, there is no way for textbooks and school programme to show non-elite children as role models or help them build a sense of identity and pride in themselves or their community. They do not build for them any sense of hope and purpose, nor help them imagine and dream of roles and possibilities outside the narrow confines of their lives. And then for some reason, textbooks have to be correct, politically benign and toothless or, in other words, aid in maintaining status quo They cannot even reflect alternative perspectives or question the dominant one. In that sense they fail to provide the crucial element of criticism and arguments as essential components of democratic citizenship. The attempts to develop checklists of don'ts and do's in developing materials results in mechanical filtering and weeding out of any depiction of reality and, with that, any possible hope of bringing in conversation about the real, live experiences of the students.

Going forward and slipping back

Even as I say this, I must point out that, in the last four decades. there have been serious attempts to reshape textbooks These efforts have emphasised building up parts of it from the lived experience of children, allowing children and teachers to construct stories and tasks that they would like to study, bring in the community to share their experiences, present case studies and stories that are somewhat reflective and even mildly critical of the reality of the situation, ensure inclusion of diversity of children in pictures and names, making a deliberate effort to be sensitive to the enormous amount of work women do outside the home

(apart from what they do at home), build humour around important persons, give more rigorously tested information and tasks that are possible for children to do on their own, etc.

These efforts are, however, not unidirectional and progressing towards more inclusion, more context and more space for democratic conversations. They get reversed and changed through various interventions. It has also to be recognised that even when put in to the books they are often ignored or even actively resisted and opposed. The challenge of a democratic school programme is not only to have appropriately constructed materials, but, more importantly, to have teachers and a system that understands, agrees and empathises with the project. If the system, including particularly the assessment, seeks to value the dominant hegemonic perspective and knowledge as the only correct one, in the process ignoring and deriding the existing culture, knowledge and language of the majority of the children, there is no way in which the most carefully created inclusive textbooks reflecting some possibility of accommodating multiple perspectives and critical discussions, can lead to construction of democratic classrooms.

What textbooks do we need?

What is needed to challenge the current view of education as an enterprise of individual salvation or escape is textbooks constructed with a vision of collective and egalitarian purpose of education to build co-operation, and transacted in that manner.. If education is competitively organised and structured to serve as a sieve, a race and a battle to survive and then capture maximum resources, authority, power and comforts, then it can never be inclusive, fraternal, sisterly or familial and democratic.

Textbooks need to help teachers and children examine the ills of society, namely, greed, consumerist desires, exclusions, disdain for the others, anxiety and fear, irrational response to other communities or backgrounds, immoderation, gender discrimination, violence, etc. To examine these, it needs to present and then discuss them. Sanitising textbooks to preclude all such 'ills' makes the school toothless even to be considered as a possibility for challenging the existing state of affairs. Textbooks thus need to be realistic and present carefully constructed situations that open up scope for discussion. They need to be pragmatic in the sense that they only challenge currently help opinions and beliefs to the extent that the school and the teacher can carry it through at that point. The extent and nature of the challenge to present situations and bringing in of discussions on ideas of democracy and inclusion can get more and more incisive as times become more appropriate. The challenge is the danger of slipping back towards old forms as political and social challenges to liberty freedom, equality and fraternity increase.

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Hridaykant currently works in the translation initiative of the Azim Premji University. He has been member of the Founding Group of Eklavya and Educational Advisor of Vidya Bhawan Society, Udaipur. He has been working in the field of education for over 40 years in different ways and aspects. In particular, he has been associated with efforts on educational innovation and modification of state educational structures. He may be contacted at hardy.dewan@gmail.com

An EVS Textbook – Cover to Cover

Chandrika Muralidhar and Ronita Sharma

Background

The National Policy on Education, 1986 emphasised the need to create awareness of environmental concerns by integrating it in the educational process at all stages of education and for all sections of society. The guiding principles of NCF 2005 emphasise on:

a   connecting knowledge to life outside the school

b   ensuring that learning is shifted away from rote methods

c   enriching the curriculum to provide for overall development of children rather than remain textbook centric

d   making examinations more flexible and integrated into classroom life

e   nurturing an over-riding identity informed by caring concerns within the democratic polity of the country

In the Yashpal Report, *Learning without Burden*, the committee pointed out that learning at school cannot become a joyful experience unless we change our perception of the child as a receiver of knowledge and move beyond the convention of using textbooks as the basis for examination.

In this context there was a requirement not only to overhaul the textbooks on the above findings, but to relook at the curriculum, syllabus and the textbook to align with the aims of education. A new set of NCERT textbooks were written in the year 2005.

What is EVS?

The myth that natural resources are available in abundance and can be exploited for our economic growth was challenged long back by George Perkins in 1864. In his book *Man and Nature* published in 1864, Marsh brings forth his concerns about the idea of inexhaustibility of natural resources and breaks the myth of superabundance and spells out the need for reform.

The concern for environment in school education was brought in 1980's in India. This concern was addressed through the textbooks of Environmental Studies. Krishna Kumar in his book *Education, Conflict and Peace* (Chapter 3, *Between Science and Scientific Temper*) talks about the block diagram of a factory showing tall and active smoke stacks which used to figure in textbooks of the 1960s with the caption, *Pilgrimages of Modern India*, now carries the revised caption, *Sources of Pollution*. He further adds that EVS materials attempt to develop the idea of co-habitation or an adjustment with nature not just with animals and plants, but even with physical objects, such as rivers, mountains, and the ocean. The value - premise underlying this idea is that all human acts need to be reviewed in terms of the impact they might have on living as well as non-living components of nature.

Before we start thinking about writing a textbook it is very important to ascertain clarity on aspects that would influence the character of the textbook. First, is a thorough understanding of the subject by the writer/s, second would be the cognitive level at which it is pitched and, third (and most important) that it is being written for the child: meaning it should not be a mini-encyclopedia.

If we look at the very first aspect, what do we know about EVS? In is full form it is interchangeably used as *Environmental Studies or Environmental Science* (for the sake of uniformity we will be using the former as prescribed by the NCERT). The second and third aspects are and should be taken care of in the syllabus that is created for the subject.

EVS is an amalgamation of insights from Social Science, Science and Environmental Education. It is a subject that is introduced at the Grade 3 in primary school and goes on till Grade 5. However, an effort is made to incorporate elements of EVS in Math and Language in Grades 1 and 2. Also, as most primary school curricula have worked on an integrated approach, EVS has proposed *themes* instead of *topics* such as to develop a connected and inter-related understanding *(EVS, NCERT Syllabus)*. What is most significant here is that, a child looks at her/his surroundings as a whole,

absorbs events from immediate environment and does not *compartmentalise* experiences and information. If this approach is not taken then the EVS textbook would be topics from the individual subjects and would not address the holistic creation of knowledge in the child.

Looking at the way in which the subject EVS itself is envisaged it might be challenging to identify 'experts' in this field who could be potential writers/authors/contributors for an EVS textbook. What is desirable is that we put together members who have expertise in Social Science, Science and Environmental Education: teachers who have taught the subjects for a considerable period of time and also people with a background in pedagogy, gender studies, child development and curriculum studies *(EVS, NCERT Syllabus)*. We will henceforth refer to these experts as the Textbook Committee (TC).

An EVS textbook - the road to joyful learning

Once a TC has been instituted, it is essential that the members work together in tandem as the main purpose is to create a resource material complete with all the aspects as mentioned earlier. One of the major tasks of the TC is to reach a consensus on the 'themes' that will drive the syllabus and subsequently the textbooks.

Once the themes are finalised, the herculean task of articulating the syllabus would be the next step. As a matter of fact one has to ascertain if the writers are familiar with the tenets of the *Aims of Education* as stated in the National Curriculum Framework 2005 *(NCF 2005)*, Learning Outcomes of EVS and the EVS NCERT Syllabus as a ready references such that the syllabus and textbooks are in alignment with all these.

Once the syllabus is frozen, the writers would need to decide on the components of their textbook: the pedagogical approach that it would reflect, the assessment strategies, the kind of illustrations, activities, the inclusion of real life experiences of the child, making sure that the content of the textbook does not restrict EVS learning to the classroom. The other components which need equal inclusion are gender and social issues. Above all, the textbook (especially the Grade 5 textbook) must create a link of EVS to science and social science of Grade 6 such that the transition from EVS to these subjects is seamless.

Structure of an EVS textbook

The syllabus in place provides a firm foundation on which the content of the textbook can be built. The chapters of the textbook that flow from the themes in the syllabus need to be well thought out, primarily keeping in mind the cognitive stage that we are addressing, whether Grades 3,4 or 5. Usually since the size, meaning the number of pages of a textbook, is restricted it would help that the writers are cognisant with this, although this should not in anyway restrict them from writing what is needed.

While the contents of the chapters are being drawn out there are certain sections of the EVS textbooks which need to be worked on simultaneously. These are:

1. Note to the Teachers and Parents - this could include the rationale of writing the textbook, the guiding principles that aligned the contents of the textbook to them, the approach to pedagogy in the textbook, kind of tasks included etc. The purpose of this note could be to provide an overview of the textbook to both teachers and parent.

2. Teacher's Page – This page could be a brief account of the contents in the chapters related to a theme and serve as a ready reckoner to the syllabus for the teacher using the textbook with the key concepts and objectives of each chapter included. The number of pages in the Teacher's Page could be at the discretion of the writers. For example, if the EVS theme is *Clothing and Shelter* and a chapter is addressing it, then the page might say the following:

> *Chapter A, intends to create an atmosphere for the child to appreciate the different kinds of clothes worn by people in _____ (name of the State for which the textbook is written) and to attain a sense of the fabrics used to make clothes. There is also a conscious attempt made to appreciate and respect the traditional knowledge of weavers and the contribution of the tailors towards the community.*
> *The activities included in the chapter are – picture compositions, matching sketches to certain objects, field visit (to a nearby tailor's shop) and experiments. An attempt has been made to sensitize the child by including acts of sharing and caring.*

Another very important inclusion in the page could be the different EVS skills which are being addressed by the theme like observation, discussion, expression, explanation, classification, questioning, analysis, experimentation, concern for justice and equality and cooperation *(Source Book of Assessment in EVS, Classes 1 to 5)*

3. Teacher's Note – these could be included right through the textbook. The purpose of these notes is to guide the teacher in teaching the concept being discussed on a particular page. The content of the note could urge the teacher to read more and explore the topic under discussion

   (The positioning of the above three could be the discretion of the writers)

4. Symbols/icons for activities – the use of symbols or icons to depict activities like *Write, Think, Work in Groups, Let's Make It* and so on will add to the visual appeal of the book as well as support the child in relating to the activities through them.

Illustrations form an integral part of any EVS textbook. An effort could be made to strike a balance between including sketches and images. The presence of sketches would encourage the child to connect pencil to paper and also nurture the artistic skills in a child. Also the illustrators need to be conscious of striking a balance in the sketches – with regard to gender representation. For example, if the picture is of a family, it is not necessary that the mother carries and takes care of the children. The father could also be shown sharing the chores. There could be relevant questions included to explore this concept.

Questions which are included in an EVS textbooks need to be more on the explorative side rather than questions which have either a Yes or a No answer. It would be ideal not to include End Text questions which attempt to gauge the rote learning skills in the child. For example, if the topic being discussed is Food and its optimal use and avoiding wastage – *What do you do with the uneaten food at home after a festival? What about your neighbours? How do they make use of the uneaten food? Visit two of your neighbours and ask these questions to the elder members in the family. Do you eat all the food that is there on your plate? If no, then what do you do with the uneaten food?*

An apt closure to textbook preparation would

be to orient the teachers who teach EVS to the new textbook. This would support the teacher to effectively take the content of the textbook to the learners. It would also provide the textbook writers insights into the way the books are being used in the classroom

Taking it forward!

How are these values of EVS taken forward?

The position paper of social science brings out the *normative concerns*, i.e. the social sciences carry a normative responsibility to create and widen the popular base for human values, namely freedom, trust, mutual respect and respect for diversity. Given this, social science teaching should aim at investing in children a critical moral and mental energy to make them alert to the social forces that threaten these values. Through the discussion of concerns such as threats to the environment, caste/class inequality, state repression, through an interdisciplinary approach, the textbook should stimulate the child's thought process and creativity.'

In The NCERT History textbook, *India and the Contemporary World I and II,* the theme *Livelihood, Economies and Societies* helps the child to look into the life of forest dwellers, peasants, pastoralists and how their lives got affected by certain laws and modernisation. It also brings in several other aspects like *Work, Life and Leisure*. The knowledge that the great cities of the world today, for instance, London and Paris, came into existence as an outcome of the Industrial Revolution helps the students to reflect on the problem of housing, the condition of marginalised groups, cleanliness and even the introduction of the London underground railways. Charles Dickens wrote in *Dombey and Son* about the massive destruction in the process of construction.

'Houses were knocked down: streets broken through and stopped; deep pits and trenches dug in the ground; enormous heaps of earth and clay thrown up;.....there were hundred thousand shapes and substances of incompleteness, widely mingled out their places, upside down ,burrowing in the earth....'

The process of urbanisation and the development of cities everywhere around the world came at the expense of ecology and the environment.19th century England cities like Leeds, Manchester could be seen emitting smoke from the factory chimneys. People started demanding for cleaner air and hence wanted control through legislation.

Calcutta (now Kolkata), too, faced the problem of air pollution and came out with the Bengal Smoke Nuisance Commission to combat industrial smoke.

The chapter *Forest, Society and Colonialism* initiates students in the history of deforestation, plantation, the rise of commercial forestry, scientific forestry and the introduction of the Forest Act, Criminal Tribes Act introduced by the colonial rulers in India in India as well as in Africa how these laws affected the life of the people living in jungle. In Kenya the the grazing lands of the Masai Mara were turned into game reserves by the colonialists The Serengeti National Park, for instance, was created over 14,760 km. of Masai grazing land. Social and political life textbook brings up several issues from the EVS and discusses them on various aspects. For example –Water. It raises issues on the power equation related to water. Who gets water? Who receives what amount of water? Who gets what quality of water? Who fetches water/ etc.? . An excerpt from the chapter *Understanding Marginalisation*:

'History textbook underlines the shaping of forest policies by colonial state and treats the issue like deforestation as manifestations of those policies. However for social and political life, India's Adivasis shows that 79 per cent of the persons displaced from the states of Andhra Pradesh, Chhattisgarh, Orissa and Jharkhand are tribal. Huge tracts of their lands have also gone under the waters of hundreds of dams that have been built in independent India. In the North East, their lands remain highly militarised and war-torn.'

Students are given an issue that is happening at present in the contemporary India. This provides an opportunity for students to think critically about this conflict. Are the laws different from the colonial past? The recent verdict of the Supreme Court on the eviction of the adivasis from their homeland will definitely help students to think critically and become informed citizens.

Hence we find that the values, concerns, issues raised in the EVS textbook sees progress in a much more complex manner in social sciences.

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Position Paper on Teaching of Social Sciences

Chandrika has been with the Azim Premji Foundation for the past nine years, and is currently a part of the School of Continuing Education and University Resource Center, Azim Premji University where she contributes to professional development programmes. She has been working in the space of science education, teacher capacity enhancement and textbook writing. She is also an integral part of the editorial team of the publications brought out by the Foundation. She may be contacted at chandrika@azimpremjifoundation.org

Ronita is currently working with the Institute of Assessment and Accreditation, Azim Premji University. She is engaged in capacity building programme for teachers, large scale assessment and textbook writing. She has taught social sciences in primary, secondary and higher secondary grades over a decade. She may be contacted at ronita.sharma@azimpremjifoundation.org

Taking Textbooks to Schools

Parthasarathi Misra
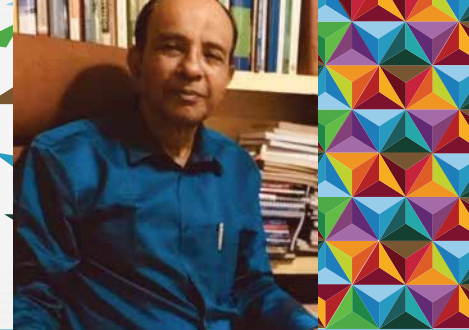
It was a hot summer afternoon of 2016 in the capital of an Indian State which had invited us to be associated with its textbook renewal exercise. We were working with the Faculty of the State Council of Educational Research and Training (SCERT) of the state and a few textbook writers drawn from two other organisations working in the field of education. Suddenly, the serene academic atmosphere of the place was marred by a slogan-shouting mob who had entered the SCERT building to gherao and submit a memorandum to the Director, SCERT alleging 'gross irregularities' in the process of textbook revision initiated by the Government. The demonstrators also raised slogans against outside forces interfering with the textbook revision exercise of the State. The SCERT colleagues working with us in our respective groups advised us not to venture out. I peeped through the window and was shocked to see that the majority of the demonstrators were in their early twenties!

A textbook narrative is a difficult terrain for the people involved in the process of conceptualising and contextualising a textbook as per the objectives of a curriculum specified by an educational authority. The curriculum, the syllabus and the textbook have an umbilical relationship in the domain of education and the people entrusted with the responsibility of designing and delivering good textbooks to learners try their level best to adhere to the guidelines incorporated in the policy documents. But in spite of their sincere efforts, textbook writers are often at crossroads, facing the wrath of a number of stakeholders keen on capitalising on the textbooks for their narrow partisan objectives. The present article, therefore, aims at demystifying textbooks by narrating and critiquing the actual process of converting the curriculum to texts, highlighting the manner in which decisions are made regarding choosing content and placing them systematically within the overall curricular arena. It also points out how a communication gap between the parties involved in the preparation, production and distribution of textbooks affects the whole exercise of making textbooks available to the students who are supposed to be the primary users of the textbooks.

Curriculum designers, textbook writers, illustrators, publishers, the educational administrators and policy makers have their specific priorities and perspectives which are often incompatible with one another and it is indeed a herculean task to accommodate conflicting priorities and perspectives in designing a particular textbook.

Demystifying textbooks

According to a tradition followed by people in many parts of India, the formal learning of a child called *vidyarambah* begins with the worshiping of a textbook. This ritual of introducing the child to a textbook makes the textbook synonymous with formal learning. For the child, it is an object of reverence, an artefact to be kept on a high pedestal, she should not treat the textbook at par with her toys, picture books and other household objects available to her. When she comes to school, a textbook is handed over to her as the symbol of her bondage, in order to prove her progress in the realm of learning she is forced to memorise and reproduce its content verbatim.

For her teacher too, teaching the textbook in the class is synonymous with the whole of education. The textbook haunts the poor teacher, as any deviation from the syllabus and the content of the textbook may invoke the wrath of the authorities and the disapproval of her learners and their parents. She surrenders to the textbook meekly, jettisoning the pedagogical practices she had learnt in her teacher education programmes.

However, the practice of using textbooks as complete curriculum goes against the recommendations of the Position Paper on Curriculum, Syllabus and Textbooks published by the National Council of Educational Research and Training. Lamenting the excessive importance given to textbooks, the said policy document observes:

The present day classroom practices are, in almost all schools of the country, totally dominated by textbooks. As a result it has acquired an aura and a standard format. What is needed is not a single textbook, but a package of teaching- learning material that could be used to engage the child in active learning. The textbook thus becomes a part

of this package and not the only teaching learning material (NCERT, 2006: 37).

The role of textbooks and the politics of textbooks are debatable topics across the globe. Textbooks affect the students' autonomous learning adversely and stifle the creativity of the teachers. Pointing out the negative side effects of the textbooks, Koutselini (2012:33) observes, 'Replacement of curricula by textbooks means viewing the teaching process as delivery of a final product, ready-made in the content of the textbooks, which must be delivered by teachers and memorised by students.' Krishna Kumar (1986:1309) calls the textbook the symbol of 'the teacher's subservient status in the educational culture.'

It is, however, gratifying to note that in a recent circular issued on 18 January 2019, the Central Board of Secondary Education has clearly stated that schools, principals and teachers should go beyond 'using textbooks as a complete curriculum, or assessing children on the basis of questions given at the unit end exercises.'

Ownership of the textbooks in the Indian context

The institutional mechanism for textbook production in India started with the establishment of the National Council of Educational Research and Training (NCERT) in 1961. Subsequently, State Councils of Educational Research and Training (SCERT) were established in almost all the states on the model of NCERT. Though NCERT prepares textbooks for the whole country, the mechanism for textbook production for state schools varies from state to state. In some states, SCERTs, or the State Bureaus of Textbook Preparation and Publication, are entrusted with the task of the preparation of the textbooks while in some states the Boards of Secondary Education, Higher Secondary Education Councils or Elementary Education Councils are the nodal agency for the preparation of the school textbooks. Again, in some states more than one Government sponsored body is involved in the preparation of the textbooks and, consequently, a lot of academic and administrative animosity crops up among these academic bodies.

Criteria for selecting the content

Once a textbook committee is formed by the Government, the members of the committee meet for brain-storming sessions to arrive at a general consensus on the broad principles of selecting the content. The following points are generally taken into account in these brainstorming sessions, usually presided over by the Director of the SCERT or a distinguished expert working in the particular

domain, the following areas are discussed:

a   selecting the content which aligns with the aims of education and the Constitutional values

b   choosing grade and age appropriate content to be used in the textbook

c   balancing the regional, national and the global content

d   specifying the pedagogically suitable content

e   the question of avoiding the stereotypical presentation of class, case and gender in selecting the content

f   the difficulty level of the content.

In the case of language textbooks, theoretical perspectives of language teaching and their pedagogical implications are often hotly debated by the members while in the case of social science textbooks, the ideological perspectives of the members are debated and examined in the context of content selection.

For the elementary level of textbooks, one of the major concerns for the textbook writers should be the selection of child-centric age appropriate material for the textbooks, but an analysis of the content of the textbooks meant for elementary classes across the country indicates that adequate attention is not paid to the child's prior knowledge, age appropriate capability and the level of her conceptual development. While referring to the textbooks of a particular Indian State, Chomal (2016:64) points out that 'Selecting, pitching and presenting the information in a manner that would be age appropriate was *inadequately addressed* in the textbooks'. (Emphasis mine)

The selection of the content of a textbook has implications for the shape and the physical features of the book. The sequencing of the content, the organisation and the length of the chapters, graphs and tables, the text narrative, illustrations, pre reading, while reading and post reading activities and the end-of-chapter questions add to the overall readability of a textbook. Again, while designing a language textbook, the writers have to decide if it will be accompanied by a work book, and while designing a social science textbook, the writers have to decide the titles for supplementary or additional reading.

In order to make the content of a textbook pedagogically relevant for the teachers, textbook writers often advocate the preparation of a Teachers' Manual. Fearing that many teachers will not take the trouble of reading a separate Teacher's Manual, textbook designers often insert

a few Teacher's Pages between the chapters of the textbook. Besides the Teacher's Pages, brief notes for teachers are also incorporated at the bottom of a few pages as and when the textbook writers believe that the teachers need specific guidance while using the content of those pages.

The selection of the content of a textbook may seem to be an uneventful event, but the insiders involved in the process of textbook writing can vouch for the birth pangs in of a textbook. It is often noticed that members of the textbook committees have different perceptions and uneven level of experience. Conservative outlooks, rigid theoretical underpinnings, political perspectives, personal equations and institutional affiliations often create a lot of animosity in the selection of the content of a textbook.

How often should we change the content of a textbook? It is observed that some states initiate the process of textbook renewal without revising the curriculum or the syllabus. The guidelines given by the Karnataka State Education Policy (KSEP) in respect of the content of a textbook and the frequency of the revision of the textbooks are quite significant. The said policy document observes:

'It is important to stabilise the usage of textbooks and not keep changing the content for at least three years unless there are inaccuracies. It is to be recognised that often schools text books are the only access to reading material that students from poorer sections of society have. It is therefore important to take great care of the content of the text books, and ensure that it is not written only for examination purposes' (KSEP, 2016:54).

Hazards of textbook writing

One may wonder why Indian textbooks often get negative publicity in the media. Factual errors, inappropriate content, grammatical errors, inappropriate language use, faulty illustrations, pages published upside down, empty pages or inordinate delay in the distribution of textbooks to schools cause a lot of embarrassment to the Government. The time constrain faced by the textbook writers is the most dangerous factor that makes the content of a textbook susceptible to inaccuracies. The members of the textbook committees in almost all the states of the country are not full time professional textbook writers. They are deputed to the SCERTs for attending textbook writing workshops for a few days and during these workshops they select the content and prepare the first draft which is finalised by the whole group and approved by the Chairman of the committee.

The illustrations are generally singlehandedly done by the artist of the concerned SCERT or an outside agency which is roped in only when the manuscript is ready. There is hardly any interface between the textbook writers and the illustrators. The writer's intention of having a picture for supporting the content and the illustrator's interpretation of the content should be aligned, but the lack of communication between the textbook writers and the designers or the illustrators often make the illustrations irrelevant, thematically as well as pedagogically.

The distribution of the textbooks is the nightmare of the education officers entrusted with the responsibility of sending the books to the different parts of the state. Inviting tenders for carrying the textbooks from the state capitals to the different parts of the state, the timely payment to the transporters, the storage of the textbooks at the district or the sub-divisional level and the statistical work related to the number of schools, the children and the textbooks affect the distribution of free textbooks to the state-run schools of the country. There are instances where transporters refuse to carry books to the districts for the non-payment of their dues for the work done by them in the previous year. Taking textbooks to schools is a difficult task indeed!

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Parthasarathi, a post-graduate from Nottingham University (UK) and a Ph.D. (Calcutta University), is a Visiting Faculty, Azim Premji University, Bangalore. Besides teaching a Curricular Material Development in Language course to the postgraduate students of the University, he is involved in designing and facilitating short term professional development courses of the School of Continuing Education and University Resource Centre of the University. He may be contacted at partha.misra@azimpremjifoundation.org or misrapartha2018@gmail.com

Social Science Textbooks: Changing Mindsets?

Deepti Priya Mehrotra

Social science textbooks created within the NCF-2005 attempt to tackle a whole range of human prejudices, hoping to bring about a sea change in mindsets. They are designed to inculcate respect for diversity, democratic values, critical thinking and questioning. As is widely acknowledged, these textbooks are framed within a progressive educational, social and political understanding *(Ritubala and Joshi, 2008-09: 29-42)*. The matter in these textbooks is engaging, varied and playful: the wall between the world and the school has been broken and the child can bring her rich experience of the world into the classroom *(Rai, 2006: 152-57)*. But we must remember at the same time that the textbook is no magic wand, nor really a vehicle for transformative education. In fact there are many hazards on the textbook's journey, as it moves through the classroom, and the world of the child.

Social science deals with the whole big human circus, including our own actions and emotions. Children learn about human agency, creativity and possibilities across time and space, and this may encourage them to expand their horizons, question their prejudices. When the EVS Class 3 textbook chapter *Foods We Eat (NCERT, 2007a: 38-44)* explores different items cooked in different homes, the intention is to encourage students to appreciate the enormous range of viable foods and food cultures and question prejudices absorbed from early conditioning. Indeed, it may well do so. In the hands of an open, imaginative teacher this could provide rich material for discussion and strengthen mutual understanding across differences of culture, class, caste, gender, religion.

However, the same exercise can go horribly wrong, particularly with an insensitive or deeply prejudiced teacher. If she holds, for instance, that 'non-vegetarianism is bad', she may flaunt this notion in her classroom, allowing some children to feel superior while others feel belittled and humiliated. Such interventions can dilute, distort or even subvert the learning process. The danger is most acute in the case of social science, for this is where human prejudice, emotion and belief are often most intense.

Similar is the case with questions like *On which vehicles have you travelled?*, followed by: *Which ride did you enjoy the most? Why?*, in EVS Class 4 textbook *(NCERT, 2007b: 62)*. A child who has travelled widely and on varied modes of transport may end up feeling immensely superior to the child who has barely ventured out or used any vehicle. However, a well-prepared and democratic-minded teacher would be able to transform the same situation into an opportunity for engaged discussion and mutual learning. The point is that bringing in children's experiences into the classroom creates a concomitant responsibility. The education system must be prepared to handle the consequences, when interpersonal differences and personal vulnerabilities emerge into the open.

The power of textbooks – and teachers

Until recently, the multiple forms of life that children experience at home and elsewhere was seldom accorded space in the classroom *(Bhattacharya, et al, 2008-09)*. NCERT textbooks have tried to reverse this trend by consciously inviting children to share their experiences within the classroom. Alongside, somewhat paradoxically, there is an effort to de-emphasise the role of the textbook. NCF-2005 *Position Paper on Curriculum, Syllabus and Textbooks* noted

'The present day classroom practices are, in almost all schools of the country, totally dominated by the textbooks,' *(NCERT, 2006, p viii)*.

The new textbooks, however, try to limit their own use. *A Note to Parents and Teachers* in the EVS textbooks for Classes 3 and 4 states

'The textbook is only one of the many teaching-learning materials used by teachers. Thus, this textbook should only be viewed as an aid to the teacher, around which the teacher could organise her teaching to provide learning opportunities to children' *(NCERT, 2007a: xi; NCERT, 2007b: vii)*.

Since there has been no effective re-education of teachers on the philosophy underlying NCF-2005, motivating them to change their modes

of teaching, most teachers still continue to place textbook lessons at the centre of their teaching process. The new textbooks are fitted into old modes of transaction. What happens then to the multiple questions and exercises in these textbooks, carefully designed to bring out children's independent thinking, respect for diversity and so forth? In some schools, the new textbooks are indeed helping do this – those schools, or the rare classroom, where there is a supportive, democratic ethos. In other classrooms the textbooks perhaps create more problems than they solve. For instance, take the question, *Has it ever happened to you that on some day you were very hungry but there was nothing to eat? If yes, why? (NCERT, 2007a: 39)*. A deprived and vulnerable child may end up feeling more vulnerable, as she admits to hunger and poverty in a class of well-fed, or relatively well-fed, children. The system provides no scaffolding.

An accompanying illustration shows children sitting in a circle describing what they ate last night. One says nothing was cooked in her house. But her poverty is sanitised: her clothes as clean as the other children's, no sign of visible under-nutrition in her body *(NCERT, 2007a: 38)*. It is an idealised image and, as such, dishonest. While the lesson urges children to talk about their real worlds, it fails to fully acknowledge and therefore dignify the reality of the underprivileged child. Deprivation is skimmed over, uncomfortable realities ignored. A footnote states, 'It is important to develop a rapport with children and create an environment where they can express themselves freely and their views are heard with tolerance' *(NCERT, 2007a: 39)*. However, when children do begin to express themselves, a far higher order of facilitation is required than is conveyed by the word *tolerance*. The teacher has to ensure a safe space, where she and her students are non-judgmental, deeply caring and respectful (not just tolerant) of each others' realities and diverse worlds. Self-expression must not be considered an end in itself, but a part of the complex process of developing mature and sensitive human beings.

In fact our classrooms are seldom safe spaces, for they are but a cross-section of wider society. Most classrooms are rife with conflict and prejudices based on caste, class, gender, religion. These may emerge into the open when impelled by a text, exercise or pedagogic mode. Strong emotions may be evoked—pain, shame, anger, guilt, aggression,

arrogance and so on. For teachers to play the role of facilitators, they would need to be non-judgmental and transform conflict through reasoned discussion and carefully nurtured trust. Effective teachers would help students reflect on their experiences, actively listen to others, analyse multiple realities and develop wider perspective on social structure, inequalities and injustice. Such teachers would be deeply committed to democratic social change, as well as personal growth—students', as well as their own.

For education to be transformative, the educator must first be transformed! Clearly it is true that:
'To enable the child to grow up free from prejudice, one has first to break down all prejudice within oneself…. It is constant inquiry, true dissatisfaction, that brings creative intelligence.' *(J Krishnamurti. 2008: 54-56)*.

Rather than genuine commitment on the part of educators, we often have the mere effort to be politically correct, thus we mouth platitudes, even as we serve up old wine in new bottles.

Sustained work with teachers can yield significant change. Schoolteachers, such as *Eklavya* worked with over long years in Madhya Pradesh, can become extraordinarily motivated when approached with respect and initiated through a transparent, participatory educational process. *Eklavya* engaged intensively with teachers as well as students in ordinary schools, resulting in:
'a richer and more vivid image of things being talked about, the ability to go beyond banal explanations into more substantial ones, a beginning as far as seeing the interconnectedness of social phenomena, and, finally, perceiving 'other' people in a less judgmental manner.'

Eklavya educationists realise that a genuine process of change is long-drawn and multi-faceted; a lot still remains to be done:
'A great deal of non-textual activity is necessary, we have learnt from our experiences with children - oral narrations, drawing pictures, making clay representations. They need greater feedback on their writing, greater orientation regarding the structure of the texts, more time to read and prepare, more attentive discussions and explanations from teachers, and, what is very important--a far greater space to talk about their experiences in the course of the lessons' *(Paliwal and Subramaniam, 2010: 43-47)*.

Transaction of the curriculum: subversion along the way

NCF-2005 recommends flexibility in teaching-learning modes, so that `the process of acquisition of knowledge becomes the process of active creation by the learner (NCF-200: 26-27).

There is tension, however, between the Central National Curriculum on the one hand and its own espousal of alternative modes of teaching and learning on the other. Textbooks, produced within a calibrated education bureaucracy, are part and parcel of a vast system of mass instruction, with print orders running into the order of five crore copies (Gohain, 2018).

Technology comes to the rescue of teachers and students who wish to continue in the old mould! The internet is replete with online gurus who provide solutions and solved question papers. Between teachers, tuitions and online gurus, there is ample pre-digested material now available for students, which he can memorise rather than having to develop his creative thinking and questioning skills! If pre-set texts, disinterested teachers and tutors (in-person and online) dominate the learning process, the space for active construction of knowledge by learners is severely compromised.

Here I list a few instances from online gurus: some of the 'solutions' a cursory search on the net has yielded. There are several websites similar to the one I quote from, which is called *CBSE Tuts*. The examples I have picked *(Bhagya, 2018)* are for students of Class 10, Political Science, relevant to the chapter *Gender, Religion and Caste (NCERT, 2008: 39-56)*:

Q: Suggest measures to check casteism in India.

A: 1. Spread of education...; 2. Economic equality...; 3. Abolition of reservations – Reservation in government jobs, education and other sectors creates conflicting attitude among members of two different castes. When the people of higher castes having adequate educational qualifications are deprived of all facilities, they revolt against the lower caste people.

Q: How is gender division understood in Indian society? To what extent does political mobilization on gender basis help to improve women's role in public life?

A: In the Indian society gender difference is taken as socially constructed basis to differentiate between the roles played by men and women. Sexual division of work has become the mindset of the society. Because of this women face discrimination and have become the victim of patriarchal system. Even after adopting the concepts of equality and liberty, we lack practical approach. It is therefore necessary that political mobilization helps to improve women's role in public life. Political parties should come together to frame policies for equal representation of women in the national and local politics. This will widen the horizon for women. Taking part in the decision making will encourage them in their day to day affairs. They will develop maturity and responsibility.

Q: Define communalism as an ideology.

A: Communalism is a strong sense of belonging to particular community especially a religious community, which often leads to extreme behavior or violence towards others. It cannot tolerate and respect people belonging to different religious communities.

The (above) answers provided on the net are in complete contradiction to what the textbooks try to teach. They are downright crass, regressive, casteist/ patriarchal/ communal. And yet, many students use such websites and write in appreciative comments, grateful for sub-standard material they can mug up, rather than have to think out answers.

The Kothari Commission noted:
'...it is a long and burdensome task to convert a school system that is based primarily on memorization into one involving understanding, active thinking, creativity.... Each step is not a step but a leap into the unknown... (Kothari, 1966).'

In the case of the social sciences, a wrong step could convert classrooms into seething hotbeds of open conflict, reinforce unjust power, suffering and violence, rather than meaningful engagement and transformation.

Texts and Contexts

I turn now to some flaws in NCERT textbooks, a kind of democratic deficit in the context of underprivileged children and communities.

A Note to Parents and Teachers in EVS textbooks Class 3 and 4 (NCERT, 2007a: x; NCERT, 2007b v-vi) states: `Activities in the book that demand that children be taken for observations to the parks, fields, water bodies, into the community, etc,

reiterate that EVS learning primarily occurs outside the walls of the classrooms.'

Class 3 activities include:

Spend some time under a tree. Observe the animals carefully

Choose a tree near your school or house and make friends with it

Go outside and look for birds on trees, in water, on the ground, in and around bushes. How many birds could you see?

Copy the sounds made by any three birds. Collect feathers which you find lying around

From where do the plants growing around your house get water? *(NCERT, 2007a: 8, 17, 54, 60)*.

Geeta Kumari, teacher in a primary school situated in an urban slum, has found it impossible to carry out any of these activities, for there are virtually no trees, plants or birds to be found in or near her school! Another activity advocated is taking the children to a post office *(NCERT, 2007a: 115)*, which she has tried and found utterly impractical: 'The school refuses to give me permission because how will I ensure safety of 45 girls during the two kilometre walk to the nearest post office?'

Geeta has a few children of *rikshawalas* studying in her class. She observes that, for them, the ethos reflected in the textbooks is too alien, an ethos of fun and careless leisure which they can barely relate to. Working class children do not easily connect with the bright and happy images and the flowing language of the textbooks. The books fail to acknowledge the grime and dirt, the pain and suffering, the indignity and deprivation which are a large part of their everyday worlds.

Socio-political concerns are reflected in language/literature textbooks as well. The story *Sunita ki Pahiya Kursi*, in Class 4 Hindi textbook *(NCERT, 2007d: 97-102)* describes Sunita, a differently abled girl, going to market on her own, entering a grocery shop with a bit of help from a young friend, Amit; later, she races down the road, Amit on the back of her wheelchair. The story tries to convey that a child with disability is as 'normal' as any other: but it may well be overstating the case and overdoing her independence. The depiction of Sunita careening down the road, with another child riding pillion on her wheelchair, is unrealistic and dangerous. Wheelchair users often require some assistance for activities of daily living, such as dressing, eating etc. The story may perform a disservice to them, trivialising their troubles and obscuring their needs.

In fact the story seems to impose a new stereotype of `normality', which is actually a fresh expectation and pressure on the differently abled child.

The NCERT Hindi textbooks for Classes 3, 4, 5 *(NCERT 2007c, NCERT 2007d, NCERT 2007e)* also fall short on grounds of gender. A count of characters in the three textbooks indicates a startling imbalance: 75% characters mentioned in the text are male, 25% female. There is similar acute imbalance in visual representation: in Class 4 textbook, 74% figures in illustrations are male, and 26% female *(Mehrotra and Ramachandran, 2010: 54-61)*.

Hindi Language Textbooks	Total characters	Male characters	Female characters
Class 3, 4,5 (combined): TEXT	162	121 (75%)	41 (25%)
Class 4: ILLUSTRATIONS	381	280 (74%)	101 (26%)

Such skewed gender composition presents children with an excessively masculine, male-dominated world. Additionally, girls and women are rarely shown in groups, while boys and men are in groups—playing ball, students with teacher, in the marketplace, on the street etc. And, although women are shown pursuing diverse occupations, when it comes to household tasks, overwhelmingly it is women who perform these--as if that is the natural order of things.

1. Household chores are overwhelmingly performed by women, in a seemingly `natural' way:
As in this image from the story 'Sunita ki Pahiya Kursi' (NCERT, Rimzhim 4, Hindi textbook for Class 4, p 98)

The textbooks try to give politically correct messages, but sometimes the result is a kind of doublespeak, or sophisticated hypocrisy. For instance, the lesson `Drop by Drop' has text and visual, in EVS Class 3 textbook (NCERT, 2007a: 134) of women and girls fetching water in pots from a pond, and a footnote stating 'In the above visual, consciously defined gender role of women has been shown (fetching water). Discuss on this issue in the class to remove gender discrimination.' While the aim is laudable, it is strange and highly reductive, to expect that gender discrimination can be removed simply through a classroom discussion on gender roles. It betrays lack of understanding of social complexity and deeply entrenched gender asymmetry.

2. An `asura' whom the boy-hero wishes to kill, as did Ram: a dangerous depiction:
`Khilonewala, (NCERT, Rimzhim 5, Hindi textbook for Class 5, p 21)

In the Class 5 Hindi language textbook, the poem *Khilonewala'(Chauhan, 2007: 20-23)* begins beautifully, with a small boy looking at an itinerant toy-seller's ware. He decides to buy a sword, bow and arrows to female demon) and the *asuras* (demons). The accompanying illustration depicts an *asura*, a forest-dweller, who could well be conflated in an adivasi (tribal). An adivasi group called *Asur* in fact to date dwells in Jharkhand.

The portrayal is extremely problematic: more so at a time when tribals are being forcibly displaced due to land acquisition by corporate and state forces. Through such literary and visual tropes, tribals get subliminally identified as evil figures, which the righteous are justified in killing. An aggressive and hyper-masculine version of *Ram* is valorised, no doubt encouraging school-boys to emulate this stereotype. Some of the exercises make a bad situation worse by and presuming that all students must already be familiar with *Ram, Ramayana and Ramlila*; and failing to provide any secular, historical frame to the poem.

Deepti is an independent scholar. She taught in the Department of Sociology and Political Science, Dayalbagh Educational Institute, Agra (2017-18); and as guest faculty for B.El.Ed, Lady Sri Ram College; M.El.Ed, TISS; School of Human Studies, Ambedkar University Delhi. She presently teaches 'Philosophical Perspectives in Education', at IAAT, Gurugram. She has designed curriculum at university as well as IGNOU, NCERT and NIOS. She is widely published; on themes including traditional knowledge; single mothers; peace activism; socio-political movements. She consults with diverse organisations in research, evaluation, training and advisory roles. She is presently writing a book on feminist street theatre. She may be contacted at deeptipm@gmail.com

A Class in Conversation

Amrita Masih

This is an experience from teaching a lesson from a class 6 English textbook which I tried to connect with their day to day experiences. Through this chapter children were able to express their thoughts freely and also learnt to frame dialogues which would help them in different kind of situations. It also aided peer learning as every child participated and listened to each other's presentation. It gave the children enough confidence to present the activity in the school assembly.

I started my first class by writing the topic -*Conversation*-on the board and then asked the students to read the word. Most of them were able to read it as we have done some oral dialogue presentation in Class 5. I asked them what this word means.

Children said to talk, to discuss, to express, to do meeting, to convey message etc. Then my next question was what kind of conversations have you heard in your daily life?

Then children started sharing their experiences of conversation and we drew up a list:

Mother and child

Doctor and nurse

Principal and teacher

Student and student

These, and many other, examples came from students.

I was able to introduce my real teaching and told them that I would give them some topics and they had to create the dialogues. They could present the conversations in English, Hindi or both. The exchanges were between:

Doctor- nurse

Teacher- student

Two cricketers

Father/mother- child

Bus driver- conductor

Bookseller - student

Two friends

Postman and a member of the public

Two villagers

Cleaner didi and student

I divided the class into groups of two and gave them ten minutes to discuss and present their 'conversation'. The first dialogue went like this:

Student - I want a book.

Bookseller- which book?

S- English book.

B- Here it is.

S-What's the price?

B- One hundred and fifty rupees.

S-Price less karo

B- Ok- give me one hundred and thirty rupees.

S- Thank you

Then S-3 andS-4 came and presented their dialogues. Other students came in turn and presented their dialogues of teacher and student and made others laugh by their actions.

Some students were left and so I told them we would continue the activity tomorrow.

The next day I started the class with the conversation dialogues of students who were left yesterday. Today some of them did their presentation of dialogues in Hindi, some bilingually. So everybody got chance to present their dialogues.

Then we discussed how different kinds of conversations are helpful if we know a particular language. Then we are always comfortable in conveying our messages. Children also shared their experiences of daily life. In this way the class was over. On seeing the excitement and interest of students for the topic I was thinking how to carry it forward in a more interesting way where I could get the students even more involved. So their learning inspired me to think the next day plan to be more different and interactive. I planned some questions which they could use in their daily life. The questions were:

Where are you going?

What are you doing?

Where do you live?

What did you eat at breakfast?

Are you not feeling well?

Have you washed your hands?

What did you eat for lunch?

Have you done your homework?

Can I help you?

Which game do you like?

Will you play with me?

What did you eat for dinner?

I planned to give these questions to groups of five students each with two questions and they had to create the dialogues in English and present in written form in a chart. The groups had all three grades so that there could be peer learning.

I entered the class and explained the activity and gave them a marker pen, chart paper and their topic.

I explained how these two questions are linked with each other and how they could be used to create dialogues by using either friends' or relatives' names For example:

Which game do you like?

Will you play with me?

I had given them about 15 minutes to discuss the topics in their groups and then present it on their charts. To my surprise two groups finished within the given time and their dialogues were wonderful.I will share one group presentation. Their questions were

What did you eat for lunch?

Are you not feeling well?

Two students prepared the dialogues to create their own conversation.

Rani- Hello Raju

Raju- Hello Rani

Rani-How are you?

Raju- Oh what did you eat in lunch today

Rani- I ate potato and chapati. Are you not well? Do you have a stomach ache?

Raju-Yes Rani, I am just going to the doctor.

Rani- Take care! Bye Raju.

Raju- Bye, Rani.

In this way children were able to construct dialogues and have opportunities for speaking as well as in writing. While working in groups for writing the dialogues, the children were helping each other for correcting the spellings. So everybody in the group learned to express their thoughts in a written form also. So a class of conversation had helped the students to converse in a language in which some of them hesitate to speak and write, but while working in groups they were able to forget their diffidence and speak. As a teacher I found the chance of using a textbook lesson very challenging and rewarding and enjoyed it as much as the children did.

Amrita has been working with Azim Premji School at Dhamtari since February 2012. She started her teaching career in 2000, in a private school, where she taught English and Science. Thereafter, she has worked as a science teacher. She has Bachelors degrees in Biology and Education, and a Masters degree in Chemistry. She may be contacted at amrita.masih@azimpremjifoundation.org

Delhi Education Revolution: The 'Pragati' Series

Anju Ghavri

The public education system of Delhi has been on an overhauling spree since the current government took over political leadership. Someone who has been working in the system for the past fifteen years can chalk out beautifully the trajectory of the revival of public education system of Delhi. The journey has been phenomenal.

I have witnessed the Delhi Government School System as an insider since 2003, when I joined one of the Delhi government schools as a primary teacher. I moved on to become a Trained Graduate teacher of Mathematics in 2008 and am currently working as a Lecturer in Commerce in addition to working as a Mentor Teacher, the flagship project of the Delhi Government which constitutes a team of 200 highly motivated and committed teachers to facilitate the academic and systemic changes in the department.

Let's start from the beginning, when the poor infrastructure and filthy surroundings were the face of the Delhi Government Schools. The schools looked pathetic and were completely unwelcoming for both teachers and learners. The quality of education and transaction of content had degraded to the extent that , during 2015-16, the pass percentage of class IX was only 49%. All the stakeholders felt helpless as the problems were vicious in nature. There was an urgent need of a series of strategically well-coordinated reforms.

The newly elected government took charge of the situation and roped in a few advisory bodies, who had rich experience in the similar field. The first year was marked for refurbishing the hardware of the system. New buildings and classrooms were constructed and various other physical facilities such as availability of clean drinking water, toilet facilities, well- ventilated classrooms and labs were taken care of. Two additional posts were created which included an Estate Manager who would look after the building and estate of the school and a Salary Manager who would assist in the administrative work such as making salary bills and keeping official records of the teachers and other staff. The next year was marked for a software system update. We shall talk about this important changes and how the academic environment of the schools was taken care of.

The treatment could not be initiated unless the correct diagnosis of the aliment was done. Hence, the first step was to find out the root cause and the extent of the damage. A baseline assessment test was conducted in all the 1000-plus government schools to check the reading ability and the basic mathematical ability of the students of Classes VI and VII. The results were an eye-opener. More than 50% of the students could not even read their prescribed textbooks and lacked basic mathematical literacy. In the first year of interventions, It was decided to conduct the reading classes and imparting basic mathematical literacy for such students and to stop transacting the subject content. If a child is not even able to read the textbook, how is he expected to enjoy the learning process and thus bring results? After, a few months of rigorous engagement with these children, the results were positive.

The next step was to enable them to construct their subject knowledge with the aid of Textbooks and teachers as their facilitators.

The need of the hour was to develop a resource which was simplified for the new readers. It was realised that the textbooks already in use were not appropriate in style and language as the end-users had recently learnt how to read. In order to encourage the new readers to take up subject books which were simplified in language and the content supported by visuals and diagrams, it was decided to develop a simplified resource and support material for them. These books were named *Pragati* meaning progress. The first series of books in English, Hindi and Maths was developed by the **Department with a closed group of experts. The book garnered mixed responses from the teachers. The major criticism was that they lacked context and teachers thought that they could develop a better resource as they knew the learning gaps precisely and better than someone else not dealing

with the students.

The feedback was taken well by the Department and it was decided that another series would be developed by the teachers themselves. Here, the efforts of the Department are praiseworthy as it took note of the feedback of the stakeholders working at the ground level and decided to take up this massive task of engaging thousands of teachers.

This was the time to collaborate with all the teachers and co- create a system where the new readers could be facilitated to achieve grade -appropriate learning outcomes. During the summer vacations of 2016-17, a mass level of workshop for all the teachers was conducted. This workshop was held subject - wise, where all the same -subject teachers were made to sit in groups and design strategies. A common feedback from the teachers was that the Textbooks provided by NCERT and Delhi Bureau of Textbooks needed to be re-contextualised for the students. The teachers felt that the situations used to develop the content, the language of the book and the questions following the text needed to be re-phrased and re-written in a simple and lucid manner with the very own context of Delhi. The teachers unanimously felt that the government schools mostly cater to the socio-economically disadvantaged section of society, where the children do not have the greatly needed learning - conducive environment in their homes. It was decided to give the children a support book which could cater to their specific learning gaps and needs. Also, such contextualised material would assist the teachers in developing the context in the class with less time and effort. The reason for this was that the examples and situations which were already in the support material would facilitate the teachers in transacting the subject content.

Thousands of teachers sat together and created the content, the worksheets and presentations which would eventually be edited and put together as a support material. It was probably the first time that the teachers were not given a book prepared by an outsider who had no knowledge of the socio-cultural fabric and the learning profile of the students. In fact, the teachers prepared their own content which was based on the constructive pedagogy instead of following conventional trajectories.

As a result, these contextualised books have given a huge impetus to classroom discourse, as the teachers actively engaged within their subject groups and brainstormed each and every topic of their subject. This process was beneficial in two ways. Firstly, it gave a resource material to the students in accordance with their learning needs. Secondly, it helped the teachers' professional competence and pedagogical disposition as they interacted within their subject groups, which led to discussions and debates on how to best transact a topic.

The books were an instant success. As the teachers were engaged in the process they owned the books as much as the Department did. The teachers felt exhilarated at seeing their work published in the form of a book. This feeling of belonging and ownership gave a huge impetus to their use in classroom discourse. Also, as the content was developed by their teachers, the material was well -suited to the students. The students learnt the concepts at their own pace and according to their needs. The results showed up in the annual assessment. The students who had previously been ignored and labelled as weak were now reading their textbooks and explaining the concepts in their own words. In addition to making the content simpler, the syllabus was also reduced for this group. It was realised that the quantity of concepts for this newly- literate group had to be reduced for them to take up learning gradually in order to make up for the previous years of learning loss. As per the current statistics only a low percentage of children have reading difficulties. This group consists of special children, children with learning disabilities and those who are long absentees.

Though a lot has been done to improve classroom instruction and a change in teaching learning discourse from didactic to constructive, a lot more still needs to be done to improve the quality of learning in government schools. Issues such as a high pupil -teacher ratio, engagement of teachers in administrative work of the school such as fee collection, maintaining administrative records, distributing and inspecting midday meals to name a few, eat up the precious teaching time of the teachers and drain their physical and mental energies. In addition is the fact that the school heads work largely as administrative officers and lack the much needed academic leadership which projects the schools as mini -administrative units instead of growing as a learning organisation.

With the current government working tirelessly

to improve the quality of education in the public sector, it has engaged various non-governmental bodies having rich experience in education as advisories. One such organisation is CREATNET, which works with principals and teachers to develop school leadership. We hope that continuous effort and a sincere will to improve the logistics as well as the quality of education will see every government school as a learning organisation.

Anju, a Post Graduate Teacher at a Delhi Government Schools under Directorate of Education, Delhi, has 15 years' teaching experience and has been a Mentor Teacher providing support to other teachers. She has had global exposure to leadership and maths programmes. She may be contacted at anjughavri@gmail.com

Working on an Autobiography with the Help of a Textbook

Chhote Lal

I worked with the children of class 6 on a lesson titled *Chambal ki Atmakatha* (Autobiography of the river Chambal) from the SCERT textbook.

In accordance with the title of the text, I started the lesson with a few questions, such as what is an autobiography? Who writes it? What is the intention of the author in writing an autobiography? Discussing these questions with the children brought forth the fact that autobiography is the description of both the pleasant and unpleasant events and conflicts that take place in one's life. The purpose of writing an autobiography is to make future generations understand an individual's life's struggle. Along with it, they should also be able to deliberate on all those aspects and understand them at their own level so that the can learn about how to act in a particular situation, what are the strategies that can result in success or failure. After discussing this with the children, I asked them to talk to their family members about their past experiences and write about it. Nearly two-thirds of the children brought a one page write-up about the experiences of their parents and grandparents. These were then discussed in the class. In this discussion, the focus was on the fact that how to write all the aspects of a person's life in a readable form. At the same time, they also realised that the experience of a particular person can be a means to get inspiration and learn lessons.

After this activity we read the lesson Autobiography of Chambal. This lesson deals mainly with the present condition of the river Chambal, its environment and its contribution to society. There is an especially beautiful description of Chambal after its different tributaries meet. It also tells us about the indiscriminate pollution of Chambal and its side effects on nature, which is a warning for the present generation. It further elaborates the uses of Chambal in irrigation, power generation, enrichment of ground water, and enriching its surroundings and finally there is a special description of how Chambal is struggling now to save its existence.

There are three main aspects that have been highlighted through this lesson. The first aspect is - how a person establishes his/her existence. That is, the story of establishing himself/herself in the world's stage is unique to each person.

The second aspect is – how can a person contribute towards betterment of the world? That is, how can he grow in a way that he is able to live for others also.

The third aspect is about the struggles he faces in his lifespan that arise from his surroundings. In this way, clarity on autobiography writing was created.

After this the children were asked to think about their past and organise their memories. They were also asked to go to the library and read an autobiography. Some portions of Dr. Harivansh Rai Bachchan's book – *Kya bhulun kya yaad karun* (What shall I remember and what shall I forget?) were shared with children. These kinds of deliberations bring out the fact that a textbook only gives the teacher a basis, or let us say that textbooks can be seen as mere guides. If we teach by focusing only on the lessons in the textbooks then we would be restricting the students to the extent of the descriptions given in the lessons.

Further, in this process, not only is the central idea of the text lost, but the role of the teacher also gets limited. When we teach only by focusing on the content of a subject then we are unable to include examples from outside the content and cannot provide the child with the experiences that he has in his surroundings. In such a situation, we can only give information and as teachers, we are unable to contextualise the understanding of the content with the understanding of child's environment. As a result, the independent process of creating knowledge with children, which is an integral part of the learning process, is blocked. In doing this, the teacher not only limits his/her role, but also deprives students of the experience of supplementary reading material and contemplations, which can complement the textbook.

On the contrary, with this method, we began working on the lesson with the context of children's life in mind, a method also recommended by the National Curriculum Framework, 2005 (NCF 2005). The children are given an opportunity to peep into their past, because of which the children could recall at their previous experiences. Apart from this, exposure to supplementary reading material also motivates children to get into the habit of self-study which is an important part of this process. The experience of working on autobiography helped children to get connected with themselves and to know about relevant reading material as well.

An example is given on the right. Anjali's father shared his feelings about how he felt when she was born and she wrote about those memories in the form of autobiography.
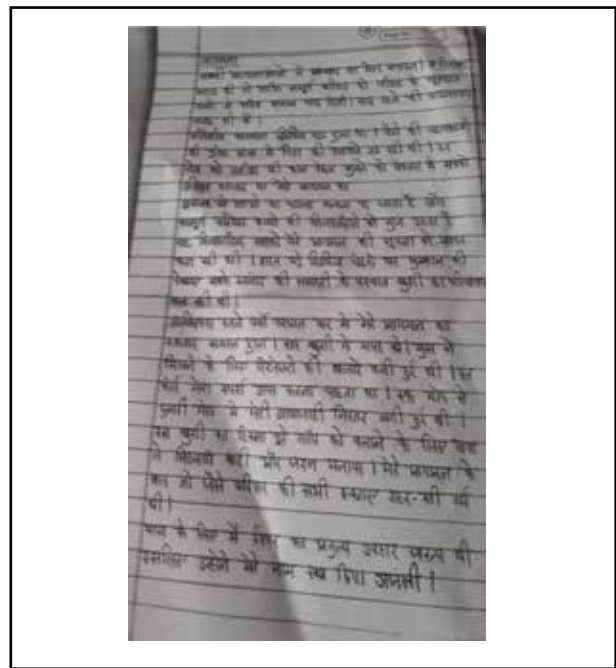
[This article was originally written in Hindi. It was translated to English by Nalini Ravel.]

Chhote Lal has been working with Azim Premji Foundation since August, 2011. Prior to this, he worked with Bodh Shiksha Samiti at Alwar district, for about 11 years, as coordinator and facilitator. He also worked there as a resource person for Hindi and Mathematics and worked closely with teachers, students and communities of 15 small schools to establish them as good schools. Before this, he has worked in Lok Jumbish, a well-known experimental project implemented by the government of Rajasthan, mainly in rural areas. He may be contacted at chhote.lal@azimpremjifoundation.org

An Experience of Working with NCERT Textbooks

Jyotsna Lall and Hyder Mehdi Rizvi

Background

This is an account of a project involving improving the quality of education in a primary municipal school in Basti Hazrat Nizamuddin, Delhi

Heritage conservation is often seen to be delinked from socio-economic development. The Nizamuddin Urban Renewal Initiative[1] is an example of rethinking conservation and demonstration that heritage conservation is a stepping stone for socio-economic development.

The Humayun's Tomb-Nizamuddin area in Delhi has continuously evolved. It has been inhabited since the 13th century. Over the past 700 years, prolific monumental tomb-building happened in close proximity to the Dargah of Hazrat Nizamuddin Auliya, a revered Sufi saint. Following an MoU for a public-private partnership (PPP) between the Archaeological Survey of India, Central Public Works Department, South Delhi Municipal Corporation (SDMC) as the public partners and Aga Khan Foundation and Aga Khan Trust for Culture as the private partners in 2007, the Aga Khan Trust for Culture commenced a major urban renewal initiative spread across 224 acres. The project aimed to improve the quality of lives of people living in Nizamuddin Basti while conserving the built urban heritage and environment development.

Since 2007, a multi-disciplinary team has worked with local communities to fulfil these objectives. The project's principal focus remains leveraging the cultural assets for the community's benefit while developing a 90-acre city park and conservation of almost fifty monuments. The project addresses the community's needs in health, education, livelihoods, open green spaces, sanitation, solid waste management and cultural revival in difficult circumstances where the population density is 70,000 people/sq km.

The Aga Khan Foundation has been engaged in the School Improvement Programme in the SDMC school in Nizamuddin since 2008. This has resulted in the physical improvement of the school infrastructure, including using the building as a learning aid, improved academic levels of children, enhanced capacities of SDMC and AKF appointed community teachers and an active School Management Committee.

Background of the children in the Nizamuddin SDMC School

Most of the children enrolled in the SDMC schools – in Nizamuddin and elsewhere - come from socially and economically disadvantaged families. Their parents work in the unorganised sector in areas like domestic help, daily wage labour, rag-pickers, rickshaw pullers or begging – sectors where employment is not always regular. In addition, many of them are first generation learners. Some of the children also contribute to the family income by engaging in either rag picking or begging. In essence, the children who are studying in the SDMC school are those who have not been able to secure admission in any other school or those whose parents cannot afford any other school or who have crossed the age limit for school admission in other schools.

Status of the school in 2007

The physical and academic state of the school was clearly visible as soon as one entered the school. It was equally obvious that both needed to be addressed urgently. Aga Khan Foundation chose to study the situation and engage with the community before deciding on a plan of action.

Physical improvement of the school

The status of the building and infrastructure was lacking in practically every way. One of the earliest activities included a workshop with the children and the community on how they would like to see their school. Many of these suggestions formed the basis of the physical improvement plan of the school. In addition, the school building was used as

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a learning aid and it was linked to the neighbouring park which also had be freed from encroachment and landscaped.

Using the building as a learning aid included using the classroom spaces and corridors for adding different boards such as dot boards, grid boards, sentence boards, calendars, measuring scales to name some. The doors opened to form angles. The grills on the windows and stairs included abacuses and designs to improve gross and fine motor skills. Safety norms were met by increasing the width of the staircase and adding another door to each classroom.

Educational Status of the School

To understand the educational status in the Nizamuddin School, the Aga Khan Foundation invited the Central Institute of Education (CIE), University of Delhi to participate in the process. This served as a baseline and enabled us to develop an intervention strategy that would lead to an improvement in the quality of education offered to children and greater engagement between the school and the community to make the school more accountable to the community.

The baseline study also assessed the academic levels of children. The academic levels of children suggested that greater work was needed on language and mathematics. Further, the classroom processes focused exclusively on completing the syllabus from the textbooks and had negligible processes and practices to that would contribute to a learning environment in the classroom.

Educational Improvement in the school

One of the major interventions was a change of strategy in the way that textbooks were used in the classroom. In 2010, new textbooks were published by the National Council of Educational Research and Training (NCERT) following the recommendations of the National Curriculum Framework (NCF) of 2005. The new textbooks are activity- based and focus on experiential learning. Further, the textbooks encouraged application of the learning in the classroom to their lives. The children, however, did not seem to benefit from this changed approach.

Classroom observations and discussions with the teachers revealed that the children were struggling with learning to read and thereby impacting all further processes. This was found to be the case even in children of grades 4 and 5. The teachers pointed out many reasons for this that included the home environment and the change in textbooks. Many of the government teachers believed (and some still do) that *it is impossible to learn to read without first learning the alphabet*. Further discussions indicated that the teachers had not received any orientation or any kind of in-service training on using the new approach or the new textbooks. There was a need to discuss the change in approach and methodology as well help teachers devise strategies to work with textbooks.

The following trainings were designed around the theme of using the new textbooks in the classroom. An incident involving the government School Inspector indicates the deep seated attitude regarding learning to read. One of the resources that we used during the training was *Padne ki Samajh* (Understanding Reading) published by the Reading Cell of the NCERT. The discussion was around the methods by which children learn to read and the challenges involved. The School Inspector entered the classroom, took one look and said, 'Why are you teaching all this? Teach the teachers how to teach ka, kha, ga (the Hindi alphabet)' and walked out without waiting to engage on how language can be taught and what were the guidelines in the NCF.

The Aga Khan Foundation, however, continued with its approach of helping the teachers use the textbooks in the spirit with which they were written. The benefits of continuing with this approach began to show results in the academic attainments of children. The classroom environment began to change when the AKF-appointed community teachers and government teachers began to make joint plans and work together. The children's performance showed a significant improvement in the annual assessment conducted by the Aga Khan Foundation independent of the school examinations. The assessment in 2013 had indicated that only 26% of children in grade 5 were able to read a text and answer questions based on it. By 2017, this figure had gone up to 71%.

An effective methodology that emerged was the use of video recording of the classroom. During the workshop, a session was recorded in which the teacher was taking a lesson based on a pre-determined lesson plan in class The recording of the lesson was analysed as a group to identify the strategies that were working and the strategies that needed to be improved. This strategy proved to quite effective in helping teachers improve as well as in designing the training programme. NCERT

resource books such as *Kaise padheyen Rimjhim* (how to teach *Rimjhim*- the name of the textbook) proved to be quite effective.

Engagement with the community

This is the third major intervention in Aga Khan Foundation's School Improvement Programme. The Right of Children to Free and Compulsory Education Act, 2009 (RtE) mandates the creation of a School Management Committee. After initial resistance, a School Management Committee has been formed. It has been growing in strength and regularly monitors the functioning of the school and submits reports from the School Inspector to the Director with a copy to the SDMC Counsellor.

In addition, Aga Khan Foundation creates several opportunities for the community to engage with the school through regular events and meetings.

Points to ponder

What should be the way of introducing new textbooks, especially ones based on an entirely new approach if the expectation is that the approach be adapted?

What is the academic support mechanism for teacher on new developments if the primary source of support and monitoring, that is the School Inspector, does not agree with the new approach?

Jyotsna has been working for over 30 years in the social development sector. She is currently Director Programmes for the Nizamuddin Urban Renewal Initiative of the Aga Khan Development Network. She may be contacted at jyotsna.lall@akdn.org

Hyder Rizvi anchors the education programme for the Nizamuddin Urban Renewal Initiative of the Aga Khan Development Network. He may be contacted at hydermehdi.rizvi@akdn.org

Teaching Primary Level English to First Generation Learners in Rural Rajasthan

Ekta Dhankar, Jyotsna Lall, Shipra Suneja, Vardhna Puri

Madhopur has a forest E, I, E, I, O; a tiger here…a tiger there…tiger, tiger everywhere.

No, don't panic! Spotting tigers is not so commonplace, even in the Ranthambhore National Park.

This is children singing in one of the classrooms of Uday Community School, where they have been working on the theme of the animals and birds. The rhyme follows the tune of the popular song *Old MacDonald Had a Farm*, but changed to suit the location. These are children who live in villages on the periphery of the Ranthambore National Park in Sawai Madhopur district of east Rajasthan.

In another month, with winter afternoon sunlight fading, the class is reading aloud a story, but not from a prescribed textbook.

"It was the month of December. Anwar enjoyed playing in the sun with his friends. He liked to walk in the mustard fields".

The story was written keeping in mind children's reading levels, context as well as experiences. This would be hard, though not impossible, to come by, in a standardised textbook. The children are listening to a familiar scene in an unfamiliar language. They are deeply familiar with this change in landscape with the season as most farmers in these villages grow mustard during the winters. As most of the children would be helping their families or playing in the fields everyday, this story draws from experiences of children.

The rhyme and the story are an example of the texts that needed to be developed as the textbooks prescribed for the class level were found insufficient to fulfil their learning needs.

Background

Gramin Shiksha Kendra (GSK)[1] was set up to address community concerns on education and functions in over seventy villages around the Ranthambhore National Park. GSK runs three Uday Community Schools, recognised by the Government of Rajasthan and works with around seventy government schools all following the government curriculum. At the core of the organisation is the belief that communities cannot be passive recipients of education provided by the government and must play an active role in demanding more and better services from the government. Through the three schools we reach out to the much wider community to bring about change in the way education is understood.

The need to focus specifically on English arose when students consistently doing well in all other subjects struggled only in the English class and the teachers, in turn, struggled to teach English. The English language programme began with the aim of addressing the needs of English teaching-learning amongst the first generation learners. GSK's approach to teaching language is based on the whole language approach. There is evidence that when a child comes to school she already has acquired a certain level of proficiency in her spoken home language. English is, however, not part of the environment of the child, before coming to school she has not had the opportunity to hear, much less practise, the language. A combination of comprehensible, input-rich environments and more explicit language instruction becomes important for learning English, with classroom transactions being crucial to the process. The GSK curriculum implements this approach while remaining sensitive to available resources and the varying needs and skill levels of students (as well as of the teachers). All efforts are made to represent language as an

important basis of human understanding and communication, rather than considering it to be just a set of grammatical rules and vocabulary to be memorised. We believe that language is best acquired through meaningful interaction and use in varied situations.

GSK's approach

Briefly, GSK's primary objective in working on English is to develop functional competency in English for comprehension of ideas expressed by others and is achieved through:

listening and reading

expressing own ideas (including emotions, attitudes, opinions, and observations) in both speaking and writing

using English to organise thoughts and ideas

using language in context

The goal being overall functional competency, special emphasis is placed on content that is especially rewarding to students. In addition, the GSK English curriculum aims to develop students' knowledge of language learning. The curriculum is designed to help students learn skills and techniques[2] to continue to study language independently and become autonomous learners.

The GSK English curriculum is thematically organised to give the teacher and the learners a context within which the teaching and learning of English happens. It also provides teachers with a wide array of resources to draw from within a framework while giving them the autonomy to plan their classes.

In the classroom, the teacher picks a theme relevant to the time of the year. GSK schools have multi-level classrooms. The teacher organises the class according to their level of learning instead of age. Each child draws upon her experiences of the world and builds on it through the process with the help of the teacher building on her pre-existing knowledge. Hence a theme starts, builds on and connects with what children bring with them from their lives. These themes have rhymes, poems, texts, stories and the words in the text are a mix of both everyday words and unusual words. The texts are sometimes from the textbook, sometimes a storybook and sometimes generated to fulfil

a particular need. Hence, the textbooks do not determine the course of a child's learning but are used as a resource to supplement the process. This helps in unpacking what children know and what they need to know to make sense of unfamiliar text(s) at a later stage. Learning of vocabulary is also contextualised through themes. Teachers are provided with a suggested list of words which relate to the theme and are encouraged to add to the list. Throughout the course of teaching a theme, these words are used in multiple ways. Through thematic learning we try to improve the language comprehension which other strategies may not support. Here, culture and context play a major role in language acquisition.

The classroom environment encourages expression among children, providing them the space to think, argue and conceptualise. The space provided in a class allows children to relate what they learn to their own lives. This personal nature of learning also gives confidence to children as they have gradually been encouraged to voice their thoughts.

Conversation (in home language) interrupted between two eight year olds using the word 'intelligent' correctly

Child: *Who is intelligent?*

Teacher: *What do you mean by intelligent?*

Child: *Both of us can read a book in Hindi so we are equally intelligent in Hindi.*

Teacher: *But what is the meaning of the word intelligent?*

Child: *The one who has more knowledge in any subject!*

The organisation and the physical environment of the classroom, including displays, have an important role as well. For instance, stories that need to be worked on are written and displayed in the classroom for children to become familiar with - these may or may not be from the 'prescribed' textbook. This also reduces dependence on children reading from just a textbook, which may be more daunting, especially for early readers. Display of the children's work - current and previous - is displayed to encourage learning and helps them to engage with their own work.

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[2]*We are differentiating between skills and techniques here. A technique is defined as a procedure used to accomplish a task and a skill is a learned capacity to carry out pre-determined results often with the minimum outlay of time, energy, or both. e.g. learning idioms would be a technique but using them in the right context would be skill; acquiring knowledge of punctuation would be a technique but using it correctly is a skill.*

Winter Theme Classrooms

Classroom organisation

The classrooms are organised in different levels to leverage the distinct advantage provided by peer learning. In addition, the teacher has the autonomy to decide her lesson plan and the material she wants to use - which could be from the textbook or from other books[3] or from material generated according to GSK developed guidelines. These guidelines focus on gender parity, scientific temper, social stratification as well as learning levels. In some instances, textbooks having images such as women sitting at men's feet[4] may be the reality, but can be used as catalyst for dialogue on these practices.

The class has three forms of activities: large group activities (involving entire the class), small group activities and individual activities. Rhymes, story-telling and games are usually carried out in the beginning of the class.

Each day, the class starts with rhymes, some familiar and some unfamiliar. Typically this is followed by a story telling or a text reading session, whichever has been planned for the day. Teachers are encouraged to make storytelling sessions interesting for students, sometimes props such as masks or puppets may be used. Modulating voice and action to convey meaning of spoken word plays an important role. They can talk about a *biiiiiig* elephant or a *scaaaaaary* lion with gestures which do not require constant translation. Word-for-word translations are avoided, rather, teachers communicate a chunk of information from the text to students. For instance, the meaning of the phrase *on a hot summer day* would be communicated as a whole. The teacher is encouraged to read out/ tell the story in English a couple of times before explaining the meaning. She ascertains from children how much they have understood. Reading the text again, she draws attention to the different aspects of the text. For instance, Anwar, who enjoyed playing in the mustard fields, would *sit close to the fire at night*. The teacher uses this moment to reinforce, close to. Students can use this phrase to then make statements such as 'My house is close to the temple' or 'My house is close to the railway station' and so on.

Children draw from their observations and experiences to make sentences from chunks of information. This is sometimes done by teachers in a group activity, where children may make sentences and teacher writes them on the board. Children at a different level may be able to write these sentences on their own. In a class, children made statements such as *I walk with my grandfather to the_____* with so much enthusiasm that they spent better part of the class coming up with different alternatives, asking the teacher for English words which they didn't know.

Story reading/telling also has other follow up activities. Younger children are encouraged to draw what they understood/felt/remembered from the story. Older children are encouraged to make word maps, storyboards, role play or summaries, depending on the level and inclination with the support from the teacher. During the initial period of language learning, stories with repetitions provide opportunity to children for language practice. A story entitled *Chotu*, about a mouse running away, from a supplementary reader Raindrop, published by NCERT[5] was used in the classroom in different ways. Children used simple statements such as *Come back Chotu, come back now!* in a role play which was presented in the morning school assembly. The teacher then turned this into a game in which the children would stand in a line and one of the children would call out to her friends. Some of the activities which are at the end of the chapter are also used by teachers, but they do not become the central part of the class. Activities which require active participation have been found to be more useful.

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[3]story books from publishers such as Tulika, Katha, Pratham, CBT, NBT and others

[4]An actual image from the current State board textbook, Rimjhim

[5]The book is not part of Rajasthan curriculum. Shared by an advisor from NCERT, this book has been helpful.

Group work is an important part of teaching learning process. This is where students are most able to draw advantage from multi-level classroom. Sometimes children at more or less similar levels are put in a group and sometimes children of varying levels form a group. These groups are dynamic, changing according to the subject. Activities such a group reading, word maps, question making are done so that children have access to collective understanding. Children often sit in a group and read out text to each other. They discuss the meaning of the story and, when required, reach out to the teacher. Reading with meaning is a challenging task. It is often observed that children are able to read the entire text, but have little idea of what it means. Through various large and small group activities, teachers encourage children to read with meaning. Children who have difficulty in reading can listen to the text being read a couple of times before attempting to read the text themselves. Children also complete worksheets in a group. *The idea is of learning as collaborative rather than competitive*.

While the classrooms are multilevel, there are some guidelines that are followed. The *first level* mostly comprises children at the preschool level. Since the children are interacting with the second language for the first time, they are exposed to language orally, mostly through rhymes and songs and some simple stories. Typically classroom displays consist of bilingual material. Children are rarely asked to read by themselves or produce comprehensible units. At this level, the concern is with exposure and increasing familiarity with the language. Children sing a lot of action rhymes and speak small sentences such as *My name is Rani and I ate chappati*. During the primary years, strengthening the home language is crucial. Research has constantly linked proficiency in the second language to proficiency in the home language. Hence the medium of instruction is the home language.

The *second level* often consists of children who have had initial one to two years of exposure to English. They are able to follow simple instructions and understand commonly used words. At this level children begin reading and engaging with the written word. The reproduction of language, in verbal and written forms, is encouraged without an overwhelming emphasis on spellings or grammar. Teachers do correct when needed. They observe their surroundings and form phrases. For example,

while teaching colour names to children, a teacher asked them to step out of the class and see what the colours of different things were. They came back to the class and reported seeing *white* clouds, *brown* stones, *green* tree, *green* grass, *white* tank, *blue* sky, *red* classroom and so on. Children make simple sentences from their experiences such as *I saw a white cloud*. At this level, children start making sense of the structure of the language. At this level (as with every level) the teacher exposes children to different stories and texts. This level corresponds to children in grades 1 and 2.

The *third level* corresponds to children in grades 3, 4 and 5. At this level, the children have a wider range of vocabulary and hence they are able to understand text with more complex ideas. They respond to questions in English and are able to describe experiences in greater detail.

Since these levels are not fixed as per age, a child in the class 2 can be at level 1 and might benefit more from the activities at level 1. The teacher needs to be skilful in identifying the level of language acquisition amongst children. This is done through day-to-day observations in the classroom. Teachers create portfolios for each child which also help chart their progress.

Reading, talking and meaning-making
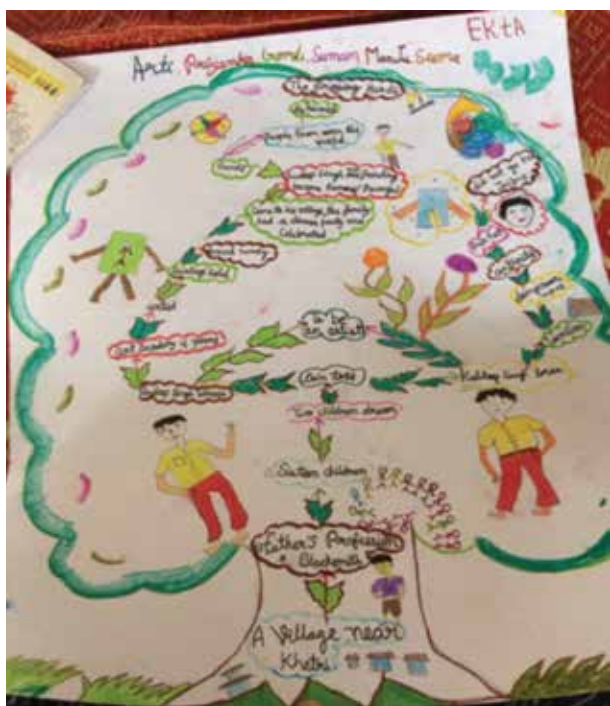
Picture Story

Pedagogical Challenges

Some of the challenges faced in teaching English are linked to the lack of prior exposure to the language, especially in rural areas. Most of the teachers have themselves been taught in a way which encouraged rote learning of grammar rules. They could identify nouns/pronouns/adjectives, but to string a thought or an idea together and present it in English was challenging for most. People who can speak in English are difficult to come by in rural area and those who can, look for jobs in cities/towns. Consequently, the need to work with teachers on their language proficiency was deeply felt. The teachers went through language learning process themselves to enhance their own capacities. In the workshops, they spent a part of time engaging with activities such as creating role play, having debates, writing recipes, making stories and so on. However, much needs to be done to improve the learning levels further.

Another major challenge is the lack of contextualised material for language learning. The textbooks provided, especially for English, are much above children's levels. The state policy in Rajasthan is board exams for Class 5, which have to be passed. The problem is not just with the level, but also with the content of the textbooks. Depictions are rarely of village life. The content of textbooks has been widely criticised in the recent times. Textbooks need to facilitate self-learning amongst student but they rarely engage students.

There are other pedagogical challenges too, but none as major as the ones mentioned above.

The way forward

GSK has been working with this approach, refining it over time since the academic year of 2016. Even with some changes in the original team.

The methodology of training teachers followed by the teachers working with children independently or with support and being periodically observed has worked.

The *whole language* teaching approach seems to be working with almost all the children writing the grade 5 board exam getting an A or B grade in English. As mentioned earlier, the material used for this approach is not restricted to the prescribed textbooks and the teacher is free to develop her lesson plans based on a variety of texts that have been suggested through trainings and activity bank. The activity bank as teacher support material is one of the major outcomes of this programme. This activity bank acts as a resource for a people who are interested in teaching English to first generation learners. This has led to a greater use of English that is contextualised, both inside and outside the classroom.

The areas that need attention include strengthening the module (including approach paper, activity bank and resources) for English teaching and learning that is peer reviewed. This will enable us to share our learning with wider audiences who are interested in teaching English to first generation learners.

Ekta works with Gramin Shiksha Kendra with the English Programme team. She has a post-graduate degree in Education, from Azim Premji University. She may be contacted at dhankher@graminshiksha.org.in

Jyotsna is one of the founder members of Gramin Shiksha Kendra. She works in an advisory capacity for the English programme. She may be contacted at jyotsna.lall@akdn.org

Shipra is Assistant Professor at Azim Premji University. She teaches courses in Child development and Early childhood education. She also works as a consultant for the English programme at Gramin Shiksha Kendra. She may be contacted at shipra.suneja@gmail.com

Vardhna is a Ph.D. scholar at Delhi University. She works as a consultant for the English programme at Gramin Shiksha Kendra. She may be contacted at vardhna@gmail.com

Extending the Idea of the Textbook through Writing

Murari Jha

Introduction

What to teach in a school classroom has never been a challenge in mainstream schools as there is always a prescribed curriculum especially when the words *curriculum* and *textbook* have become synonymous. But the contextualisation of the curriculum has always been a challenge. As teachers, we are required to follow a prescribed curriculum for our children in the school. We are the part of a diverse nation and thus it is not possible for any institution to develop a curriculum which accommodates the diverse needs of the people living in this country. The role of the school and the teacher becomes extremely important in the contextualisation of curriculum.

In the following paragraph, Winch talks about the importance of grounding of the curriculum in children's context so that the curriculum caters to the need of a diverse group of people:
'Grounding is necessary if young people are to be prepared for adult life. But the kind of life that someone will lead depend on a great variety of factors, and it is desirable that many of those factors should be under the control of the individual concerned. It is particularly desirable that people should live a life that makes the best possible use of their abilities to enable both them and other people to flourish. Given the variety of possible occupations and the variety of different abilities and interests that people have, it is most unlikely that they would all benefit from exactly the same preparation for adult life.' *(Winch C, P;51)*

We transact curriculum through the textbook and the textbook culture is very dominant in India. Reflecting upon the state of education in India and the dominance of textbook as the mode of prescribed curriculum, over a century ago M K Gandhi wrote:
'If textbooks are treated as a vehicle for education the living word of the teacher has very little value, a teacher who teaches from textbook does not impart originality to his pupils, in fact, he becomes a slave of textbook and has no opportunity or occasion to be original. It, therefore, seems that the fewer textbooks, there are the better it is for the teacher and his pupils.' *(MK Gandhi, Harijan September 9, 1913)*

Explaining it further Krishna Kumar (1988)writes:
'In the education system based on textbook Culture, teachers are given no choice in the Organisation of Curriculum, pacing and the mode of final assessment. Textbooks are prescribed for each subject and the teacher is expected to elucidate text lesson by lesson in the given order. She must ensure that children are able to write answers to questions based on any lesson in the textbook without seeing the text for this is what they will have to do in the examination when they face one.' *(Kumar, pg 452)*

However, NCF (2005) speaks for the teachers who could bring life to the curriculum

'A child constructs her/his knowledge while engaged in the process of learning. Allowing children to ask questions that require them to relate what they are learning in school to things happening outside, encouraging children to answer in their own words and from their own experiences, rather than simply memorising and getting answers right in just one way — all these are small but important steps in helping children develop their understanding.' *(NCF 2005, p 17)*.

What is interesting to note is that, in most of the definitions given for curriculum, the voice of children is missing. The knowledge of the adult world seems to be imposed upon students. But it can be observed that teachers and students have no voice in the making of the curriculum.

The arguments in favour of the voice for children and teachers in the making of the curriculum are also supported by the critical discourse in education.

As a teacher, I always felt that reciting the text from the textbook is like a ritual and serves no purpose. I always tried to develop some mechanism which would help students construct their own meaning. In this context, I introduced daily writing work for

my students.

How does it all begin?

Teaching in one of the government schools of Delhi, one of the major challenges I face as a teacher in the school classroom is that the children are not able to express his/her ideas through writing. Traditionally, what they are being trained for in the name of writing is basically copying the text from the blackboard or from the textbook with some help from a book or from the notebook of another student. If the students are asked to write a few sentences independently, they find it very difficult and most often they come with the excuse that they have not memorised it.

I wanted my students to learn how to write. I do not mean how to write sentences or how to write grammatically correct sentences. What I mean by writing is enabling my students to express their opinions and ideas through writing.

What I did

I believe that asking the students to write on the topic of their choice would make it easier for them to start writing a page on daily basis. I was aware that there are few students in the class who do not know how to write and can only write by copying from somewhere. Keeping in mind the challenge of such students, I allowed those students to copy from somewhere, but I stated that I would prefer and encourage writing without copying. At this stage of the work, I had clearly two objectives in my mind:

to encourage students to write on regular basis to enhance their writing skills, and

to enable them to learn, how to write independently and thus making it easier for them to answer in the examination.

Since students were not habituated to this kind of work, they found it very difficult and they insisted that the topic should be given to them to write on, but I was adamant in not giving the topic. I believed that giving a topic to write about has certain limitations. One, that it would encourage all the students to write on that one topic which some may be comfortable writing about, some may not be comfortable. Two, I discovered that thinking in order to write about a topic in itself is a wonderful journey as it is the beginning of their thinking process. Many of them have shared through their writing how painful it is to find a topic to write about! I guided them at the beginning about the

kind of things I expect them to write and suggested that they start with the story of a movie they may have seen, the story of a serial show or to write about what they see while coming from home to school and while going back from school to home, the kind of talk around them, etc.

They started writing on such things and gradually they kept updating the writing skills based on the kind of feedback I was providing. Here, we see a sample of the difficulties they face in doing this activity.

We have a chapter in the class 7 textbook *Growing up as Boys and Girls*.

The idea is to make students aware of gender stereotypes and how to build a society based on gender equality. This chapter brings out the story of a boy and a girl growing in one of the small Pacific islands-Samoa. The same chapter also brings the story of a boy growing in a village in Madhya Pradesh in the 1960s.

I felt that these stories should help students reflect upon their own life realities related to gender and I encouraged them to write it. However, it was not easy. Then I shared my own story that how I perceive gender and how I see the discriminatory practices around me and in my family. I also read a book for them written by Kamla Bhasin *Ladka Kya Hai Ladki Kya Hai*

With these interventions, some of the students started writing. One was about a personal experience in the neighbourhood about differences in treatment of a boy and a girl, titled *Apne aas paas ladke tatha ladkiyon se bhed bhav*

' Once upon a time, an uncle and aunt were living in my neighbourhood. They had two sons and a daughter. The girl was 12 years old, one boy 11 years old and the other boy was 14 years old. They allowed their daughter to study till class 7 only. Their son studied in class 9. Once, a fight broke out in their family. On that day people came to know that her daughter wanted to study but she was not allowed to. They were only allowing their sons to study. Then, they always took their son for the outings. The daughter was never allowed to go out'.

In 15 days, I could see that students were able to relate what they see in their surroundings with what they are taught in the class. However, it takes a lot of time for students to start reflecting upon their own life experiences.

Sometimes I have seen that they have written about the discriminatory practices they face during the period in their family and they questioned their mothers for these discriminatory practices. What is important to note here that this is a process and students only start reflecting on life experiences when they see their teachers doing the same.

How did I ensure that they all are writing?

I took a variety of steps to ensure that all the students wrote everyday.

It became my daily ritual to see the compositions of the students as my first work in the classroom. Gradually, students discovered that the first thing sir asks is whether you have written a page or not!

I asked students to maintain a checklist so that we could track who is writing and who is not writing. I asked for the reason if a student failed to write on a particular day and, through the checklist, I could discover that a particular student was not writing for several days.

Sometimes, I called the parents to share the wonderful write-ups their wards had written and congratulated them. I asked the students if they wanted me to read out their writing to the whole class. If they agreed, I used to share it with the class and sometimes even in the school assembly. I used to click pictures of those write-ups and share it on the WhatsApp group of the teachers. I also started the practice of reflecting upon the write-ups, which were brought by the students.

Since the write-ups of the students were discussed in the classroom, it enhanced their engagement in the classroom processes. Their opinions, ideas and knowledge were used as valid content for the classroom discussion. This practice established them as important agents who could contribute to the formation of knowledge and in that context, this process transformed them from passive receivers of knowledge to contributors in the *formation* of knowledge.

Their writings throw light on the various challenges they face in their lives and show their critical awareness about such challenges. Since they were free to write on the topics of their choice, many of the write-ups could not be seen as the extension of curriculum, but established their growing critical consciousness about the life around them and this is what the ultimate objective of a curriculum is. This process also influenced the power dynamics in the classroom: the power dynamics which exists between the teacher and the student and between the students themselves, though at times they questioned my unconventional method of teaching in their write-ups.

In my experience as a teacher, I have seen teachers divided into two groups. One group believes that textbooks are sacrosanct and nothing can be done with them. The other group believes that they are completely useless as they do not care about the needs of the children. I propose: let the textbook be *one* source of information, but not the *only* source of information. Extend the ideas raised in the textbook by your own intervention and by extra readings! Whatever qualities a textbook may have, its value depends upon the teacher who uses it.

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Murari Jha has been teaching social science in a Delhi Government school. At present he is a mentor teacher and helping his colleagues in improving classroom teaching methodology. He is also a Ph.D. research scholar and his area of research is based on Children's Voices and the Curriculum. In 2018, he visited United States as Fulbright teaching fellow. He may be contacted at murarijha1984@gmail.com

Textbook
is
not
an institution.
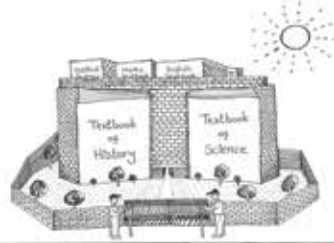
It is
a tool,
amongst many,
for
education.

It is
a source
of reference
for
the teacher
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that can be
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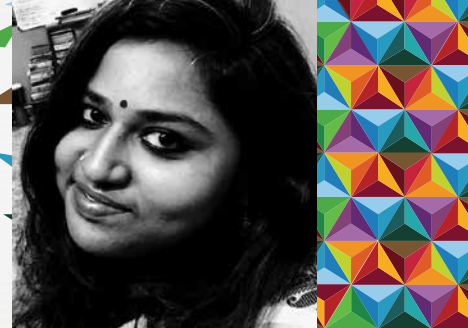If
textbooks
had
answers
for everything,

What
would
the universe
around us
be for?

Oza Vasvi Mayankkumar
vasvi.oza@apu.edu.in

Textbooks as Tools for Building Teacher-Student Relationships - A Perspective

Rajarajeshwari T

Overview: The article explores the use of textbooks as a Teaching Learning Material in the classrooms. The article seeks to understand whether the design and usage of textbooks helps towards building whether relationships between the teacher and the learner.

School has an important place in the democratic practice. The classrooms act as a microcosm for linking the macro level society with the micro level processes that takes place within it. But often the question rises, is the very act of going to school and participating in a classroom transformative for the society? If so, what tools for classroom practices aids towards creating such emancipatory experiences? With the focus shifting to child-centric learning, the discourses on textbooks has gathered a lot of momentum in the country. Within the system of schooling, the textbooks occupy a central position to enable teachers to design learning spaces to achieve specific goals for their students and demand a special inquiry.

In public education system, the textbook discourses often emphasise its need on the basis of ensuring quality and effectiveness in the implementation of curricular objectives. Their universality in the practical use of day to day classroom transaction, and their symbolic function in achieving the educational ideals is evident from how a teacher is tied to the prescribed textbook. Every subject comes prescribed with a textbook which a teacher is expected to complete in the academic year, create her instructional plans using it, ensure students complete the exercises prescribed within it, and design examinations to assess students' knowledge within its purview. Any deviation from the textbook is not accepted; from the state, the school authorities, the parents, and even from the students. The textbooks embody authority that teachers within the education system cannot refute. This authority of the textbook developed within the centralised examination structure of public education in our country, creates a particular positioning of the teacher and the learner within the larger system and forges a particular relationship between them.

Much has been researched and contested in the domain of 'textbook culture'- the teacher- textbook conflict, the colonial roots of textbook culture, the role of textbook in nation building, and the construction of knowledge, etc. All these raise critical and relevant questions about its role in the educational process and its importance in building 'ideal' citizens for the democracy. Textbooks are put out as the sites for "official knowledge" and they often remain only source of knowledge for many children in the crucial stages of their socio-cognitive stages of development. It is within the layout of the textbooks and their use in the classrooms the learners are introduced to the larger goals of education through concrete bits of information, concepts, exercises, visuals, etc. A child's conception of the world, its organization, and functioning, is shaped in crucial ways by the textbook design and the way it is used in the classroom.

In an educational system which capsules time, and disciplines its primary actors to jump from one subject to other ritualistically day in and day out, the question of experience takes a back seat. This raises the larger question that whether in the current design and usage of textbooks in schools, is it in its nature to create an emancipatory classroom experience for the learner and the teacher alike. One of the elements that textbooks as a central teaching- learning aid demand inquiry is what kind of relationship they build between the teacher and the learner.

Alasdair McIntyre (1985), a Scottish Philosopher, states that any social practice is a complex, socially established, and cooperative human activity. One has to achieve excellence by participating in the standards defined and appropriate to that form of activity to realise its goods. In order to achieve these goods, he claims that strong relationship needs to be established between those who participate in them. The participants need to treat each other fairly honestly, and act out of conviction. These virtues are necessary conditions for the continuation of any practice. Within MacIntyre's conception, we can assume with conviction that education is a social practice. For the pursuit of excellence, the teachers have a responsibility of designing learning spaces that would encourage

students to develop compassion, moral and intellectual autonomy with an ethic of care for their peers. Such learning spaces would encourage teachers and the students to make connections with their life, be observant of their social world, have interdisciplinary approaches, and generate empathetic relations with their surroundings. Thus, the relationship between the teacher and learner forms the core of any educational practice. Does a textbook centred curriculum act as an enabler for building such relationships and creating such experiences in the classrooms?

Let us take an instance of the visual representation in textbook layout and its usage in the classroom. While the visuals present one representational process, the words and the sentences present the other. The cognitive processes of constructing and assimilating knowledge occur when the learner is socialised through experiential processes within cultures of representation. For example, while reading a social science textbook, the words as well as the picture clues aid the learner towards understanding the event and the social representation of the actors (gender, class, caste, etc.) through the colour of the skin, the design of clothes, and the narrative of the incident shared, etc. The information presented along with the visual clues and exercises should act as a pedagogical tool. It should enable learners to develop processes to construct knowledge by making connections with their own lives. Thus, the act of meaning making of the concrete information, concepts, and exercises provided in the textbooks is not a simple natural process. It entails complex cognitive, socio-cultural, and political processes. As a tool, the textbook has to aid the teacher in directing the attention of the students towards these visual and written clues. The textbooks within their design should embed the pedagogical component that would aid the teacher in creating experiences in the process of learning. In the absence of this pedagogical component the teacher often ends up being a passive delivery agent of the prescribed curriculum and children become the passive recipients of knowledge. The classroom experience often gets reduced to reading the chapter, summarizing the information shared, and completing the exercises for the upcoming test. Within the devoid of creating an experience, the textbook often fails to serve its purpose as a tool.

A tool or an aid by the virtue of creating an experience, brings forth the conflicts and contestations of knowledge and its properties. The learners wade through these conflicts by trusting the teacher, and by collaborating with their peers. With the absence of these processes built within a textbook, the homogenised, fragmented knowledge, gets away without any inquiry.

The children march from one scientific concept to another, from one historical event to another, and one formula to another with no consequences of internalising them, thus making learning an impersonal act.

This conception of textbook- in its design and usage would not provide scope for other educational reform in the sphere of teacher education, assessments, accountability, etc. In the past years, there have been changes in the textbook design in NCERT books as well as those designed by private publishers. The lessons have become more interactive and there have been attempts to integrate subjects. Despite of it, their usage in most of the classrooms still follows the same routine and the student-teacher relationships are still dominated by textbooks. If we imagine teachers to have moral and intellectual autonomy in their classrooms, a new kind of relationship has to be conceived for looking at teacher and the textbooks. The teachers should be empowered with pedagogical content knowledge to critically understand the effective use of textbooks as a TLM in their classrooms. For developing such understanding of the textbooks and its usage for creating experiential learning practices, teacher education should focus on developing critical literacy in teachers.

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Rajeshwari is an educator based out of Chennai. She has worked with teachers and children on using critical literacy as a pedagogical tool in the classrooms under different programs. Currently, she is working as an Academic Coordinator at SEED Academy, Chennai. She completed her masters in M.A. Education from Azim Premji University. She can be contacted at rajarajeshwari.t13@apu.edu.in or rajeshwarit975@gmail.com

Enquiring Context in the Content of Honeycomb

Ravi Pratap Singh

In this article, I will analyse a class 7 English textbook called Honeycomb, published by NCERT.

The role of the textbook book in formal school education

No one can deny the fact that books have very crucial role in formal school education. On the other hand, it is also true that knowledge is not limited to the world of books only. Thus we have to analyse the situation: at what stage do books become an essential tool in teaching and when do learners learn without help of a textbook? In the early stages, a child learns how to read and once he /she has ability of reading, then later in life she/he reads from different sources to learn various things. This establishes the importance of the reading skill for children. When we see a child in the initial stages of learning in school, we find that there are books in the target language to help them in reading. It has been proved that the mother tongue helps in learning different subjects. Thus almost every educationist would say there should be use of mother tongue (in our case, Garhwali) to teach the target language (in our case both Hindi and English) and to strengthen target languages. When we ponder over this thought then we find that the mother tongue helps in making connections with content. This connection is essential for understanding of content. Along with this, if there is content which is contextual to learners then the learning becomes long lasting.

Now we can see the situation from two perspectives. The first is the textbook which we (facilitators) use in our schools or classrooms, and the second is the pedagogical approach, which we use in our classroom teaching. Reflecting on the first perspective we will analyse whether in our textbooks the content is contextual and relevant or not to our learner. Second, does it provide an opportunity to explore interesting activities which may be helpful in learning of children? This means: are the exercises given in a way that helps children to learn with fun? The second perspective is mostly about the teachers' exposure and their belief system of teaching and learning and how they use local language in strengthening of target language.

With this background I would now like to share my experience of English teaching in Class 7. As all of us know that now we are using NCERT text books in our schools. The textbook for Class 7 in English is titled *Honeycomb*.

Given below is the brief summary of content of the book

Unit 1	Three Questions (story The Squirrel (poem)	Leo Tolstoy- Mildred Bowers Armstrong	Three questions is a story by Tolstoy. The squirrel is a poem.	Good story makes the child think. And the poem is also nice.
Unit 2	A Gift of Chappals The Rebel	Vasantha Surya D.J. Enright	A gift of chappals is a story based on South Indian literature. The rebel is a poem highlighting the naughtiness of child.	The background of the story is a South Indian family. It was difficult for children to relate to it.
Unit 3	Gopal and the Hilsa Fish (comic story) The Shed (poem)	Frank Flynn	Gopal and the Hilsa fish is a comic story. The Shed is a poem which describes the talks between siblings.	Gopal and Hilsa fish is a good comic story.

Unit 4	The Ashes that made trees bloom (story) Chivvy (poem)	William Elliot Griffis Michael Rosen	The Ashes that made trees bloom is a Japanese story. Chivvy is a poem that tells about elders talk for children.	Japanese story is a good to listen and enjoy with some sense of magic.
Unit 5	Quality (Story) Trees (poem)	John Galsworthy Shirley Bauer	Quality is a story based on background of London. A trees is poem which helps us to understand the various use of trees.	Quality is a story which gives good message however again has a foreign background.
Unit 6	Expert Detectives (story) Mystery of the Talking fan (poem)	Sharada Dwivedi Maude Rubin	Expert detectives is a good story.	Children enjoyed it.
Unit 7	The invention of Vita Wonk (story) Dad and the Cat and the Tree (poem)	Roald Dahl Kit Wright	It is an imaginary story. It is funny poem	The story is imaginary. However there are some phrases which have very high level of difficulty. The poem misses the context.
Unit 8	Fire: Friend and Foe Meadow Surprise	Lois Brandt Philips	Good to understand dual nature of fire. A poem which reveals the surprises of meadow.	Yes good in context.
Unit 9	A Bicycle in Good Repair (story) Garden snake (poem)	Jerome K. Jerome Muriel L. Sonne	A humorous story	Child may get connection.
Unit 10	The story of Cricket	Ramchandra Guha	A knowledge full chapter.	A child will get easily connected with it. However, long texts may bore them.

Now I will try to share my experiences for above mentioned chapters one by one:

Unit 1: *Three Questions* (story), *The Squirrel* (poem)

Three questions is a philosophical story by Tolstoy. When I ask the class the third question, that is, what is the most important thing for him to do? The children responses were - study, play, etc. As the story proceeded, all of them were excited to know the answers of these questions asked by the hermit. However at the end of the story all of them were surprised when the hermit gave the answers.

Then I told them to read the last section of the story again. Then some of them got the sense. As it is story by Tolstoy, it is very obvious that it is not easy to get the sense of content. I myself found some difficulty with this chapter.

The Squirrel is short poem. Children are familiar with squirrels and have their experiences to share such as a squirrel is very shy, very quick to run away when noticed. The content of poem is in the context of children's lives. Thus it was easy for them to understand it.

Unit 2: *A Gift of Chappals* (story), *The Rebel* (poem)

A Gift of Chappals is a story with a South Indian background. The story is long and it was difficult for children to connect with the text. The exercises are good enough, specially the speaking and writing parts.

The Rebel is a very interesting poem. The children said that there is more than one rebel in our class!

Unit3: *Gopal and the Hilsa Fish* (comic story), *The Shed* (poem)

Children enjoyed the comic story as they got character of Gopal as of Birbal and Tenaliraman. Children enjoyed the role play of the story. *The Shed* is easy to understand because children are familiar with it as they have seen in their villages. The exercises given at the end of the chapter gives them an opportunity to talk about scary places in their locality.

Unit4: *The Ashes That Made Trees Bloom* (Japanese story), *Chivvy* (poem)

The Ashes That Made Trees Bloom is Japanese story which has magic power which the children understood. The poem Chivvy is easy to get connected with as most of the children have experience of this types of talk from elders.

Unit5: *Quality* (story), *Trees* (poem)

The background of *Quality* is London. This is the story of two brothers who were born in Germany and settled in London. The message of story is good though it was difficult for children to understand about buying shoes from a cobbler as they had not seen this. They had only bought shoes from a shop.

Trees is easy to understand as children have experience with trees. The exercises given at the end of chapter is interesting, specially writing poems on water and air.

Unit6: *Expert Detectives* (story), *Mystery of the Talking Fan* (poem)

Expert Detectives is an Indian story of Indian in which a brother and a sister are trying to gather information about a man. They find some suspicious information about him. While reading the story, the children thought at the end of the story they will get the climax of story. However the ending was open, so that the the children could have different opinions.

The poem *Mystery of the Talking Fan* was easy to understand as children were familiar with noisy fans. They extended it to the idea that cycles too make noise if not oiled properly.

Unit7: *The Invention of Vita-Wonk* (fantasy), *Dad and the Cat and the Tree* (poem)

The Invention of Vita – Wonk is a fantasy, but the vocabulary used in the content is very difficult. It was difficult for children to connect with the background, although the theme of story is interesting. The exercises given at the end of chapter give opportunities to use the local language.

Dad and the Cat and the Tree is a poem in which a father is trying to bring down cat from a tree. However, the situation was not understood in our rural context.

Unit8: *Fire: Friend and Foe* (informative), *Meadow Surprises* (poem)

Fire: Friend and Foe is informative as it explains the causes of fire and ways to put it out. The children understand the dangers of fire and find it easy to connect with the content. The poem *Meadow Surprises* is easy to understand.

We have still to complete the following:

Unit9: *A Bicycle in Good Repair* (story), *Garden Snake* (poem)

A Bicycle in Good Repair is a humorous story and It is easy for children to understand as they have experience with bicycles and this will help them to understand the story.

Garden Snake is a poem which says that most snakes are harmless to human beings. Most of the children have seen snakes and are familiar with the sight. This will help them to understand the content of the poem.

Unit 10: *The Story of Cricket* tells about history of cricket. Although cricket is always favourite topic for children to read about, the text is very lengthy and children may feel bored with it.

Out of the ten units there are five which I found difficult during classroom transactions. The reason of this difficulty is mainly due to non-contextual content, lengthy text and complex vocabulary.

Below is the table about the authors.

Name of author	Brief note
Vasanth Surya	Born in Tamilnadu and also worked in Tamil film industry as a director and actor.
Mildred Bowers Armstrong	Born in Newyork, USA also known as queen of carbon science.
Frank Flynn	Born in Sydney, Doctor as profession
William Elliot Griffis	Born in Philadelphia, Pennsylvania, USA. Educator
Michael Rosen	Born in London, UK. Children's novelist
John Galsworthy	Born in England, Writer
Shirley Bauer	Born in New York, writer
Sharada Dwivedi	Born in Mumbai, writer
Maude Rubin	Born in Colorado, USA. Writer
Kit Wright	Born in Crockham Hill, UK. Writer
Roald Dahl	Born in Cardiff UK, writer
Lois Brandt Philips	Born in Lowell, Massachusetts USA. Writer
Jerome K. Jerome	Born in Caldmore, Walsall, England. Writer
Muriel L. Sonne	Born in Canada , Writer
Ramchandra Guha	Born in Dehradun, Writer

The above mentioned table shows that out of fifteen writers, there are only three Indian writers: one from Tamil Nadu, one from Mumbai and one from Dehradun.

When I look at Honeycomb on the basis of pointers mentioned in first part of this article, then I find the following:

- the book seems lacking in contextual content. especially when we are using the book in schools of rural background. However it may be seen as an opportunity of exposure to new learning

- the book has very good section called Notes for the Teacher, which helps the teacher to understand the theme of particular chapter
- the book provides ample opportunity for children to learn with fun
- the book also gives opportunity to bring the local language into the classroom

Final comment

This is the first time I have used this book in our school and these are my impressions.

As the book is published by NCERT, it tries to cover certain prescribed parameters of an English text book for Class 7. However, if and when the book is used in schools all over India, because of the diversity, it will definitely lack in contextual content.

The dominance of foreign writers is very apparent in this book and there is need for including more Indian writers, although it is almost impossible for a single book to contain content in context of whole country.

The book is balanced in other ways as it gives ample opportunity for facilitators to teach with fun activities and along with this there is also scope of creativity for children. I feel there is a need of other books which have a lower level of difficulty to help the children understand NCERT books better

Another suggestion is: in order to make this book more useful SCERT should work to include a few lessons which have context relevant to their regions. Then this book will be a boon for learners and facilitators.

Ravi is associated with Azim Premji School, Matli since last seven years. He is teaching English to grades 7 and 8. He may be contacted at ravi.singh@azimpremjifoundation.org

Widening the Scope of Thinking by Widening the Scope of Textbooks

Saachi Khandpur

A text can be defined as anything that provides information, whether primary or secondary, that aids in the study of a particular topic. This is what I was taught within my first few classes at college in the United States. This threw me off, as throughout my schooling in India, I was taught that text could only refer to textbooks. A textbook that was used as the standard to follow in the study of a particular course. I was surprised that most of my classes in college did not use any textbooks. I was assigned movies to watch, speech transcripts to read and fiction and non-fiction books to absorb. It was an idea alien to me that such materials could be as effective, if not more so, in the instruction and learning of a course.

I was used to being read out to from a textbook and being told that my answers had to match the material in the textbook, lest I fall short of being academically proficient. The information in the textbook was considered correct, even if outdated. For example, in my entrepreneurship textbook in class 12, we were taught about the Companies Act 1956. We were told that we had to memorise all the provisions of the Act. We were never taught that this Act was replaced by the Companies Act, 2013. This rendered the knowledge gained in the classroom obsolete and inapplicable, as following the textbook was considered more important than disseminating knowledge that was valid and useful to students.

I believe that textbooks are very important in the earlier stages of education. They provide a framework within which teachers instruct their students. They also enable students to keep up with the material taught in class more easily, as textbooks are used as a point of reference to learn the material better. However, I think that textbooks should be structured better. In the aforementioned example, the textbook would have been more relevant to the realities of today if it had been edited after the ratification of the new Act. Perhaps this could be ensured by timely reviews of textbooks, thus ensuring that obsolete material is replaced with more valid information.

I also believe that students should not be tested on obscure information. For example, my political science textbook in class 12 included a flowchart on all the coalition governments since 1989, including the Prime Ministers that led those governments. This flow chart was worth four marks in that year's board exam paper. Should any of us become political scientists and policy makers, the information that would prove to be helpful to us would be the various advantages and disadvantages of a particular system of government, as opposed to who the Prime Minister was a decade before we were born. Textbooks are helpful only when they reflect the realities of our time.

At the same time, it must be recognised that textbooks are not the only materials that reflect the realities of our time. Other mediums, such as movies, documentaries, articles, speeches and social media platforms may also be used as methods of instruction in a course. Most students use these sources in everyday life to learn more about the events taking place around them, even globally. Therefore, education would be more effective if students are instructed via methods that they themselves actively seek out. A comedian commenting on a pertinent issue on a talk show may be as important as the statistics of the same issue as highlighted in a textbook. This may also enable students to develop a multicultural and multi-faceted perspective of the issue.

No single method of instruction should be used in isolation. Every method has its own unique advantages and disadvantages. The disadvantages of each method can be minimised and even eliminated by the supplementary use of a different method. This would also reduce the stress experienced by students, something that is a widespread problem in our country. The use of many forms of media and print would ensure that fatigue in students is minimised and that absorbing information becomes more a pleasurable activity than a stressful chore.

To a certain extent, perhaps teachers should also be given more freedom to determine the syllabus. This syllabus, along with any changes throughout the duration of the course, should be approved by a board comprising of experts as well as educators. This would provide for a more flexible use of the textbook, in accordance with regional realities and differences. After all, the relevance of a particular piece of information is dependent upon the region it is used in, too. An option within the textbook may also prove useful. Going back to the class 12 entrepreneurship textbook as an example, the section on setting up a business included steps specific to the city of Mumbai. As a student in Delhi, these steps bore no real value for me. In this case, the book should have included the steps for all the metropolitan cities of the country, giving students a choice to study the steps most relevant to their region, or eliminated such a section entirely. It does not make sense to have a workload that does not bear fruit in the future.

I studied in the traditional system, using only the textbooks prescribed for a class to study the course. The advantage of such a system is that my classmates and I rested easy, knowing that every question asked would be from the textbook. However, the disadvantage is just that: we rested easy knowing that we did not have to really know what we were talking about as long as we had it memorised. We knew that we did not have to engage in much critical thinking. This is in contrast to the structure in college: there is very little or no material for memorisation. Everything has to be read, watched and listened to, only to be critically analysed. This gives us the freedom to think and brings diverse perspectives into the classroom discussions, which widen the scope of everyone's thinking, including, perhaps most importantly, the professors'.

Saachi is a first-year student of the Bachelor of Arts programme at Mount Holyoke College in Pioneer Valley, Massachusetts. She passed out of the Delhi Public School, Noida in 2018. She may be contacted at khand22s@mtholyoke.edu

Experiences of Working with Textbooks in the Early Grades

Saurav Shome, Archana Dwivedi, Monu Kumar, and Pramod Kandpal

Indian classrooms have often been blamed for being dictated to by the textbook (Kumar, 1988). The report *Learning without Burden (Government of India, 1992)* observed the disappointing state of teaching-learning in the Indian education system. It noted that the curricula transacted in the classroom with the students are both meaningless and irrelevant to students and therefore incapable of engaging young minds in the process of teaching-learning. NCERT textbooks *(NCERT, 2006, 2007)* prepared and published after National Curriculum Framework 2005 *(NCERT, 2005)* seems to address the observed alienation.

In this article, we will present our experience of using grades 1 and 2 NCERT textbooks in our school.

We will first write about the context of school and introducing NCERT textbooks in classroom, the pedagogic challenges we faced in the classroom, aspects of pedagogy we were trying to establish in classroom, how NCERT textbooks helped us realise our envisioned pedagogy and the limitations of the textbooks. At the end we have also noted our overall learning and plan for future work.

The school's context

The Azim Premji School is situated in a village in Uttarakhand. The school is committed to providing quality education at elementary level while abiding by the norms and ethos of Right to Education Act *(Government of India, 2009)*. The students come from lower to middle income groups and many of them lack academic support at home.

The school is affiliated to the State Board and has been following State Board textbooks from its inception in 2012. In the current academic year, the Government of Uttarakhand asked all the schools to introduce NCERT textbooks. The state education department printed the books at the state level and made them available in the market. However, we procured NCERT publications directly and distributed them to the students.

Context of teaching at grades 1 and 2

We mentioned earlier that many of our students lack academic support at home and many of them are first generation learners. The students' language and textbook language also differs to a great degree. Therefore, teachers have to constantly engage in addressing the reality of multi-level classrooms and ensure the students' pace of learning. Despite several efforts, we found that raising most of the students' grade- appropriate learning level at grades 1 and 2 was a difficult task.

Our school has continuous teacher professional development initiatives and processes in place. As a community of teachers, our vision of education is that education should be problem-posing, authentic *(Freire, 1968)*, connected to the real world and relevant to and meaningful for students. There should be opportunities for group work, integrating students' voices and carrying out formative assessment *(Black & William, 1998)* in teaching plans. Teaching units should be presented to the learners in the form of themes rather than piecemeal as subjects *(Dewey, 1923)*. There are suggestions in research literature to make curriculum coherence in alignment with the expectations set by NCF 2005 *(NCERT, 2005)* as well as the realities of the Indian classroom, while focusing on subject integration, group work, assessment and classroom management *(Shome & Natarajan, 2013)*. In this context, we have found that NCERT textbooks provide solutions to many of our challenges and meet our envisioned pedagogy.

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NCERT textbooks and envisioned pedagogy

In the beginning of the academic year, when we introduce the textbooks in grade 1 and 2, we have found that students of grade 2 find it difficult to cope with the standard because all the concepts dealt with in grade 2 were constantly referring, explicitly or implicitly, to the concepts taught at grade 1. Therefore, we decided to merge the two grades and introduce the textbooks in succession to all the students. In addition to that the authors of this article collaboratively read textbooks of all the subjects of these grades and planned the teaching units. These teaching units had focused on the aspects discussed below in connection with the use of textbooks.

Problem- posing and activity-based teaching

Overall, using the textbooks resolved several problems for both students and teachers in the classroom. We carried out all the activities, question-answers, reciting poems from the textbooks with the entire class of students. In several cases we first demonstrated all the activities to the whole class and asked questions after the demonstration, such as *What floats and what sinks? What is heavy and what is light?* As part of activity- based teaching, students created calendars, carried out data collection on a number of students in each class on preferences such as choice between egg or milk and number of doors and windows in classrooms, etc. Later they presented their work in a *Baal Sodh Mela*. Similarly, students sowed seeds in pots, observed germination of seeds, and growth of the plant over a period of two months.

The exercises given at the end of the lessons are interesting. While doing the exercises students are able to read, write, and present their views with arguments. Lessons such as *Angoothe ki Chhap, Boojho Mera Rang, Haat ka Khel, Kya Bhata Hai, Kya Nahi Bhata Hai* provided ample opportunities to the students to learn while playing.

Group work

Students were given a number of opportunities to work in groups. The dominant mode of group work was solving the textbook problem together while reading the textbooks.

Connecting the text to the real world

The content of the textbooks, particularly in mathematics and Hindi, have plenty of real world connect. The visuals are related to the students' experience: there are images of kitchens, classrooms, schools, scenes of recess and villages with nothing very different from what they observe around them. All the words used in the Hindi and mathematics textbook are simple and familiar to the students' experiences. This not only helped students engage with the content, but also helped them to understand concepts better. For example, teaching the concept of place value was always a difficult task in the early grades. The use of currency notes and coins helped students develop the concept by better connecting it with the situation of real life transactions. Students understood that ten one rupee coins are equal to a ten rupee coin or note.

Similarly, in the English textbook, the familiar example of a merry -go -round, followed by a lesson on circles, providing the opportunity to use the circle for making different images, finally introduces the idea of other shapes.

In the mathematics textbook there is focus on reading and comprehension of real world problems that require mathematical operations or mathematical thinking. Most of the numerical problems are presented in context with lots of text. This also enhances the reading and comprehension skill of students provided the teachers helped the students to read and allowed to solve the problems in the textbook at their own pace. There is enough scope for students to engage with the material on their own and collect data, such as using their own feet to measure the length of a mat or their classroom.

Subject integration

Thus, there is a thematic coherence in the mathematics, Hindi, and English textbooks. There are topics connected to environmental awareness, sensitivity and activism in all the textbooks which would later connect to EVS taught as a separate subject in grades three to five. There are also topics on sinking and floating, rolling and sliding primarily in mathematics and then in both the language textbooks with the potential of developing into very sophisticated concepts in physics. Other examples are poems about trees to show the importance of trees in our lives and that of other animals. Other ideas, such as seed sowing and taking care of animals, movement, clouds, rain, rainbow, different type of houses, animals and their young and their habitats expressions, family, body parts, are introduced in both English and Hindi.

In both English and maths and, to some extent, Hindi common concepts like shapes, describing locations: *up, down, near, far, inside,* and *outside* etc. are presented.

The textbooks provide opportunities to introduce different forms of students' expressions as well as pedagogical approaches like singing poems with action, story-telling, role play, art and craft work (for example, making a tree, rainbow, kite, flowers, etc.), pictures of play and games, different art forms like *Madhubani* and *Warli* . This, in a way, closes the gap between traditional ideas of scholastic and creative domains.

Fostering values and skills

Both in content and presentation, the book introduces the values required for democratic society. In the English textbook for example, a tailor talks with a pig about each helping the other. In another story, a tiger and a mosquito show that everyone has something great in them and no one can be categorised solely as being either strong or weak. The stories in the textbooks end with constructive messages. This textbook helps foster the ability to argue, estimate, analyse, express their views and ideas, and imagine.

Gender balance and environmental sensitivity

There is an attempt of maintaining gender balance in the textbook, though there are occasional exceptions, as in a poem *A Nice Boy Like Me* is mentioned, or in the case of animals, which are mostly referred to as *he*.

Textbooks as an effective tools

Getting appropriate and readymade tools of learning is a big challenge in our context. However, these textbooks provide the required backing and suggested the resources readily available in our surroundings. In addition to that, while introducing varied content the textbooks provided a legitimacy of rich literature available for use in the classroom.

There was clear focus on introducing particular letters and words in Hindi and English textbook. For instance, there was a picture story called *Aam ki kahani* in the Hindi textbook which enabled students to express their views based on the picture story, ask and answer questions. While teaching another lesson on leaves, we collected leaves of different kind from the school compound, followed by a discussion on the shapes of the leaves, the differences in them and compared each with the names written in the book, thus helping them to recognise letters and guess the whole word.

Overall comments about the textbook

The design of the textbook facilitates learning. The font size of the letters is appropriate for young students. The quality of paper is good enough to handle and use as worksheets. The colour composition is varied and fits the theme of each lesson.

The content and presentation of the book provides scope for formative assessment. We have used NCERT Learning Outcome Indicators *(NCERT, 2017)* to keep track of the learning levels achieved by the students. Integrating the subjects across theme, content, concepts, skills and values, it reduces the curriculum burden of both the teachers and students. The textbook helps sustain the interest of students and engages them in learning by weaving in a lots of activities, interesting yet challenging tasks, orchestrating very sophisticated concepts as a network of ideas in both language and mathematics textbooks. As a result we were able to extend our class period to one and a half hours or more every day for each subject. Sometimes, we even dedicated one whole day for one subject.

Finally, it is important to note that no single textbook is sufficient at any level of school learning and the NCERT textbooks are no exception. However, it is interesting to note that the textbook successfully collated a rich variety of resources and therefore opened up a world of sources for teachers to look for and bring in classroom as aids to their teaching.

We mentioned early in this article that for our students and school context the English textbook of grades 1 and 2 are difficult for us to deal in classroom at the initial stages. In order to use the English textbooks better in the classroom we need a well-defined pedagogic intervention of third language teaching in place. We should mention that we often use the term *second language* for all the languages other than *first language*. However, in this article, we have used the term third language as something more distant even than the second language, that is Hindi in our context. Garhwali is first language for our students. We consider English as third language as it is assumed that students do experience the language in a very limited sense: they do not get opportunity to learn and use English grammar in daily conversation or use.

Future plans

One of the writers of this article commented that NCERT textbooks appear difficult at the beginning, but with time show the way to move forward and we all agree. For the next academic year, we will focus more on thematic units for the textbooks, prepare multiple teaching units of classroom transaction as well as a list of TLMs required for transacting lessons in the classroom, all in keeping with NCERT learning outcomes.

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Saurav Shome is presently associated to Azim Premji School. His current research work include project based learning, teacher professional development, and science & technology education. He may be contacted at saurav.shome@azimpremjifoundation.org

Archana Dwivedi is teaching science and English at Azim Premji School for the last one year. Before joining Azim Premji School, she taught science in Kendriya Vidhyalaya for five years. She is interested in making TLMs for students. She may be contacted at archana.dwivedi@azimpremjifoundation.org

Monu Kumar teaches at early primary stage. He also teaches Sanskrit at upper primary level. He is interested in SUPW and physical education. He may be contacted at monu.kumar@azimpremjifoundation.org

Pramod Kandpal teaches at early primary stage. He is interested in library work. He may be contacted on pramod.kandpal@azimpremjifoundation.org

Is oxygen only a supporter of burning or combustion? Or does it burn itself!

Ever since our elementary classes we have been studying in our textbooks about the importance of air. There are many experiments that can be done with oxygen, such as making a paper pinwheel and blowing it to feel the flow of air, or putting an empty inverted glass in water to show that the empty glass is not really empty but is filled with air.

As we go to higher classes we learn about the various features of air such as its solubility. To show that air dissolves in water, we take water in a pan and heat it. Just before it boils, we notice some bubbles at the inner surface of the pan. These bubbles are formed because of the air dissolved in water. We can also prove that air is matter. Yes! The same experiment where two balloons are inflated with air and tied to the ends of a wooden rod, indicating that air has weight and it also occupies space.

Based on these experiments and findings, we realise that there is invisible and essential matter around us that is very important for life and which has both direct and indirect impact on all living and non-living things. Such activities connect science with real life and play an important role in making children understand concepts of science.

However, many a time children surprise us with their observations, logic and the questions that they raise. I experienced this while teaching a chapter on air in class VIII, where the first part the chapter on Air is basically about understanding the specificity and utility of oxygen, nitrogen and carbon dioxide and it motivates children to adopt a scientific approach based on findings from exploration, activities and experiments. The second part of the chapter creates awareness and sensitivity about global environmental issues such as greenhouse effect and acid rain. I started this lesson with an activity.

Teacher (myself) – Let us try and stop the air today and see what happens.

Children (surprised) – Teacher! How can stop the air!

T - Oh, we do not have to stop the air around us. We should try to hold our breath and see for how long can we do it and what is this experience like.

(The children started discussing this idea with each other, saying that 'I will not be able to stop it for long ... no, I cannot!')

T (After activity) - Children, how did you feel?

C - Teacher, we were feeling suffocated and in the end, in order to compensate for the shortage of air, we had to breathe hard.

(When we calculated the average time of holding the breath, it came to about 12-15 seconds.)

I asked the children - Is there any difference between the air taken in (inhaled) by the nose and the air that is exhaled?

C – Yes, we take oxygen in and when we exhale, we breathe out carbon dioxide.

But some children started saying - No, no. We inhale and exhale the same thing.

I asked - How can we check this?

Homu - Teacher, we can check the carbon dioxide that is released from the body by using alkaline phenolphthalein and observing the change in its colour. (This answer was possibly based on the experiments done in the acid-alkali lesson studied in the previous session)

So based on the above suggestion, we immediately did the experiment and found that the alkaline phenolphthalein (pink) becomes colourless because of the air that came out from the mouth. Hence, it was concluded that we used different types of air which meant that air is also made up of different types of air.

Moni - Teacher, how can we know what is air made of? What are the components present in it?

Lomu - Teacher, the book says that there are a lot of gases in the air such as nitrogen, oxygen, carbon dioxide, argon etc.

I said – Yes, you are right. Let's look at another

experiment to understand it.

We divided children into five groups with six children in each group and performed the bell jar experiment. We concluded from the experiment that there is something in the air that helps to burn the candle and when that something finishes in the bell jar the candle extinguishes. Meanwhile, another group tried to do a different kind of experiment...

Vinu - (attempting to remove the air that helps in burning by blowing, flicking the glass, covering the candle) - Hey! Look! The candle got extinguished immediately?

The group again kept the glass upside down on the candle and found that the candle got extinguished faster than before and the level of water also did not rise much. In this way the children were able to figure out that there is one gas in the air which helps in burning while the other one extinguishes the candle.

I said - Can we make these gases in the laboratory?

A few children (happily) - Yes! Let's make them.

I - But how?

Children - With the help of materials available in the laboratory and the activity given in the book!

I said - Ok! But we will have to work very carefully.

The children started experimenting in the group on their own. When they were heating potassium permanganate to make oxygen, they saw that the water in the water-filled test tube was being replaced by a certain gas.

I said - Children, how to confirm that the gas prepared by heating potassium permanganate is oxygen?

Koki - Teacher, in the presence of oxygen things burn rapidly and are extinguished as soon as the oxygen gets over, so if the test tube has oxygen, then the burning matchsticks should make it burn faster.

Again the children started testing the gas in their group. The matchstick, which had got extinguished while being taken to the test tube, started burning much more brightly as soon as it was inserted into oxygen gas and extinguished after some time.

Dipu (repeatedly putting matchstick in and out of the test tube) - Hey! The match starts diminishing when taken out and burns when it is taken in.

But after some time, when the burning matchstick was taken back to the test tube then things did not happen as before.

Moni – Teacher! The matchstick is not burning anymore! Where would the oxygen present in the test tube have gone?

Chetu - The oxygen in the test tube will not remain there! It must have got mixed in the air.

Sana - The oxygen present in the test tube was used to burn the matchstick and it must have got over.

Moni - But, the book says that oxygen helps in burning but does not burn itself. According to this, oxygen should not get over. And if the oxygen is getting over then all the oxygen on the earth should also finish.

The question was natural. When we say oxygen helps in burning, we assume that it only helps in burning, whereas the fact is that it also gets over. In my discussions with the children, I tried to make them understand that oxygen, together with combustible substances (wood, coal, fossil oil) that mostly contain carbon content, produces heat and carbon dioxide gas. I told them we will learn about this in detail when we study about carbon. Again a question was raised by a child.

Moni – What happens if hot iron is put in the test tube? Because that is Fe.

Though the question was asked by one child the whole class was eager to know the answer and understand it.

I - We should do it and see what happens.

We again collected oxygen in the test tube and passed a thin red-hot iron rod in the test tube. Observation showed that the brightness of the iron rod increases as it is introduced to the gas sample that has been trapped in the test tube, but not when the process is repeated again and again. The children were surprised.

Homu - Oh yes! Even now oxygen is getting over.

Moni (logically) - Teacher! Either carbon is present in iron or iron also has the quality of combustion, just like carbon.

Sana – That means oxygen helps in burning, but after making the new substance it also gets over. So we cannot say that oxygen is only a supporter of burning or combustion.

I said – Going further, we will study about metals, non-metals and carbon, perhaps then we will get more accurate conclusions!

Children doing experiments

It was a very interesting experience for me and also for the children. After this activity, we made carbon dioxide from vinegar and soda and examined its fire extinguishing nature. We also learnt about the application of nitrogen. Further, we tried to learn about the global issues of air pollution through news, newspaper cutting and debate, which I will not be discussing now. All these interesting experiments- related to air, logical questions and answers, confirmation through experiments and drawing conclusions- helped in adopting scientific thinking and approach in children. Most importantly, on the basis of above experience I could teach and make children understand certain other topics such as chemical reactions, carbon, metals and non-metals

In this manner, textbooks can be the starting point of discussions in the class, leading to learning what is in the text.

[This article was originally written in Hindi. It was translated to English by Nalini Ravel.]

Umashankar is working as a science teacher in the Azim Premji school at Dhamtari since 2016. He has done his graduation in Bio-technology and Post-graduation in Zoology. As a teacher, he is interested in being a friend to children and together with them, in understanding scientific processes as a shared teaching-learning endeavour. He may be contacted on umashankar@azimpremjifoundation.org

India in the Classroom

Vijayshree PS

It was nearing the end of the academic year and the 5th grade Environmental Science Karnataka State textbook awaits its readers to complete its pages.

I am always excited about the opportunity to teach the chapter *Our India – Physical Diversity*, since it appears to capture characteristics of the different regions of India- historical places and the flora and fauna of these regions. This is an account of one such experience.

At the start of every chapter in the textbook, there is a set of aims for the particular lesson. The aim stated for this chapter is that *the students know about India's unique natural setting*.

After studying this lesson you,
- Understand the physical map of India.
- Know about the Himalayan Mountains, plateaus, plains, coastal plains, river basins and desert.
- Understand how the factors of natural environment influence the life of the people.
- Know the effects of physical factors on art and architecture.
- Know about the important characteristics of weather and the climate of India.
- Know about the plants and animals of India.

I entered the class armed with the textbook. A physical map of India lay in the corner of the classroom, waiting to be opened. I set about the task by trying to understand the students' previous knowledge. So, the session began with a simple question, *What is India?* The students responded, *It's our country*. When asked what the uniqueness of India is, I was expecting to hear something around the aspect of unity in diversity, since I had taught a similar topic to 9th graders at some point. To my surprise, the students were quiet. Realising that these were younger students, I reframed my question and asked about places they have visited. One boy mentioned that he had been to Mysuru and a girl shared that she visited her grandparents' place during summer vacations. Soon there was excitement in the class with every student wanting to share about their family trips and travels. I decided at that point to do a preparatory activity for this chapter with a clear objective: that of making the students understand the meaning of diversity.

To begin with, I introduced myself and the place I hail from and the language spoken at home, following which, the students also shared information about their native place and their mother tongue.

There were seven students in all. So we grouped them into three teams. I asked the teams to pick up a piece of chalk and marked three specific areas on the black board- one for each group. The task at hand was for the team members to discuss and write their responses on the blackboard for the questions I asked.

Each team picked up a specific area on the blackboard- like owning their own spaces - and were ready for the questions. Next, they picked a name of a place for their respective teams. One group picked Bengaluru, another Tamil Nadu and a third group picked Mysuru. These were the places they were aware of or had lived in. The students had to answer all the questions specific to the place they had chosen.

The objective of this activity was to draw out some differences between these places and then move to the more complex notion of diversity. My first question to them was *What is the colour of the soil in that place?* The students appeared confused! I asked them to discuss within the groups and come up with a response. It took a few minutes to arrive at a response that they agreed upon unanimously. The answers they gave were red soil, black soil, and brown soil.

The next question was, *What is the colour of water in that place?* Initially they said white. With some probing and encouragement, they said orange, blue, and even dark brown! As they moved to the third question, the students began to get confident. Gradually they began to write whatever they had experienced, secure in the thought that they were

not going to be judged for their response. The last two questions were about the animals and the green leafy vegetables found in that place.

At the end of the activity, the students were delighted to see the blackboard filled with their responses, with not a single empty space.

The students were struck by the differences they had noted between places at short distances from each other, of not more than six hours of travel. I could now see that the seed of the notion of diversity had been sown. The activity had served as a preparation to begin the lesson on the physical diversity of the country.

We also discussed how the world differed in terms of the food, the weather, soil colour, taste of the water everything changes'. At this point, we used the map of India to locate Tamil Nadu, Bangalore, Mysuru and the river Kaveri. The students got a sense of national borders and lines demarcating borders between countries.

I wanted to wind up the day by setting a context for the introduction of the big chapter ahead. The textbook provides factual information on physical aspects, climate and art and architecture of the different regions in the country. I felt that the lesson must go beyond mere facts and be made more interesting. The subject needed to be approached by making students appreciate diversity in the country. At the end of the activity, they were excited to learn more about the diversity of our country.

The activity also raised the students' interest and curiosity about the vastness of the earth. After the activity, there was an animated discussion and students wanted to know about cities and rivers on the map of India and the nations on the globe. And to my astonishment, they began raising interesting questions. At the end of the session a girl asked, *What happens if we keep moving away from the land? Where will we reach at the end?* And one of the boys who had kept quiet through much of the session said, *Do you want to go to the sun, moon, away from the earth?* There was much laughter. I was glad to see the children opening up. I ended with the promise of taking the discussion forward the next time.

Vijayashree PS is a resource person and part of the Urban School Initiative of the Bangalore District Initiative, Azim Premji Foundation. She may be contacted on vijayashree.ps@azimpremjifoundation.org

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As a seven-year-old in a Convent School in Delhi, I found the strange name of 'Edinburgh' in my English textbook hard to pronounce and harder to locate in my mental world, let alone a map. In fact, school just churned out more and more of these strange names and words which did not seem to have any bearing at all on my lived experience. And as the years rolled on, I was struck by a single lesson in Class Four, where our Science text had a chapter titled 'Four Common Trees' – and voila! Three of those trees (The Red Silk Cotton Tree, the Rain Tree and the Gul Mohur) were *actually growing on our school campus*! This memory stands out as one of the few instances where what we learned in our classrooms actually connected to our immediate world outside it. And there aren't many more such memories that survive …

Much later, as a teacher in a school in Kalakshetra, Chennai, I discovered the power of contextuality!

My third graders had to learn the difference between rotation and revolution. How was I to have eight-year-olds experience these contrasting motions in the distant heavens?

Suddenly, I had a flash of an idea. The school atmosphere was one where students chanted prayers of five religions in the daily Assembly, and pujas were often performed before the serene statue of Lord Ganesa on the Assembly grounds. I asked them how they prayed at home: and one child demonstrated how he folded his hands across his chest in a 'Namaste'. Closing his eyes, he rotated slowly as he chanted his prayer. I then asked them how they prayed when they went to a temple. Immediately, several hands shot up as they described the manner in which they would circumambulate the sanctorum where the Deity was housed.

So, I called upon students to demonstrate the two different motions. When I announced 'revolution', two students would spring out of their seats, and while one stood still, the other would go around the first in slow circles. When I announced 'rotation', each student would stand in one spot but slowly spin around in that spot.

In no time, the students understood that to demonstrate 'rotation' they did not need two people, while to show revolution, they did.

I believe that this example worked because it was so firmly embedded in the students' immediate context. Unfortunately, since the diversity of our textbooks hardly matches the enormous diversity of a country like ours, teachers often have to rely on standardized content and examples to transact their lessons. During this process, the precious opportunity to connect the students' immediate experience with their learning is often lost.

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➢ When the content to be taught seemed to be far removed from the children's immediate experience, what was your strategy to bring it into their field of experience? (an example is shown above.)
➢ When you changed your lesson plan because something unexpected arose in class – and your unplanned lesson was a huge hit!
➢ When your students turned around the lesson purely by virtue of their engagement, and you found that your planned lesson would not have been half as impactful as this spontaneous one …
➢ When you wove the local environment into a History/Grammar/Mathematics class … (it is relatively easy to do so in an EVS/Science/Social Science class, so we are excluding those categories here)

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