EXPLORING THE EVERYDAY
Ethnographic Approaches to Literacy and Numeracy

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ACKNOWLEDGEMENTS

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INTRODUCTION

Teachers teach, students learn. We take it for granted that education is about one group of people imparting knowledge to another. We also suspect that nothing is ever that simple. But when teachers are involved in the practice of adult education, we can be certain that a much more complex process is about to unfold.

This publication is an account of such a process, involving a diverse network of adult-education practitioners working in South Asia, and a group of academics and trainers based in the U.K. The initiative described here sprang from the interaction between Nirantar, a feminist organisation with a long experience of adult-education work among rural women in India, and Uppingham Seminars in Development from U.K.

Nirantar had shared with the Uppingham group some of the intricacies involved in bringing an educational curriculum to women who, while unschooled, routinely drew on a complex, even sophisticated, body of local knowledge based on their collective life experiences. Nirantar had experienced difficulties, but also a sense of a genuinely empowering opportunity, in the dissonance between the cultural knowledge of local women and their own adult-education curriculum.

The conversation grew from such anecdotal origins to a discussion on how to approach the knowledge base of learners. Uppingham Seminars and Nirantar worked on the possibilities of using ethnographic approaches to study the indigenous beliefs and values that structure learners' understanding and experience of literacy and numeracy and to see how such knowledge could be used to develop curricular material. After a few short exchanges, which included an in-house workshop with Nirantar and a couple of field visits by Uppingham members to Nirantar's field programme, a more structured capacity-building intervention for practitioner organisations began to evolve. Nirantar approached the Asia Pacific Bureau of Adult Education (ASPBAE) as a member of this regional organisation, and sought their involvement in drawing in other South-Asian organisations and developing the project further.

We felt the project offered new possibilities. We were keen to share this with a wider group of adult-education practitioners from South Asia, not least because adult education and literacy are low on the list of priorities within the education and development sector in this region, despite the fact that it is well known for being home to a substantial proportion of the worlds 'illiterates'. So there is always a need to create spaces and explore new approaches — in this case ethnographic approaches — that will help make programmes more effective and meaningful for the people they are meant for. Organisations in South Asia do grapple with several common issues and problems and renewing the energy around adult literacy is a shared concern.

As adult educators we are in the business of determining what is worth knowing for other adults, who are usually not from the same background and do not share the same experience base. This process is power-laden and hence the need to be self-reflexive becomes critical. Moreover, while it is commonplace to say that programmes should be contextual, how one actually goes about understanding this context, its nuances and inner workings is less well-known. This requires skills and ways of seeing that we felt ethnography could offer.

But, ultimately, as practitioners and activists we are interested in changing things for the socially and economically disadvantaged and this requires interrogating power relations and structures. From our experience of working with rural women from marginalised communities we were aware that literacy and numeracy were embedded in power relations, gender being one of them. Understanding these is an important first step in the process of transforming them. Could ethnography offer such a lens that would strengthen our work?

The project also focussed on numeracy, again opening up new possibilities as numeracy invariably gets short shrift and is subsumed within the larger rubric of literacy. We all know that non-literate adults calculate and use maths in their daily lives, but how and in what ways? But when it comes to teaching numeracy such knowledge is ignored and what ensues is a decontextualised transfer of technical skills, which adult learners often do not use in their everyday lives.

And, finally, as practitioners we were keen to see how developing an understanding from an ethnographic perspective could translate into changing programme design, curricular frameworks and materials — again an area that needs exploring. Even a cursory glance at adult literacy and numeracy material will reveal that it is mostly didactic and simplistic, and that it talks down to learners and privileges 'formal' knowledge. Local knowledge is rarely reflected in literacy and numeracy materials. Through this project we were hoping to not just reflect the everyday in materials but to use this knowledge to bring about change and broaden horizons.

Keeping such concerns in mind, a collaborative project — between Nirantar, Uppingham Seminars and ASPBAE — was initiated, with each partner bringing particular strengths and expertise to the venture, and with Nirantar playing a coordinating role. The resulting project, which developed both conceptual and practical skills, was implemented in three stages. The first step was a workshop held in January 2006 in New Delhi. At the workshop, facilitators Brian Street and Dave Baker introduced participants to some basic ethnographic concepts and methods. Participants also worked out research project that they would implement on returning home. During the second stage, between January and August 2006, participants did the fieldwork and wrote up their research reports. Participants reconvened in August for a second workshop facilitated by Dave Baker. Here, participants presented and discussed their research studies and used it to develop outlines for teaching-learning materials. The workshops were interactive and used a mix of 'academic' and 'practitioner' approaches, which included lectures, group work, observation, presentations, games and discussions around readings and films.

This publication describes how the project unfolded, with an eye to encouraging others to join us in what has already proved a most engaging and fruitful discussion. We hope the engagement will continue.

Nirantar, New Delhi
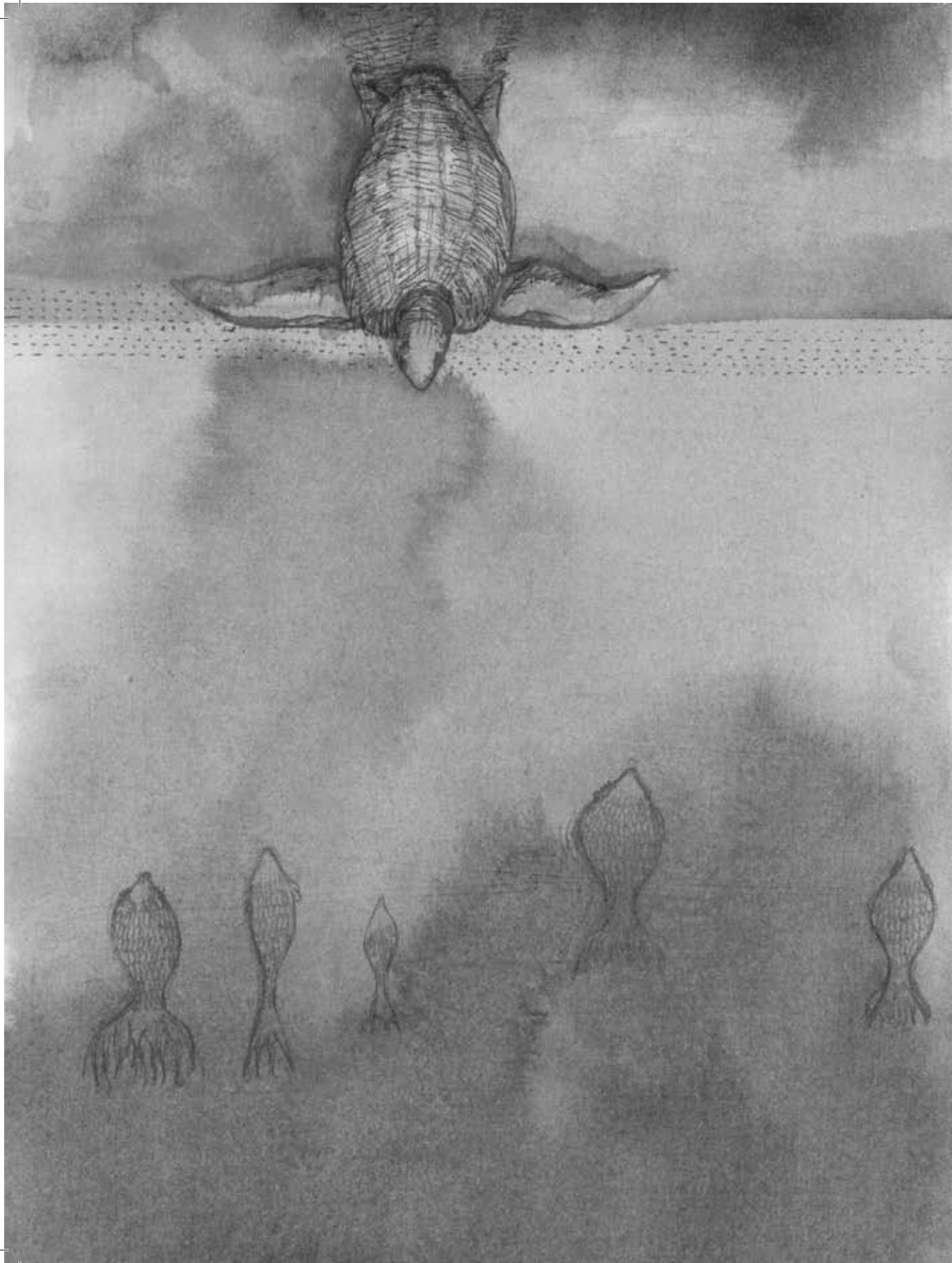
PART I
Crucial Concepts in Ethnography, Literacy and Numeracy

The first workshop was designed to acquaint participants with the techniques of ethnographic research, and then enable and encourage them to use those techniques to do small-scale ethnographic research of literacy and numeracy practices in specific contexts. The research was to be conducted to inform literacy and numeracy programmes, with the ultimate aim of designing teaching and learning materials using an ethnographic perspective. This is based on the basic principle of adult education — to start where the learners are, with what they can do (and are, in fact, doing) rather than with what they cannot do. While this may sound simple, practitioners do, in fact, need to be sensitised and trained in ways of finding out what learners are already doing. In Part I you will read about the main content of the sessions and deliberations at the first training workshop.

CHAPTER I
Developing an Ethnographic Perspective

Ethnography was new ground for most participants. The first step, therefore, was to discuss what an ethnographic perspective could offer adult-education practitioners. Participants were then introduced to the concepts and principles of ethnography and ethnographic research through a variety of modes, including stories, lectures and discussions, as well as core readings about ethnography and ethnographic methods. The substance of these sessions is described in this chapter.

WHY TAKE AN ETHNOGRAPHIC PERSPECTIVE?
Most adult literacy and numeracy programmes are centrally designed by formally-educated people who are at a distance from the lived realities of the participants of the programmes they try to serve. Such programmes tend to be top-down and skills-oriented and are very often not as relevant in the learners' lives as they could be. As a result, many have not been effective.

The tools and approaches of ethnography offer a more socially-grounded approach to adult literacy and numeracy programmes. To approach the development of literacy and numeracy from an ethnographic perspective means finding out what people already know, determining what their existing literacy and numeracy practices are and building on that, rather than assuming that adult learners bring nothing to a class and must be 'given' everything. It means moving away from viewing literacy and numeracy as isolated and autonomous sets of skills, and instead towards seeing them as social practices that permeate the environment and the lives of people, those for whom literacy- and numeracy-learning programmes are designed.

> "The perspectives and tools of ethnography and ethnographic research allow us to elucidate these social practices of literacy and numeracy, teasing them out of the events of daily life."

Thus ethnography-based research serves many purposes: it helps inform literacy and numeracy programmes so that they are more relevant and closely matched to the needs and practices of the learners. It also reduces the gap between the programme 'providers' and the 'receivers', transforming a provider-receiver paradigm into one of teachers and learners learning from each other. It also makes curriculum and material developers aware of the 'funds of knowledge' of learners. This process enables the learners themselves to become aware of their skills and knowledge, with the potential result of increasing their own confidence. The recognition and validation of people's existing literacy and numeracy skills and practices, which lie outside the formal realm of what is recognised as being 'literate' and 'numerate', is very empowering.

By taking an ethnographic perspective, programmes can become more than simply 'relevant'. They become integrated with people's lives, drawing upon people's experiences as a starting point and bridging the gap between programme-implementers and learners. This requires that programme-developers and curriculum-designers themselves first become learners again, learning about the learners from the learners: details about their lives, their methods of solving problems, their own systems of organisation, their literacy and numeracy practices — from how they measure grain to how they read a calendar.

Participants engaged in this project with a range of expectations, from learning about new approaches, seeking greater conceptual clarity to learning new research skills. All the participants were interested in applying what they had learnt to their own programmes: to alter programme design, to change teaching-learning interactions and to develop ethnography-based material.

> "We want to do research in order to understand, and thus be able to inform and plan our teaching and learning programmes and make such programme offerings more effective, more real and more complete, based on people's actual daily lives."

THE ESSENCE OF ETHNOGRAPHY
The essence of ethnography was introduced to the participants through discussions around a short story.

> **The Story of the Turtle and the Fish**
> There was once a turtle that lived in a lake with a group of fish. One day the turtle went for a walk on dry land. He was away from the lake for a few weeks. When he returned he met some of the fish. The fish asked him, "Mister turtle, hello! How are you? We have not seen you for a few weeks. Where have you been?" The turtle said, "I was spending some time on dry land." The fish were

> a little puzzled and they said, "Up on dry land? What are you talking about? What is this dry land? Is it wet?" The turtle said, "No, it is not." "Is it cool and refreshing?" "No, it is not." "Does it have waves and ripples?" "No, it does not have waves and ripples." "Can you swim in it?" "No, you can't." The fish said, "It is not wet, it is not cool, there are no waves, you can't swim in it. Don't tell us what it is not, tell us what it is." "I can't," said the turtle. "I don't have any language to describe it."

This story helps us understand what ethnography involves. If we go to a new place, our first inclination is to describe it in terms of what it does not have. An ethnographic perspective shifts us out of this mindset and helps us firstly to 'imagine' things that do not exist in our own world and then to understand them on their own terms rather than to see them within our terms, as simply deficits.

The story also has special application to the fields of literacy and numeracy. Often 'outsiders' and 'literate' people describe people with whom they are unfamiliar as 'illiterate' or 'innumerate'. They do not see the many literacy and numeracy practices that non-literate people are engaged in. Or, like the turtle on dry land, they perhaps lack the language to describe literacy and numeracy practices that do not correspond to the literacy and numeracy practices that they are used to. An ethnographic approach is dedicated to developing the lenses and language for describing such practices to others. One of the implications of developing such lenses would be that as practitioners we engage more closely with the participants of our programmes, respect their knowledge and use this to build the new knowledge and learning that our programmes aim to provide.

> "The story shows us that to be ethnographers means exploring local meanings, the things that make sense locally but may not have meaning in other contexts. It means suspending judgment about those other contexts, and appreciating the different 'worlds' that others live in and their own knowledge."

The story enabled participants to understand the essence of ethnography, which they were then able to relate to other contexts. One participant suggested that dealing with currency conversion in a foreign country is a practical example of the difficulties that one can run into when trying to describe the unfamiliar. Suppose a Western visitor to Delhi wants to buy a shirt from a street vendor, which he is told costs Rs 200, a quantity that is unfamiliar to him. How can he convert it or translate it into something familiar, like pounds or dollars? In other words, how can the turtle describe it to the fish? In the process of trying to convert the currency of rupees into pounds, many

questions naturally arise with regard to making assumptions about familiarity, about the understanding of the symbols and meanings of terms such as 'division', 'decimal', and about how to make sense of an answer.

A BRIEF INTRODUCTION TO ETHNOGRAPHY
Participants were introduced to key concepts, methods and tools in ethnography and ethnography-based research.

Ethnography began as a subset of anthropology. It draws upon some of the basic tenets of that discipline and has evolved over time, as have the theories and approaches of anthropology. Early traditional anthropology followed the same scientific paradigm as the rest of science in the 1800-1900s: The researcher was an observer who remotely and dispassionately observed or studied his 'subjects' — another culture or group of people — and made uninvolved interpretations on the basis of his observations. The 'subjects' were rarely involved in the interpretation of the 'data' and the researcher was assumed to be neutral and unbiased. The conclusions drawn were then often applied to a large group, the goal being to develop a model or theory about the particular group.

As the views of research evolved and began opening up to the idea of the scientist/researcher as a participant in the process as well as an observer, the field of anthropology/ethnography also began to change. There was a recognition of the need for the researcher to become more involved with her 'subjects' — to talk to them, learn their language, live with them, listen to their explanations of why and how they do things. Other changes have taken place in the discipline. Modern ethnography has come to be recognised as a form of study that is based on a case-study approach rather than the earlier empirically-based account of a whole society.

> "Ethnographic research, unlike some research which is solely done 'on' people, is research done for people and ideally with people."

Another distinctive feature of modern ethnography is the role of reflexivity — that the perspective and world-view of the researcher cannot be ignored or elided, and that it should be acknowledged and reflected on openly by the researcher herself. In traditional ethnography, the observer was assumed to be neutral and unbiased. But every researcher (every person, in fact) sees the world through a particular set of 'lenses', be it culture, gender, class, education level or ethnicity, and so rather than ignore those lenses, it is the researcher's responsibility to acknowledge them and share what she brings to her interpretation of a particular situation.

These are some key ideas related to ethnography:
Proximity/distance (participant vs observer) The researcher flows back and forth between the two perspectives of being inside the situation as well as seeing it from the outside. The researcher may be directly involved with the situation or may observe it from the outside.

Switching between modes, languages, cultures, practices, etc The ethnographic researcher must be able to switch modes easily in order to go back and forth between being an observer and being a participant.

Reflexivity The ethnographic researcher must be aware of her affecting a situation as a researcher/observer, and must track and acknowledge her own changes, perceptions and influences.

Representation of an experience to another person The ethnographic researcher must be able to explain and share the workings of a new experience with other people.

Time for ethnography Anthropologists tended to spend at least a year 'in the field'. These days, researchers using ethnographic methods may spend shorter periods in a field site. They may stay for a few months, following a class from its start to its end, or they might go to the class only for specific sessions.

Ethnographic perspective In recent years other disciplines have come to use ethnography without doing the full-fledged field study usual in anthropology. These approaches are termed 'ethnographic perspectives' in order to distinguish them from anthropology.

DOING ETHNOGRAPHY

The ethnographic approach means more than just observing and interviewing. Adopting an 'ethnographic' perspective often means identifying a problem or question to explore, and then having conversations with people about that topic, observing that environment, listening closely to what people share about themselves and their lives, how and why they do things. It doesn't necessarily involve compiling a lot of data or taking a large survey. It does mean, for example, accompanying someone as they take their fruits to the market to sell, or negotiate with a taxi driver, or collect their wages. It means uncovering and understanding the invisible details of people's lives; in our case, it meant finding out the details of people's literacy and numeracy practices that they themselves may be completely unaware of or give little credence to.

"Ethnography is complex, although it appears simple. It is more than a set of skills: it is a set of concepts, assumptions, and perceptions. It also means letting go of assumptions."

Common methods of ethnographic research include unstructured or semi-structured interviews with people about their activities, observations of interactions and the environment, video/audio recordings, descriptions of events, and finally moving from descriptions to explanations. Interpretation of data means looking for deeper reasons and connections among events, looking for linkages and connections that point towards patterns and practices and provide insights and deeper understanding. In this project, too, participants will adopt an ethnographic perspective — they may call on some of the anthropological insights and traditions noted above but they also take the method forward in their own way.

Women write their names on a wall in a *basti* in Rajasthan, India

Making Meaning

The ethnographer must develop a theory of meaning for whatever/whoever is being studied and understand the game internally by asking, "What does it mean to them?" Not by interpreting or judging from a perspective of science and rational thought. For example, a person from a different culture visiting a village in India might ask, "Why has that woman written her name on the wall?" or "Why did that woman write on the outer wall of a house, 'Mothers-in-law and daughters-in-law must learn together'?" But rather than focussing on the content of what was written, an ethnographer would look at the literacy act and the social practice of writing on a wall, which is supported and accepted in an Indian context but is not in a Western context.

ISSUES AROUND DOING ETHNOGRAPHY

Validity of Ethnographic Research

Questions are sometimes raised about the validity of ethnographic research compared to more traditional, experimental or survey-based, empirical approaches. It is important to remember that these are two distinct approaches with different aims. In ethnography, case studies are used to demonstrate a concept or a hypothesis. Case studies used in this way are not meant for empirical generalisations. We thus only need one case study to demonstrate a concept, not necessarily 'representative' data or samples.

> "Ethnography offers a way to look more closely and explain things such as low motivation, 'failure' of programmes, etc."

Experimental methods and ethnography are inversely related. More experiment means less ethnography and less interaction with people, while more ethnography means less experimental data and more interaction with people. In ethnography, the close relationships developed with our 'subjects' are part of what makes it possible for us to make the claims we make. This is in contrast to empirically-based approaches which aim to reduce the level of interaction that may be perceived to 'colour' the data. It is also important to acknowledge the differences and perceived 'weaknesses' of ethnography.

Recognising the 'Frame'

In ethnography there are always 'lenses'

As mentioned above, in ethnography there are always 'lenses'. Ethnography is always rooted in some kind of theory or the researcher's frame of reference.

With regard to adult literacy and ethnography we must be aware of the frame through which we are seeing the class or activity. As a teacher? Researcher? Donor? Programme manager? Learner? These create lenses of perception. Take this example. During a discussion about festivals in a literacy class, the women became very animated, opinionated and involved in the discourse. They had great strength in verbal skills and dialogues, even if their literacy was weak. The teacher allowed the discussion to flow. The lesson plan and the goal of the literacy class remained unfulfilled. An ethnographer-researcher observing the class would possibly comment that the discourse itself became the vehicle and focus. And the implication for curriculum and teaching-learning processes would be to make a link between discourses and technical literacy skills. A supervisor, on the other hand, may not be pleased that the lesson plan has not been adhered to. The values, beliefs and sentiments of the observed and observer should, however, be included in the research report.

Local and Global

There are trade-offs between taking an ethnographic approach versus an experimental one, such as regarding local/global issues, since ethnography is somewhat 'micro' in its orientation. Ethnography may not always be able to take external political pressures into account, and yet with development programmes there is a need to link with macro-economic and policy issues. The ethnographer thus has a responsibility to work towards making local and global linkages by doing research 'upwards' — by finding out about the larger policy issues and international frameworks and analysing them in the context of power, desired outcomes and relations with policy agencies — and then making connections between the 'global' and the 'local' whenever possible. The ethnographic practitioner holds a unique local perspective that could be shared with those at the 'global' or macro, policy-making level.

> "Ethnography can link the local with the global. Policy-makers can also be trained to look at new ways of assessment and to use other inputs rather than just statistics to determine policy."

Can Ethnographers Intervene?

> "As practitioners and activists we will invariably be interested in change. As ethnographers we will be trying to understand the status quo. The role of an interventionist-ethnographer will always be a fraught one."

Another vital issue, at least for practitioner-ethnographers (all the participants would come under this category), was whether they could be interventionists or whether they are always meant to be passive observers. This in turn gives rise to concerns about whether ethnography is compatible with a change-agenda or whether it leads to

conserving the status quo. The relationship between the researcher and the researched when using an ethnographic approach makes dealing with such issues almost inevitable. Recognising power relations and appreciating the voice of the subjects is the domain of the ethnographer. The ethnographer may often then be drawn into negotiating or mediating within power structures.

> "The ethnographer has two options: to 'get into the system' by being a participant while observing or by observing objectively, trying not to interfere. The latter is now out of date. "

CHAPTER II
Literacy and Numeracy as Social Practices

Literacy has been, and often still is, perceived as an autonomous set of skills, but is gradually being seen as a social practice that can be explored through the observation and analysis of literacy events and practices situated in context. Several sessions of the workshop were devoted to developing an understanding of literacy and numeracy from a social-practice approach. Chapter II, which is divided into three parts, captures the main points of the content and discussions of these sessions.

DEVELOPMENT OF A SOCIAL PRACTICE MODEL OF LITERACY
Perceiving Literacy and Illiteracy
Workshop facilitator Brian Street used his research experience in Iran as the vehicle for exploring the evolution of perceptions around literacy. In the villages where Street conducted ethnographic fieldwork in Iran in the 1970s, he had observed various instances and spaces where literacy was being used continuously — such as in the primary school, around the post-office box, fruit sellers labelling boxes, people taking notes and writing records, classes taking place in the Madrassa (Muslim religious school), and so on. From this research he identified three 'sets' of literacy based on specific contexts in this village: 'Dabestan literacy' at the village primary school; 'Madrassa or Maktab literacy' among those who went to religious school; and 'commercial literacy' among those who sold fruit at the city market and had to write receipts, bills or cheques.

> "Despite such obvious uses of literacy, the villagers were labelled and perceived as being 'illiterate' by outsiders because they did not perform in the realm of defined literacy. There was a sharp contrast between perception and actual practice. This happens all the time even today."

How can one make sense of a situation like this, where people described as illiterate demonstrate so many literacy practices in their social context? The dominant theory at the time was that there was a great divide between the 'oral' world and the 'literate' world. The 'literate' world was seen as being logical, rational and efficient and the 'oral' world as irrational, ignorant and unscientific. But this model did not fit with the reality seen and experienced in this village in Iran. New terms were needed to describe the situation, in order to see the things that the 'dominant model' seemed not to see.

The Autonomous Model

An analysis of this situation revealed that there was an 'autonomous' model of literacy held by various international agencies, development organisations, governments, etc. These agencies held the view that irrespective of context, gaining literacy skills will have a certain effect on people and communities — in that sense, the model assumed literacy to be autonomous, to have effects on its own irrespective of variations in use and meanings across cultures. These autonomous effects were thought to include: enhanced cognitive skills, uses of logic and scientific thought and ability to engage in rational economic decision-making. These assumptions drove policy and funding decisions. If, after a literacy programme, a community did not show the expected results of becoming part of the 'literate world', the problem was seen as lying with the people involved. It was not seen as a problem of the programme or the theory. There was no local accountability within the programme design, and no taking into account local variations, local meanings or local knowledge.

> "This autonomous model that seems to be neutral is in fact not neutral at all — it is loaded with hidden ideologies and assumptions regarding culture, progress, 'correct' skills and worlds of knowledge. These attitudes and beliefs are imposed on local people as though they were universal."

The autonomous model did not, however, match reality. Descriptions, especially by ethnographers but also by teachers in adult-literacy organisations, began to show that local people and students in adult-literacy classes had their own funds of knowledge and were able to use literacy but in different ways than those assumed by the outsiders. So how do we operationalise a new model or description of observations when a model does not match reality?

This dilemma led to the development of a social-practice model of literacy. According to this model, literacy varies with social context; there are different uses and meanings associated with the activities of reading and writing, rather than one universal literacy. How could we describe and explain these local literacies? Researchers coined the terms 'literacy events' and 'literacy practices' in order to provide fuller and more culturally sensitive accounts of literacy in people's lives.

Operationalising Concepts

Literacy events are identified as any kind of interaction that people have with literacy activities or resources. Literacy events can include acts such as writing letters, reading newspapers, writing public messages on walls or labelling boxes. Seeing situations as literacy events, instead of focussing solely on autonomous literacy skills, dramatically broadens and humanises the perception of literacy.

But it was not adequate to simply keep describing such events wherever they were observed — it was also necessary to recognise the patterns in these events and to attend to the underlying meanings that local people brought to the events. One can observe and generate a very long list of seemingly random, unrelated or repetitive literacy events. So once we begin identifying literacy events, how do we identify the patterns of literacy events and determine their underlying connections and meanings?

This question led to the coining of the term literacy practices. Identifying literacy practices involves exploring literacy events and their linkages within society more deeply by communicating with people, interviewing, questioning and understanding the deeper meanings of what's happening. Literacy practices may be those more general uses and meanings that enable us to see patterns and similarities across different events — we may note religious literacy practices across a range of events that include reading holy texts or hymns, and perhaps also writing in such religious contexts, as with transcribing sacred texts or writing out one's own prayers.

These religious literacy practices will differ from, say, commercial literacy practices, although there may be some overlap in a given event and it may take an ethnographer some time to disentangle religious literacy practices from commercial literacy practices

in particular contexts. But if we do not disentangle them we may fail to understand what they mean to the participants — to an outsider, many literacy events may look the same but they may have a quite different significance and meaning to practitioners. It is this kind of understanding that literacy trainers and teachers are trying to achieve as they follow their students into everyday situations and come to recognise that ideas about literacy are not exclusively the right of teachers.

> "Literacy practices, then, are when people involved in a literacy event share certain understandings and the events share certain meanings. Practices are combinations of actions and meanings, shared in a society or an institution. Literacy events are then no longer isolated. They become social and institutional."

Identifying Literacy Events and Practices

In order to become skilled in this process of identifying literacy events and practices, one can start by making simple observations in a certain environment. Start by looking for events that appear to have sufficient literacy involved to make it worth observing for longer. After time, one can begin to look at patterns and understand what practices these events are part of, link them to other events and make hypotheses about the links between events.

An example of observing literacy events and consequent hypothesising about the literacy practice

Imagine you observe a literacy event: There is a conference taking place in a big hotel. Papers, books, handouts and notebooks are scattered all over the table. There is an overhead projector with slides.
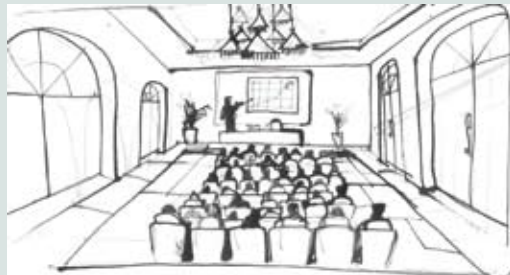
You make a hypothesis: The literacy events observed are part of academic literacy practices (such as a conference of professors presenting papers). But later, you discover that the meeting was, in fact, about how to set up a McDonald's franchise. This has a completely different meaning and set of practices related to the literacy events observed, even though the literacy events may themselves look the same. In this case, these would have been described as commercial or corporate literacy practices rather than academic literary practices.

Literacy practices usually revolve around such common occurrences and needs. Some other examples of literacy practices are record-keeping practices, formal school literacy practices, journal-keeping practices, public communication practices (newspapers, magazines, signs and signboards), private communication (letters, notes, codes), and there are many others. Within all of these practices there may be literacy events that look the same, such as writing on pieces of paper, or reading information from a book or paper or sign. But it is easily seen that each of those events happen in a specific context relative to the particular practice. Literacy is not just about the act itself, it is the context of the act that gives meaning to its practitioner.

> "Writing a note to a friend is not the same practice as writing down a list of gifts received at a wedding, even though both utilise a pen, paper, the alphabet and words, and on a decontextualised level both acts look identical. But the meanings behind the acts are entirely different. Thus literacy is seen as a contextual set of social practices, instead of an autonomous set of decontextualised skills."

It is this awareness of literacy as social practice that should accompany the researcher as well as the teacher of numeracy and literacy when conducting an ethnographic research case study in a particular environment or context.

DEVELOPMENT OF A SOCIAL-PRACTICE MODEL OF NUMERACY

The Autonomous Model and Perceptions of Numeracy

Numeracy, within the field of adult literacy, is an overlooked area. It usually takes a backseat to literacy, in the same way that language studies are nearly always preferred over maths in formal schools. The perception of numeracy is fraught with maths trauma and gender, class and ethnicity issues, with maths seen as being difficult, boring and often irrelevant. And adult numeracy is rarely seen as a priority, or is often merely addressed in the same way that children learn maths.

Parallel to literacy, an autonomous model is at work here. Maths is most often presented as a set of decontextualised skills — numbers, counting, fractions, memorisation of multiplication tables, addition and subtraction, steps in solving calculations, etc. Generally only one method of problem-solving is taught, and only that method is accepted as 'correct'. The correctness of the final answer is what is important, not the process and not the reasoning. Numeracy is often seen from a very narrow perspective of being almost exclusively numbers and calculations using the four operations — addition, subtraction, multiplication and division. And numeracy is perceived to be neutral and removed from social values or social interactions, because numbers do not have 'meaning' or implications in the same way that words and language do.

A question: 10 birds are in a tree; 2 are shot. How many are left?

When this question was asked of the workshop participants, a range of answers arose — and there was no single correct answer, because all answers could be justified.

Some answers often given are:

0 birds are left (2 fall to the ground, the other 8 are scared and fly away, so none are left in the tree.)

2 birds are left (2 fall to the ground, the other 8 fly away)

10 birds are left (8 are alive and 2 are dead, but all are still there)

8 birds are left (8 are left alive, and 2 are left dead)

Each response could be linked to a particular perspective. For example, a birdwatcher might answer 0 birds, since no birds remain to be watched. A conservationist might say 8 birds, being more interested in live birds. And a hunter would probably answer 2 birds, because s/he would be most interested in the two that were shot. The answer evidently depends on one's values, social position, outlook and interpretation — even though at first it seems to be merely a simple mathematical question of subtraction! A seemingly straightforward maths question can reveal hidden layers of inherent values.

> "The symbolism and built-in meanings in maths are quite rich and complex and we often take much of it for granted and don't realise how HARD it is. How much is intuitive? How well do we really understand what we're doing/teaching/learning?"

Numeracy is a Social Practice, Too!

The reason for the variety of answers and interpretations given is because the question can be seen in many possible contexts. It is not the maths that is being interpreted in varying ways, it is the context. This suggests that maths cannot be seen as separate from the context in which it is sited. It always lies within a context. It is only in formal education that maths is claimed to be decontextualised, where we would have to answer 10-2 = ? with no explicit context given. In every other situation in which maths is used, it is found in a particular context with a particular purpose, whether it is a market or a bank or a tailor's shop or the formal educational context of formal maths. And thus numeracy begins to reveal itself as a potently contextualised social practice.

In addition, it very quickly becomes evident that numeracy is power-laden. Those with the particular numeracy skills from formal education are often in control of vital aspects of life such as banks, moneylending, shopkeeping, etc. It is as though mathematics were a gatekeeper to such positions. People with weaker formal maths skills can end up feeling that they are the victims of cheating, whether by being cheated of change given, incorrectly weighed goods, or inaccurate wages. This is where social justice issues of numeracy become evident, and where the value of taking an ethnographic approach becomes clear as well.

> "Maths, too, is not neutral or value-free, and in fact encompasses vast and often hidden realms of social value and social justice. And thus numeracy, usually perceived only as an autonomous set of skills, can be seen instead as a vital and yet veiled social practice. The nature of ethnographic research makes it an excellent way to discover social numeracy practices."

Street-vendors' Practices

During the first workshop, participants saw a video revealing the maths practices of children working on the streets of Rio de Janeiro. The video showed that the teenagers, who had very little formal schooling, were able to do swift, accurate calculations of sales, performing addition, subtraction and multiplication very quickly and with large (four-digit) numbers, as well as easily converting between old and new currencies. However, these children were not able to perform the same calculations on paper, and some had difficulties even writing the numbers properly.

Before watching the video, participants were asked to watch for different kinds of maths in different contexts, to compare street maths and school maths, to be aware of maths as a social practice and to consider the question: 'What is the importance of context?'

> Comments from the participants:
> "In a traditional maths class, the learning is context-free. They do calculations outside of meaning, on paper. On the street, the calculation has meaning."
>
> "These street children have power and success in their world on the streets due to their numeracy skills, but these same children in school would be seen as failures. This illustrates the role that maths can play in the areas of social justice and values."
>
> "The children's methods of decomposing large numbers in order to add, subtract, multiply etc are simpler and quicker that what is taught in schools. There is evidence that those who can do maths well in schools can't do it on the streets. We blame the children, but why not the kind of maths being taught in school?"

Operationalisating Concepts

In shifting literacy from an autonomous model to a social-practice model, we began looking at literacy events and the meanings that link them to create literacy practices. Numeracy as a social practice can be approached in the same way. Through observation, numeracy events can be identified — counting money, making tally marks on a wall, marking days off on a calendar, measuring the size of a vegetable garden, keeping track of expenses, playing games, solving problems, etc. These events connect in ways that create numeracy practices such as commercial numeracy practices — moneylending practices, religious calendar practices, measurement practices of cooking, tailoring, agriculture, construction, etc. Formal maths education is one more practice.

In seeking numeracy events and practices, it is helpful also to consider aspects of numeracy that go beyond numbers. Aspects such as shapes, patterns, space, time, problem-solving, measurement of a variety of attributes, and managing information, are very significant areas of numeracy that should not be neglected. For example, tailoring and building are very numeracy-rich activities because of the spatial reasoning required. Cooking involves estimations of quantities and time, which are vital mathematical skills, even as unconsciously as they are practised in cooking. Information about dates and amounts is often recorded in tables, graphs and matrices.

Analysing Numeracy as a Social Practice

Having established that numeracy is an embedded social practice, numeracy events and practices can be analysed in terms of the following components:

Content Identifying the maths concepts, skills and procedures involved in the practice.
Context Assessing the purposes and site of the practice and the context in which the maths is being used and the mode used (written, oral, etc).
Value Identifying the beliefs, values and importance attached to the maths in that context.
Social relations Assessing power and social relationships with others that are affected in the maths practice, and the social position of being inside or outside the 'world of

maths' ('inside' meaning those who have received formal maths education and see themselves as insiders to that discipline).

Participants used these four aspects to analyse and compare the characteristics of formal school practices with the numeracy practices of a street vendor:

ASPECTS OF NUMERACY	FORMAL SCHOOL PRACTICE	STREET-VENDOR PRACTICE
CONTENT	Traditional concepts such as addition, subtraction, fractions, multiplication, etc.	Addition (totalling, complementary addition), subtraction (giving change)
CONTEXT	Abstract, not purposeful, an educational context, mainly working in written mode	Selling for livelihood, life actions, commercial context, working in mental and oral modes
VALUE	Getting the right answer, complying with formal system demands	Making sales, succeeding, making profits and a living, surviving, being alert and sharp
SOCIAL RELATIONS	Teacher is in charge, learner has little power	Seller has power, and so do customers; negotiating with customers

"Using the tools of ethnography and the modes of analysis for numeracy events and practices can reveal a great deal about the inner workings of numeracy practices in a particular context, and the social-justice issues that numeracy practices impact upon."

Using Ethnography to Move to a Social-Practice Approach

Participants were also introduced to an analytic technique called DICR, which enables one to build on people's existing knowledge and move to teaching something new. The participants were asked to analyse aspects of the Brazilian street-children video using this technique.

A suggested model that can be used for analysis
Describe, Inform, Confront, Reconstruct (from Smyth, 1991)

Describe What is going on? This is for the students to give an 'account of' what they know of the topic, about their learning of it and why they are in this class.

Inform How do they understand this description? This is for the students to 'account for' this description and give their understandings of it.

Using the Model

Going back to the example of the street vendors in Brazil, the boys can calculate 1000 minus 850 quickly in their heads, but can't write it. How can we help them shift to being able to write it?

We could start by acknowledging what he does (Describe) when he calculates: 1000 minus 850 = ?; and then how he does it (Inform); then we would invite him to go further (Confront) by understanding what the bottlenecks are and why he needs to learn the new skill; and then we would help him learn a new (written) system (Reconstruct).

The presentation of the model enabled participants to reflect on their current methods of teaching-learning and material development. Participants acknowledged that programmes usually end up teaching what they want and jump to the material design (Reconstruct) stage without informing themselves or having substantive discussions with the participants.

"Too often we're trying to teach people things WE think are important, and don't give them enough chance to make those decisions themselves. Going through the D, I and C integrates people into the process of their own learning before jumping to the R stage. It isn't that we're replacing teaching, but there are steps before teaching."

OBSERVING LITERACY AND NUMERACY EVENTS

The best way to become accustomed to seeing literacy and numeracy as social practice as opposed to sets of autonomous skills is to observe literacy and numeracy events. To this end, the participants of the first workshop were asked to spend one evening in Delhi observing, looking for examples of literacy and numeracy. The next day, after hearing each other's reports, the group began to develop a deeper feel for literacy and numeracy as social practice, and to become sensitive to examples of literacy and numeracy in the environment around them and the embedded issues of social justice and power. Some of their observations and ethnographic methods follow.

Examples of Literacy and Numeracy Events

Interview with a roadside shopkeeper:

Every day I see this roadside shop that sells jackets. Today I stopped to talk to the shopkeeper. "Where do you get the jackets from?" "From Panipat [90 km from Delhi]." "Are they second-hand jackets?" I asked. He said, "No! These are export factory rejects." When I started asking him about rates and how he procured the stock, he looked worried. He asked me, "Are you from the Press?" Then I realised I should have told him why I was asking him all these questions. He relaxed after I told him. I began making social connections, like talking about places we had in common, so that I could get correct information.

He said they buy in bulk. "Bulk, but how much? So you count each piece or do you have your own system?" I asked. He said, "1 truck is called one *katta*. One *katta* has 10 *ganth*. 1 *ganth* has 100 kg and 1 kg is equal to 1 or 2 jackets. So in each *ganth* there are 150, 155 or 160 jackets. So we weigh it and don't count. It means that one *katta* has 1,650 jackets."

I asked, "How do you remember all this?" He replied, "It's all in my mind. We don't use bills or any written documents, or else we would have to pay taxes! If we want to communicate with each other, we use sign language, so that others can't read it!"
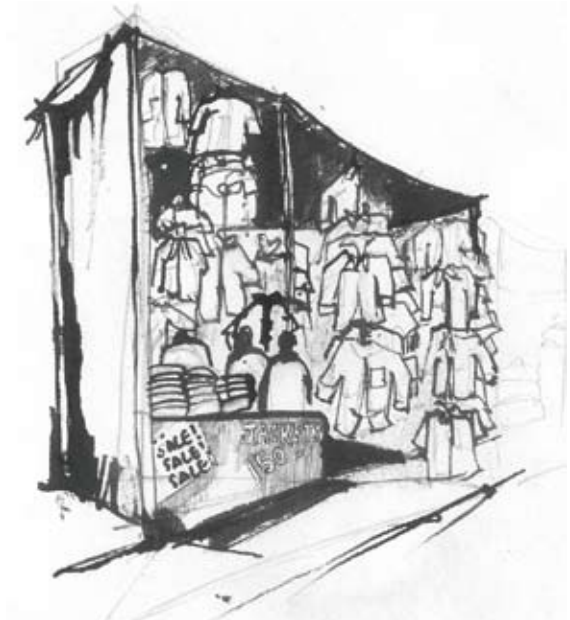
Understanding car number plates

Every day I see car licence plates. I only knew that 'DL' means Delhi. Yesterday I was curious to know the meaning of the numbers of a plate like (DL1CA4567). I asked my husband: "What does the 1 in the number DL1CA4567 stand for?" He said that Delhi is divided into nine zones and so this car is registered in Zone 1. 'C' stands for the kind of vehicle, so this is a car. A4567 is the serial number of the car that stands for the date the car was registered.

Observing street hoardings, signboards and billboards

While I was walking, I sae huge billboards in written and visual modes, carrying public-interest messages. Some of them were on tuberculosis (TB) and how it is a common medical problem and when people need to visit a doctor for a TB check-up. There were some billboards on immunisation for polio. But I feel that the visuals were not self-explanatory at all. People with low levels of school literacy would find these billboards very difficult to read and decipher. Most of these billboards were on streets where there are many government offices. So the question that came to my mind is, who are these messages actually for? Why aren't these billboards put in marketplaces, which are visited by all classes of people?

Interview with a taxi driver

I talked with a taxi driver and his brother about their work. He said they spend anywhere from Rs 100 to Rs 200 per day on fuel. Their CNG taxi can go 13 km on 1 kg of fuel. Fuel costs Rs 18 per kg, resulting in a cost of about Rs 1.5/km [my calculation]. Their metre rate is Rs 8/km, giving a substantial profit margin at first glance. But they have many other expenses such as insurance, bank loans, inspections, etc. He told me all of his income and expenses from his head; he did not refer to any kind of record-keeping. He said that foreigners usually round their fare up and give a tip. But Indians only pay the fare on the metre. This distinction between domestic and foreign passengers has great implications in social relations. He said they prefer foreign passengers and also said that few Indians take private taxis anyway, due to the cost.
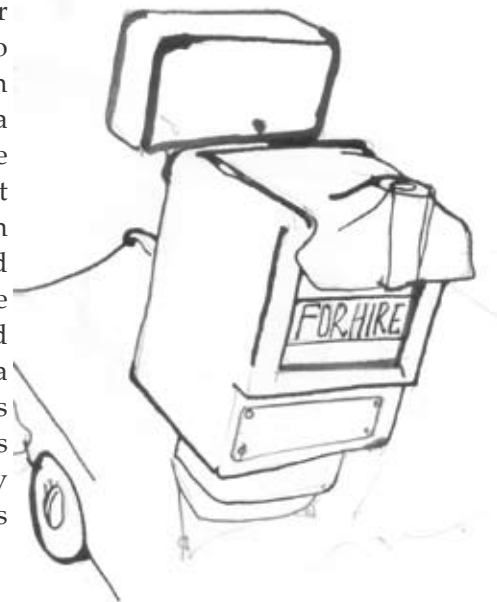
Common Themes Emerging from the Discussions
Varieties of literacy/numeracy and modes of communication

Participants were surprised at the vast range of literacies observed, from types and styles of texts to various numerical processes to hybrid messages made of letters, numbers, pictures and abbreviations. This also then pointed to the varying levels of skills required to be able to understand the various forms of communication.

> "Some of these are hybrid messages, mixed symbols. In education we always keep the symbols and systems separate. But in text messages and email this happens frequently now."

Social Factors

Through the collection of observations, the social aspects of literacy/numeracy, such as power and justice, became starkly clear. Politics was involved in the placement of billboards, second-language proficiency determined comprehension of certain types of information, and social status determined expected levels of income.

> "I thought if an illiterate person walks into a place like McDonald's, the person might really be quite lost. The pace is fast, all the ordering depends on literacy and numeracy and there are hardly any opportunities for 'personal interactions' with the waiters. But then maybe McDonald's does not want a non-literate clientele."

Accessibility

Access to information was not affected merely by the skill of being able to read, write and calculate. Access was also limited by language, by location, by writing style and level, and also by politics. Accessibility was also facilitated by a variety of communication skills.

> "The shop vendor was calculating different types of discounts in his mind and offering them to potential buyers. He was also matching *kurtas* with *salwars*. He was using numeracy skills (calculation) but he was effective because he had good communication and negotiation skills."

Implications for literacy and numeracy teaching and learning

Drawing on their experiences, participants were able to concretely identify strategies that they could incorporate in their work:

• Using a range of communication strategies instead of relying heavily on standard text alone, such as hybrid messages using texts and symbols, using textual literacy within an oral discourse.

• Connecting literacy and numeracy texts with experiences to create more meaningful teaching-learning spaces. This could involve enabling learners to engage with the literacy they see in their environment.
• Keeping in mind what people can do, instead of focussing on teaching them what they can't do.
• Bringing this kind of experience of observing and discussing literacy and numeracy events into the classroom and curriculum.

"We need to think about how we could move from the knowledge of local practices to the educational practices of adult literacy and numeracy. What is the link between what people do in 'the world' and what they will be doing in an educational context?"

CHAPTER III
Planning and Conducting Ethnographic Research

After critical concepts of ethnography, literacy and numeracy had been explored, participants from different organisations then used these concepts to plan small research projects that they would undertake once they returned to their workplaces. A research design framework was presented by the facilitators and discussed by the participants. Each organisation developed an initial research plan that would address a question or problem pertinent to their respective programmes. They then presented their research plan and received feedback from the group. They used this to revise and refine their plans. Chapter III describes this process.

SUGGESTED RESEARCH FRAMEWORK
Ethnographic Research Design Framework
'Problem': What concerns/'problems'/constraints do I see in the work context that an ethnographic approach might help me explain and deal with better?
What is the foreground and background of the problem? Why is this a problem for my context? What are some possible alternative explanations? How do the global and local interrelate? Where do global and local contexts meet/interface?

Question: How can I test my new 'lenses' (an ethnographic perspective) with respect to my own work situation?
Develop a question that enables me to explore the 'problem', being careful not to be too broad, too ambitious. Keep the question answerable and problematise the meanings of key concepts such as 'literacy', 'empowerment', etc.

Concrete focus What data should I collect in context: what, where, when, who, how?

Methods Which method(s) is(are) best for answering the question? Possible methods: observation, visual representation, focus-group discussions,

interviews (formal and informal), use previous research/knowledge, checklists, triangulation. A particular method is not demanded or required, and should also not be chosen according to one's 'favourite' method.

Data Is there enough data to address the question and to be able to report and analyse? This is a recursive process: upon analysing some data, we may find that we need to get more data because other questions arise. Or if we collect too much data, we find we need to cut it down, narrow down the questions and scenarios.

Analysis What kinds of explanation for the 'problem' does this provide? What hasn't been 'seen' before that this approach provides lenses for? We may begin to question initial assumptions.

Applications What are the implications of this for teaching and learning in my programme? This should be kept in mind throughout the whole mini-research process, and keep the focus on the applicability in terms of the literacy/numeracy context.

Validity How can I justify my claims in light of the kind of data I have collected and how I arrived at the conclusions? How robust are my claims and results? Would they stand up to scrutiny? Has the data been crosschecked?

Report How will I track the processes of doing this research project? The research process itself should be documented and included in the final report. And thought should be given to presentation to specific audiences such as fellow practitioners, others in the organisation, and funders.

RESEARCH DESIGN PROCESS
The process of designing the research was done in two stages.

Stage 1: Initial ideas — brainstorming about research projects
Each organisation present was asked to briefly describe their project and a problem or issue they would like to address by conducting a small research project. They received feedback from the group, which they used in further developing their research plan.

Stage 2: Revised plans — presenting revisions of the research design
Each organisation took on board the suggestion, revised their research designs and then made a brief but more formal presentation to the group about their proposed

project addressing all aspects of the research design format.
The example given below illustrates how a process of discussion enables one to modify, sharpen and make manageable one's research questions and design. The research designs changed considerably between the first and second stages.

ILLUSTRATIVE EXAMPLE:
Mahila Samakhya, Andhra Pradesh

Stage 1: The initial research plan
The research context A women's empowerment project, Mahila Samakhya views education as a process of problem-solving and reflection. In the beginning, when we talked about literacy, women would bring up the issue of wages. They wanted to know the legal minimum wages and how they could actually get that (as the wages they received were far below the stipulated minimum wages). In our project area, liquor is also given as part of the wages — Rs 15 as cash and Rs 5 worth of liquor. We have developed the curriculum based on these discussions, choosing particular problems and related words. Our programme primarily focuses on literacy, and numeracy has taken a backseat.

Problem In our programme we have subsumed numeracy within literacy. But after this workshop, we understand that we should see literacy and numeracy in different ways. We therefore feel that we should study local numeracy practices in greater depth. The questions we have in mind are:

• How can we understand local numeracy practices?
• What are the implications of incorporating an ethnographic approach in our educational programme?

Feedback and discussion It was pointed out that the questions needed to be broken down and further sharpened. For instance, it needs to be identified which numeracy practices will be studied. More details are required in terms of where the study will be done, with which community, how many villages, etc. The second question would be valid only after some curricular changes had been introduced.

Based on the comments received, the Mahila Samakhya team narrowed the scope of their research and also sharpened the research questions.

Stage 2: The reworked research plan
'Documenting Local Numeracy Practices in Telengana, Andhra Pradesh'
Problem to be addressed by the research The methods we are currently using to teach numeracy do not address the learning needs of the learners in our project area.

Questions What are the local numeracy practices related to differend caste-based occupations? How do local numeracy practices affect the teaching-learning process?

Methods Observation and interviews

Data Recording of numeracy practices, such as measurements, money, etc, used in the daily lives of the community. The study will be conducted in two villages where Adult Learning Centres are running. Of these, one will be a tribal village.

Feedback and discussion The feedback that the research team received was that the questions and methods needed more clarity. The question: How will including local numeracy practices in the teaching-learning process affect the learning of the learners? In terms of research design this may involve a pre- and post-evaluation. One option could be to observe local numeracy practices and then observe the classroom. This could help determine to what extent the local practices are being used in the teaching-learning, or whether they are used at all. The process before and after could also be digitally recorded. Some more specifics are needed like whom will you be interviewing, studying, etc. Which numeracy practices — calculating, measuring etc — remains to be specified.

CONDUCTING AND PRESENTING THE RESEARCH
A similar process was followed for each organisation. All the participants left the first workshop in January 2006 with research plans in hand. Over the next eight months until the second workshop, the participants worked with their organisations to find the time and resources to conduct their research while also meeting their other organisational responsibilities. The research designs were to be the starting point for the organisations to plan and conduct their research. However, in most cases the organisations did not, in fact, follow their original research questions. After discussions within their organisations and as the work developed, participants changed their research plans. During this process participants also got feedback from the workshop facilitators on further refining their research questions and methods.

Eight months later, most of the participants and organisations were able to reconvene for the second phase of the workshop. Many participants were very excited about their research studies but, at the same time, expressing concern that they hadn't 'done it correctly', or that their research data did not display anything significant. Participants were worried about the fact that their written reports did not reflect the richness of the experience.

"We had to change our research design several times as the political situation in Nepal was very volatile and was not conducive for us to travel. Each time we thought this was the final outline, we would have to change it again."
World Education, Nepal

"I initially had six questions but soon realised that that was too many. I then narrowed it down to two questions. But that was a difficult process."
BGVS, Rajasthan.

"The notes and writing-up, organising the research data and results, was quite difficult, there were many nuances. The first visit was more descriptive; the second trip had more details. But we did wonder if we had moved too quickly into the structured interviews."
Nirantar

The first task at the workshop was for research teams to present their research and share their analyses. Despite participants' initial concerns and uncertainties, the presentations revealed the depths of insight that can come from even a small research project. Some participants admitted that at first they felt their research was nearly meaningless, but after discussions and seeing other presentations, they recognised the strength and usefulness of what they and others had discovered from the research. What appeared obvious and commonsensical to one group was often novel and full of insights for another. After each presentation, the large group gave feedback to the presenters about their research, and made suggestions for revising the final written report. The organisations were encouraged to return and revise their written reports based on this feedback. The following section presents the research reports generated by the organisations.