



PART III

Designing Material based on Ethnographic Research

The purpose of understanding ethnographic approaches in this project was to be able to develop locally-grounded curricular materials for literacy and numeracy programmes. At the second workshop this expectation was realised. The research undertaken by each organisation had revealed areas to focus on for programme- and materials-development — gaps between standard and traditional measuring systems used by women, people's unique skills in counting and calculation, record-keeping techniques and texts available in homes, and numeracy practices used in indigenous games. However, to develop these into educational material, participants needed to be familiar with a social-practices approach to learning, curriculum development and classroom practices. Once that was done, participants began developing outlines for teaching-learning modules. Part III describes this process of converting research findings into teaching-learning module outlines.

CHAPTER IV

Ethnography, Learning and Curriculum Design

In the second workshop concepts around learning, curriculum frameworks and classroom practices from an ethnographic perspective as well differences between autonomous and social-practice models were discussed. The content of these sessions and the discussions are described in Chapter IV.

ETHNOGRAPHY AND LEARNING

The principle of starting from and building on what people know requires a different approach to education and learning in general. This naturally would mean looking at designing curriculum differently as well. Participants discussed this after reading two short papers prepared for the workshop by Alan Rogers, where he divided the learning of human beings into three categories or types: Learning 1, Learning 2 and Learning 3.

Learning 1 (L1) could be called *incidental* learning. It is learning that occurs naturally and subconsciously. It is the type of learning that occurs when we learn language as children, or where we learn unconsciously through experience or when we 'pick up things' naturally from the environment. The defining characteristic is that we are not aware of having learned at the time. Every human being undergoes Learning 1, as it is what enables us to learn what we need in order to survive.

Learning 2 (L2) is a *conscious* learning. It occurs when someone makes a decision to learn something, driven by need or by interest. For example, when adults decide to learn a new language they are driving and directing their own learning. They take the initiative to learn by practising or exploring from another person or a book or a situation.



Learning 3 (L3) is also conscious learning, except that now learning is *directed* by someone else. This is what we often call 'formal education', where there is a teacher and a curriculum and a syllabus decided by someone else. The learner is not directing his/her own learning; the learning is externally directed.

While all human beings have undergone L1, and many have undertaken L2, not everyone has undertaken L3, formal schooling. And yet, L3 is very often the only type of learning that is considered valid. And so the learning of someone who has not gone to school is discounted, because what they have learned in life is not considered important and is not in the curriculum, which is decided by someone else.

"Since L3 is often perceived as the only source of learning, when we help the learners become aware of what they know and have learned unconsciously (L1), that also helps build their confidence and validates their own knowledge."

Most teaching and learning programmes are in the L3 realm. And yet ideally we should be taking into account what learners already know (L1) and what they want to know (L2). This is where ethnography comes in. Ethnographic research is a way to discover what people have learned unconsciously. The awareness gained from ethnographic research can help us design an L3 programme that is purposeful and linked to learners' lives by connecting with the learners' L1 knowledge and with their own interests and drives, or L2. Ethnography helps the researcher actually *know* how people might be able to make links between L1, L2 and L3.



Learning 1 is unconscious learning from childhood to adulthood through experience.

Learning 2 means the learner has an interest which plays a role and the learning is self-directed.

Learning 3 means learning things that are determined by someone else.

Discussions at the Workshop

The papers stimulated animated discussions as participants tried to make connections with their own work and contexts. Some of the issues discussed were:

Defining Formal, Informal and Non-Formal

The terms formal, informal and non-formal were referred to several times in the paper as well as in the discussions. These terms have a history and meaning in the literature on adult education and can take on different meanings in different contexts. In fact some participants commented that they used these terms differently in their own work. In the handouts, formal is defined in terms of being an L3 scenario, where learning is under the control of an external force such as a teacher. Non-formal learning is associated with L2, where the learning is under the learner's control but shared with a teacher. And informal learning is L1, where learning is unconscious but comes solely from the learner's individual experiences. Some participants were of the opinion that such neat categorisations were not possible or even necessary. Some also commented that one should be careful not to project a view that non-formal education programmes do not require any structure or curriculum.

“Formal doesn't mean totally controlled and informal doesn't mean totally flexible. So instead of strict categories, it may be more helpful to list desirables in the learning process such as participatory, democratic, etc.”

Control, Power and Structure

Participants also analysed the different learning scenarios in terms of power relations. With L3 power seems to be in one place (with the teacher), and with L1 power seems to be again in one place (with the learner), and in L2 it is shared. Participants felt that in reality the situation is not that simple as the learner has power in an L3 situation too. In the context of adult-literacy programmes, learners regularly exercise power — for instance, by dropping out or not attending classes. Moreover, learners often want the L3 experience and will often push for it.

On the other hand, without an awareness of where power lies, teaching and learning can become very teacher power-based. With numeracy teaching this recognition is very important, since most people think numeracy is about teaching techniques. Evaluation and assessment are also power-laden and it is important to think of new methods of evaluation if one is to think of shifting power. Eventually, if the evaluation system does not also follow such a perspective, having a participatory learning process will not help. It was also pointed out that when talking about a learning situation, it is not useful to consider only teachers and learners. Curriculum-developers, supervisors, trainers, etc are also integral to the process and are embedded in socially hierarchical relationships and structures, which have a bearing on the teaching-learning process.

Curriculum Design based on L1, L2 and L3

Participants communicated that the literacy and numeracy programmes that they have been involved with would be considered L3, with the content and approach being largely determined by someone else. In many of the programmes, learners' experiences have complemented the learning and the materials, but had not been taken to a deeper level of not just supplementing, but basing curricula on people's experiences.

“The point of our research was to uncover L1 or what the learners have learned unconsciously. And now we are trying to use this to design L3 that is purposeful and linked to their lives. Thus, to make learning meaningful, the material developer needs to know learners' everyday practices in great depth.”

However, it was felt that curricula should not be based only on local understandings and beliefs. It required a certain degree of structure and direction from the outside as well. This was felt necessary as programmes function within larger iniquitous social structures, which influence classroom interactions: It was pointed out that in India, in a mixed class with 'lower-' and 'higher-' caste learners, if the facilitator (who would very likely belong to a 'higher caste') is not *directed* to question caste relations, one could end up reinforcing the status quo. The same issue would apply to gender relations. The need to challenge discrimination or oppressive structures would not come either from the learners or the facilitator.

“In formal education, externally-imposed curriculum standards that address discrimination and are rights-based can be used to ensure equity in the classroom. Such standards may not be in place in informal education settings. So we cannot just privilege the 'traditional'.”

NUMERACY CURRICULA: COMPARING AUTONOMOUS & SOCIAL-PRACTICE APPROACHES

The learning categories being discussed can be linked to understanding the autonomous and social-practice models of numeracy and literacy discussed at the first workshop. A curriculum or programme based on an autonomous model — where skills are seen as autonomous sets of knowledge to be imparted from one person to another — is a prime example of L3. But a curriculum that takes a social-practice approach, taking into account what people already do and already know, naturally includes L1 and L2.

Participants compared characteristics of numeracy curricula based on an autonomous model with those based on a social-practice model. Though the focus was on numeracy the same process and concerns would apply to a literacy curriculum as well. The distinctions between the two models include both the source and rationale for including particular content as well as the nature of the content itself. While the content of a numeracy curriculum is often assumed to be a fixed and accepted set of concepts,

including counting, operations, measurement and geometry, in a social-practice curriculum, very different aspects of a content area, such as measurement, might be included. Decisions about what content to include in a social-practice curriculum are determined by events and practices learners are engaged in instead of including what is typically and formally defined as ‘important’ or ‘necessary’ or is even simply ‘a tradition’, carried on by those who have passed through the formal education system.

The case studies undertaken by the participants in this workshop revealed some sophisticated methods of calculation and problem-solving used by supposedly ‘innumerate’ people. They are not innumerate at all – they simply don’t use the formal techniques that many of us learned in school. And thus the ethnographer/curriculum-developer must be aware of the fact that adult learners of numeracy have a variety of ‘funds of knowledge’ that impact upon and feed into their learning of maths, such as these listed below:

- Adults have mathematical knowledge and practices that they have learned from sources other than formal schooling.
- They have identities and images of themselves that relate to their attitudes towards maths, whether they feel highly confident or very unsure of their abilities.
- People have relationships to learning, to teachers and to maths itself that come from past experiences with maths and/or education.
- Everyone has involvement with numeracy practices beyond the classroom.

“The role of the ethnographer/programme-developer is to identify and recognise these funds of knowledge within the learners, and then build on them in the teaching and learning process. This way they can become more culturally, socially and economically sensitive to their learners.”

An Autonomous Model: General Qualities of a Numeracy Curriculum

- Content is abstract, without explicit context
- Focus is on solving given problems using a given procedure
- Only one correct answer is generally allowed
- Content is treated as being neutral and culture-free
- Focus is purely on content

A Social-Practices Model: General Qualities of a Numeracy Curriculum

- Content is embedded in practices and events
- More than one answer is accepted, depending on the situation
- Incorporates issues of culture, power and values
- Focus is on process as well as content
- Puzzles and games are utilised

Comparison of Numeracy Curricula Content

NUMERACY TOPICS	IN AN AUTONOMOUS MODEL CURRICULUM	IN A SOCIAL-PRACTICE MODEL CURRICULUM
NUMBER COUNTING OPERATIONS, FRACTIONS	<ul style="list-style-type: none"> • Counting and calculating with no explicit context. Decontextualised and abstract problems given • Specific methods for solving to be memorised, with little focus on understanding 	<ul style="list-style-type: none"> • Counting and calculating based in real purpose • Learners encouraged to use methods that they understand when calculating • Links with standard methods made based on individual methods used by learners
MEASUREMENT OF WEIGHT, DISTANCE, VOLUME, TIME, ETC	<ul style="list-style-type: none"> • Only exact measurements considered correct • Units specified and standardised • Calculations based on abstract formulae • Use of only one calendar 	<ul style="list-style-type: none"> • Making links between standard and traditional measurement units • Approximate measurements also accepted based on situations • Use of local and religious calendars
SHAPE AND SPACE (GEOMETRY)	<ul style="list-style-type: none"> • Focus on two-dimensional shapes • Focus on names, vocabulary 	<ul style="list-style-type: none"> • Explores aspects of building and designing in real contexts • Involves real places and shapes
DATA HANDLING: GATHERING AND REPRESENTING	<ul style="list-style-type: none"> • Decontextualised graph- and table-reading skills practised with little application 	<ul style="list-style-type: none"> • Local, relevant data recorded to provide real experience • Data represented meaningfully for planning and analysis

APPLYING A SOCIAL PRACTICE FRAMEWORK

Drawing on the research studies and discussions around the framework above, participants brainstormed in small groups on possible content areas to be included when determining a curriculum from a social-practice perspective. One group worked on how the topic ‘Recognising, Counting and Writing of Numbers’ could be visualised using a social-practices approach in the following way.

In a number of the studies participants found that women referred to numbers in different ways, like ‘60 and 8’ instead of 68. In such cases the *number names* can be introduced to learners by building on what they already understand.

- Some of the research studies had revealed that the scripts of both English and local

language numerals are used in the local environment. However, most programmes teach one or the other. It was suggested that both scripts could be introduced, making sure to stay with what is most commonly used in the local environment.

- Most adults were familiar with currency notes and coins. These should be used as the starting point to teach number recognition.
- Many of the research studies had documented indigenous methods of record keeping and counting — tally numbers, cowdung dots, knots, markings on the walls, etc. Again these should be used to understand what numbers they already know or recognise.
- People seemed to have their own counting systems. Like counting in 5s, 10s or 20s. These should be used to introduce number names, place values etc.

Discussions at the Workshop: Excerpts

Even this small exercise made participants realise how difficult it would be to evolve a full-fledged curriculum. Among the things that participants grappled with were:

Determining the starting point Should they identify a topic, as they did in the example, and then bring in the local uses? Or should they begin with the practice and then move to concepts and skills?

“Do we include those things that we think are important, like averages, and then search and see where averages are in their lives and teach from that perspective? Or do we look at their lives and use that as the basis, and develop from what goes on in their lives?”

Reinforcing a functional view of learning They were also concerned that a social-practice approach may end up taking a very functional and utilitarian view of learning.

“We have to be careful not to put a ceiling on a curriculum by basing it only on what is being used locally. Topics like map-reading, for instance, which don’t seem so ‘necessary’ or ‘relevant’ would get left out. Looking at it from a social-practice perspective, we would ask the question — why is map-reading important for rural women? Because they enjoy learning such things? They know directions but can’t read a map so we want to give them a new skill? The rationale needs to be clear.”

METHODOLOGIES: CHARACTERISTICS OF AUTONOMOUS & SOCIAL-PRACTICE CLASSROOMS

Participants considered the following comparative table:

ASPECTS OF TEACHING AND LEARNING	CHARACTERISTICS OF TEACHING AND LEARNING USING AN AUTONOMOUS MODEL	CHARACTERISTICS OF TEACHING AND LEARNING USING A SOCIAL- PRACTICE MODEL
SOURCES OF IDEAS FOR TEACHING AND LEARNING	Teaching ideas come from given curriculum and content, and from teacher. Learners not involved in sharing ideas	Instructional ideas gleaned from learners’ issues, interests, lives, based on events and practices in environment. Listening to learners
FUNDS OF KNOWLEDGE OF THE LEARNERS	Learners’ knowledge suppressed, ignored or denied	Previous learning of learners explored, valued, built upon
CONTEXT	Learning usually abstract and decontextualised	Learning sited and embedded in real contexts. Learning experiential and based on real experiences
ASSESSMENT	External assessment (exam graded by teacher) determines success or failure. Correctness of answers main criteria. Focus on competition	Assessment can be mix of peer- and self-evaluation, and objective criteria. Criteria can be on progress, rather than correctness and success/ failure. More focus on cooperation than on competition
CONTROL AND ROLES TAKEN	Teacher determines curriculum and how classroom is run. Teacher as instructor	Learners have roles in teaching-learning process, cooperation among teacher and learners, more negotiated learning situation
MODE	Most work done in written mode	Oral, mental, written modes used
ROLES OF CULTURE AND SOCIAL RELATIONS	Role of culture mostly ignored. Dominant culture assumed in the classroom (usually teacher’s culture). Dominant culture often ‘invisible’, taken for granted	Learners bring in own aspects of culture (BUT must ensure no one culture becomes ‘privileged’; must challenge and critique cultural practices and experiences)
BUILDING NEW CONCEPTS	New concepts decontextualised and given in top-down manner from teacher to learners	New concepts contextualised. Learning shared, experiential and process-oriented
CRITICAL THINKING	Learners subtly expected to be compliant, following teacher’s instructions and matching his/her thoughts	Learners encouraged to challenge, think for themselves

Participants discussed the fact that besides differences in curriculum content, the approaches and attitudes in a social practice model-based classroom are crucially different from an autonomous model-based classroom. The social-practice classroom would work to include L1 and L2 when linking with L3, whereas the autonomous classroom works solely on an L3 scenario, with skills and information being imparted from teachers to learners. An L3 classroom would ignore L1 and to a large extent L2. It would devalue these forms of learning or even deny the existence of local knowledge systems — therefore, L3 would not just be ineffective, but can actually be harmful.

“When you think of the ‘what’ and ‘how’ separately you run the danger of coming up with a decontextualised list.”

The differences in approaches are also played out in terms of power and control, negotiation in the classroom between the teacher and the learners, and the space given to learners to be involved in determining their own learning. An example from the Nepal case study was recalled where in the training sessions on learning to measure a seed-bed, the trainer had insisted on using a measuring tape when trainees were more familiar with local measuring systems (which, incidentally, the trainer was also familiar with). The person who decides the dimensions of a seed-bed that are to be included in the curriculum has a certain power; the trainer who teaches the ‘correct’ standard measurement system has power; finally, the trainees don’t have much power in the classroom (though they have the power to reject by not learning). A classroom based on a social-practice approach would have encouraged the trainees to bring in their own measurement methods. This discussion brought out the dilemmas and difficulties facing programmes where learners are trying to transition to a formal system (often referred to as ‘bridging programmes’). In such situations programmes are compelled to teach the formal school curriculum, and that in a very short stretch of time. Participants wondered whether it would be possible to rework the curriculum from a social-practice perspective.

“If one leaves out some of the ‘formal maths’ topics (like all the operations around fractions) that are not socially needed there would be a problem. What one could do is begin fractions like half kilo, one-and-a-half kilos, mixed fractions, etc that are used in real life and then move onto the more ‘technical’ things like conversion of mixed to improper fractions.”

Participants agreed that some general qualities of a social-practice curriculum and classroom could be identified. Each programme could then develop curriculum specifics based on insights gained from ethnographic research in its particular context.

For example, some of the case studies undertaken by the participants of this workshop

revealed gaps between traditional methods and units of measurement used by village women and the standard metric system of measurement used by shopkeepers. This gap was a source of frustration and confusion for the women, and provided shopkeepers the potential opportunity to cheat. Having now discovered this gap and need, the programme developers can address the issue in their programme and attempt to help the women make the leap from what they already know to using the new knowledge that will link them more solidly to standard commercial practices. They do not need to give up their own local numeracy practices, but simply add a new set to the repertoire, as we add new languages and dialects, and new literacies.

“This is the role of curriculum- and programme-development: to provide materials and programmes that are appropriate for the specific social numeracy and literacy practices relevant to the learners.”

CHAPTER V

Designing New Materials Using the Research Results

In the chapter that follows, the newly designed research-based module outlines of two organisations are presented as illustrative examples of the process of converting research findings into teaching-learning material. Reports of the research studies on which these modules are based can be found in Part II of this report.

GETTING STARTED

The next step for the participants was to use the information and insights they had gained from their research as well as from workshop sessions, to begin designing outlines for developing new materials. A format for writing the outlines was suggested as a guideline, and the participants in groups designed modules addressing particular concepts or areas of focus that had come up in their research. Some groups began designing new modules from scratch, while others chose to adapt and revise existing teaching-learning materials and activities using an ethnographic approach.

A Proposed Structure for Developing Modules

Rationale A needs statement that maps learners' and teachers' numeracy practices and funds of knowledge for numeracy.

Goals and intended outcomes Jointly identified concepts and skills within practices to be learned.

Outline of module, sessions and activities Outlines of sessions, brief description of strategies and activities, timings, resources, materials, etc.

Strategies for teaching and learning concepts and skills within practices and events, taking account of social-practice guidelines.

Evaluation of processes and outcomes and next steps within social-practice guidelines.

Each organisation presented preliminary outlines of their modules to the large group. Feedback was again given to the presenters who were then encouraged to incorporate the feedback and continue the work once they returned to their organisations.

Module outlines developed by the different organisations:

- Learning numbers, addition and subtraction through games (Plan Bangladesh)
- Buying and selling at the market or village shop: traditional and standard measures (Nirantar)
- Reading the ration card [a booklet recording purchase of grain and other essential commodities available through the government-run public distribution system] (Nirantar)
- Reading calendars (Laya)
- Recognising numbers, building on existing practices (BGVS, Rajasthan)
- Counting and number-recognition based on local practices (Mahila Samakhya)
- Traditional and standard measurements (World Education, Nepal)

Outlines of two modules and the discussions that ensued are presented below:

ILLUSTRATIVE EXAMPLES OF MODULE OUTLINES:

Example 1: Measuring Length and Distance: Traditional and Standard (Metric) Systems (World Education, Nepal)

Rationale (based on research outcomes) The research study revealed that despite having studied the lessons on standard measurements of distance/length and weight/capacity in the GATE (Girls' Access to Education) and SEEP (Self-Employment Education programme) curriculum, the participants of the SEEP programme had not understood the lessons and hence the metric system. In their daily lives they used the traditional measurement systems with which they were familiar and sometimes referred to them in the class. Yet they did encounter the standard or metric system and felt the need to understand it.

Goals and Intended Outcomes:

- To help the participants of the SEEP programme feel comfortable with and confident of using both systems of measurement — the formally-taught standard system and the informally-learned traditional systems.
- To enable the participants to understand how the different measurement units in the two systems compare and relate with one another, which would allow them to 'switch' comfortably between the two.
- To rework the lessons in the SEEP curriculum using an ethnographic perspective.

Outline of Sessions The session had been planned for two SEEP classes (for approximately 4 hours)

Session 1 Understanding how girls measure length and distance in their daily lives

Activity Through discussion, map how the girls measure distances and lengths in their daily lives in the village context. And explore the girls' familiarity with standard measures and contexts in which they use them.

Session 2 Establishing the need for standard measures and introducing learners to standard measures

Activity Tailoring clothes

- Participants will bring in pieces of cloth and tailored clothes to the class.
- They will be asked to measure these first using traditional measurement units. The exercise will reveal variations in measurements. After this they will be given the measuring tape and asked to measure again. They will be helped to measure and use the measuring tape.
- As a consolidation exercise they will be asked to take actual measurements of each other, as a tailor would.

Session 3 Estimating distances

Activity 'Experience walking a kilometre'

- Learners will be asked to walk a kilometre, from one highway marker to another on a nearby road/highway.
- They will then be asked to estimate the distance from class to their homes, between their homes, and so on. It is possible that they will mention the distance in traditional measures or a mixture of both.
- The link between kilometres and metres (from the previous activity) will be established.

Possible evaluation methods

Self-assessment through periodic discussions. Questions such as 'Do they understand all the measurement units and how the two types of measurement (traditional and standard) relate to each other?' Or, 'Can they convert between the two?' will be asked

Application: A good assessment method would be to see whether they were using these skills at all in their daily lives, and if they were indeed using it then whether they were doing so with greater confidence.

Comments from the workshop participants

Making connections One set of comments was around the need to make connections at different levels stronger: to ensure that classroom activities moved into real life situations, to provide enough examples so that learners realise that the same measures

can be used in different contexts. For example, the unit 'metre' can be used to measure cloth as well as vegetable-beds.

"Your case study shows that the girls are familiar with standard measures when measuring fabrics. But they are not making the connection between the metre in the fabric shop and the metre when measuring a vegetable-bed. We have to help them make that connection."

Learning should be enjoyable People learn a lot when they are doing things they enjoy, so it was pointed out that the enjoyment element in activities should not be compromised. Many participants felt that the activity where learners have to take measurements of each others' clothes would be a lot of fun.

"It's nice to do something different sometimes. It can become very boring if we link all our activities and learning to life all the time."

However, the two sessions seemed similar and they could think of adding different types of activities. Participants felt that learners should be given more practice in actually using the measuring tape, and that literacy/numeracy activities around this could be developed.

"In designing these materials, we had to think back to what our objectives were in teaching these things. Not just what would be taught but also how that would be carried out. Even though there was conceptual clarity, to translate these ideas into activities was not easy."

Teaching the metric system Participants felt that the mapping exercise was good as it would validate existing skills and at the same time could be referred to when introducing new skills. It was suggested that more time would have to be spent on teaching the metric system and explaining its basis. When using a social-practice approach one would still have to teach and introduce new concepts, but how one does it and the rationale for doing it make the difference. Also a decision would need to be made on issues such as accuracy: How accurately would we want them to measure?

"How accurately do you want them to convert, or how often or for what purpose? A rough conversion can be used as a bridge between the standard and traditional systems with which they are familiar."

Example 2:
Recognising and Writing Numbers
(BGVS, Rajasthan)

Rationale (based on the research outcomes)

The research was conducted among women engaged in a range of home-based activities like stitching, embroidery, tie and die etc. According to the research, women knew numbers up to 30 and counted in 10s only orally. They did mental calculations but could not write. Women had indigenous ways of keeping records. They maintained diaries which were filled in by literate people.



Goals and intended outcomes

- Learners will be able to recognise and learn numbers (up to 1,000).
- Learners will be able to write numbers (up to 100).
- Learners will be able to accurately keep diaries about how many items they have prepared, etc and thus not get cheated by the contractors.

Outline of sessions and strategies

The module has been planned for 16 hours over one month (approximately, two days a week for two hours per day, and some 'homework' exercises, which would be in the form of applying what has been learnt).

Session 1 All the women had calendars in their homes, so we will use calendars to familiarise them with numbers up to 30. Several different activities will be planned for this.

Session 2 As a next step we will extend this to a number square up to 100 and teach women to recognise numbers from 1 to 100 and know the names up to 100. As they count in 10s, we will base the counting exercises on this. And we will begin with the number names that they know.

Session 3 Reinforce counting in tasks that they are engaged in, for example counting the knots they have tied in the *bandhej* work, or the stitches in their embroidery work.

Session 4 Women are paid poorly for the work they do and are regularly cheated. "They get Rs 17 to embroider one sari. This is sold in the market for Rs 1,400. And it takes them a minimum of a day to do the embroidery. That is how much they are exploited."

We will discuss issues of exploitation with them and possibilities of challenging this. The discussion will include how having numeracy skills would help.

Assessment

Again, the suggested assessment method was to look at application. The test will be if they can read their diaries, if they start keeping records, use the calendar to mark payments etc, and eventually if they don't get cheated.

Comments from workshop participants

Participants were unclear about the objective of having women recognise numbers up to 1000 and write up to 100. The rationale for this was not explicit. They suggested that this decision of up to how many numbers women should learn should be based on the numbers that women deal with and need to know in their work. This could at least be a starting point.

"Once they understand the logic of place value system, for which one must explore local ways of counting and calculating, they will be able read and write large numbers. They already count in 10s, which makes it easier."

Move Beyond the Immediate

While appreciating the fact that the activities were rooted in women's lives, participants felt that this should be used as a springboard and a regular reference point but should not be limited to that alone.

"All the activities are rooted in the women's daily use of numeracy such as the counting of knots or recording of saris. This might get very boring. The possibility of building on this to introduce other activities should be explored."

Numeracy and Social Justice

One of the most exciting aspects of the module outline was the inclusion of social-justice issues. This aspect could be developed further for example by tracing the entire production chain, discussing the value of women's work, and actually doing a costing exercise. The group shared ideas about developing new marketing strategies with the women, teaching the women how the market works and thus aiming to stop the exploitation of women who work many hours for little money.

"Women rationalise this work by saying they do it in their free time, they don't have to go out the house, this is earn extra money for the family. This can become the basis of a lot of discussion."

CONCLUDING OBSERVATIONS

The most exciting aspect of this process was seeing how research could be used practically and concretely to feed into material development, as research findings are rarely applied. What was particularly revealing was that though none of the research projects were large scale, they had thrown up ideas for developing several modules.

One challenge, however, of adopting such an approach to materials-development is the question of how to design materials for a large number of learners or a wide range of environments. It may be simple to design materials that are relevant for a particular village, but this is time-consuming, resource-intensive and not viable for large-scale programmes. How can a social practice-based curriculum and materials be scaled up to be more widely useable? Can a social-practice curriculum be generalised? Participants felt that an effective option would be to train local facilitators as ethnographers so that they could be in a position to adapt and change material, or to develop material around guidelines that can be developed for a larger number of learners.

ISSUES DEBATED, INSIGHTS GAINED

“We have now understood a different approach to doing literacy and numeracy work. I think it’s going to impact our work in a significant way.”

The participants of this project were seasoned development workers and literacy practitioners. The workshop room echoed with decades of their cumulative years of experience of working with marginalised communities and implementing literacy and empowerment programmes in diverse settings. And yet the ethnographic perspectives on numeracy and literacy that were shared in the two workshops were new and engaging for everyone. The discussions were stimulating and challenging, as participants reflected on and shared their experiences and views quite candidly.

Over the two workshops, seemingly disparate discussions began to crystallise into particular themes. These revolved around practical curriculum and pedagogical issues, issues related to power relationships, and ethnographic research methods. Through the voices of the participants presented below are glimpses of the insights gained from the discussions and research studies; snapshots of frequently debated issues and lessons that participants took back with them.

CURRICULUM, MATERIALS AND TEACHING-LEARNING

“We have talked about how to change our approach and about new ways of developing material. But actually writing them into exercises and pedagogies that can be used — that is the challenge that still faces us after this workshop.”

Since using ethnography to design more effective literacy and numeracy programmes was the focus of the workshops, concrete concerns related to curriculum- and material-development, teaching-learning processes, and programme design and implementation dominated the discussions throughout the project.

Using Research Results to Design Curricula and Materials

What came through strongly were the various possibilities of using the observations and analyses from the studies to determine particular areas of focus for programme and material development. A number of curriculum topics emerged as rich and relevant conceptual areas to be developed. We read about some of these in Part III of this publication. Research also highlighted the need to pay attention to small and seemingly less critical aspects that could actually have a large impact on the application of literacy and numeracy in the lives of learners and the programmes' effectiveness.

For instance, the Nirantar team from India found that if one only looked, a variety of texts could be found in rural contexts. But they also realised that simply including local texts in the teaching-learning programme would not go far enough. They observed:

"Our programme could include reading wall-writing as part of the curriculum. But to make it effective, this would necessitate enabling women to deal with issues of mobility and accessing the public domain even before we can get to the actual act of coding and decoding what is written."

As practitioners the idea of doing research that could be applied was appealing and something that participants felt could be carried forward.

Acknowledging Funds of Knowledge

Over the course of the project, a set of core ideas around curriculum-development using an ethnographic perspective began to emerge. The most fundamental was the principle of understanding the literacy and numeracy practices that people are already engaged in, embodied in the concept of the 'funds of knowledge' of the learners. This approach first sounded familiar to the participants but once they actually applied the concepts they found that it opened up the possibility of seeing things in new ways and doing things that one may already be doing but differently. As some participants said:

"It's not that we haven't taken people's experiences into account when developing curricula and materials. But it is not fundamentally based on their experiences. Local experiences are like seasoning, added later."

"I now know that I have to be ready at all times as I might find the insights when I least expect it. I have to be listening continuously. When doing this kind of research I had to try and move out of *didi* (big sister) mode. This was quite complex for the teachers and us."

In terms of material- and curriculum-development, this research project had shown that three basic steps need to be followed: first, acknowledging that learners have vast

knowledge resources of their own and helping them recognise this; understanding these in greater depth (ethnographic research is a good way to do so); and finally developing the curriculum, material and teaching-learning interactions based on this understanding.

The Importance of Context

The recognition that literacy and numeracy were social practices always embedded in a context and not a set of autonomous skills was reinforced by each study. The studies showed that adults are engaged in literacy and numeracy activities for a purpose — to measure, buy and sell, in their work, or simply for fun. But people themselves were unaware that they were doing maths when engaged in such activities.

The study undertaken by Plan Bangladesh, for instance, documented several indigenous games which when analysed revealed a wealth of numeracy practices:

"Almost all the games required numerical skills. It was interesting to discover that the people playing the games did not recognise these skills as 'valuable' or 'authentic' mathematical knowledge."

What the studies also showed was that such practices were not being brought into the classes or the curriculum as effectively as they could have been. The research study of World Education, Nepal, which observed the interface between traditional and standard systems of measuring in a skills-training session, highlighted that the trainees were unable to relate what they knew already from experience to what was being taught in the class:

"What is being taught in class is not being learned by the girls and they resort to what they have learned at home. This is what we must understand and incorporate into our programme. This may also help us understand why people sometimes do not use a new method that they are taught."

The implications identified for programme design: enable learners to make connections between previous knowledge and new skills and information; allow experiential knowledge to flow into the sessions; enable learners to use this knowledge in real-life situations. The module outlined in the previous sections tried to put this in practice.

From the Particular to the General

In keeping with the understanding that numeracy and literacy could not be perceived as a fixed set of skills, the research studies revealed a variety of problem-solving, counting, calculating and measuring techniques practised by people but also underscored the fact that to enhance people's numeracy skills and expand their range of abilities, certain formal, autonomous skills would need to be shared with learners.

But participants felt that putting this into practice would not be easy. The following excerpt of a workshop discussion reflects some of their concerns:

“How are we going to be able to work with the individual methods of each learner? You need to explain it in one way in a class.”

“But why? We each do things differently, even those who have learned the formal way.”

“It’s a practical problem. Just talking to 10 people when we did our research was an overwhelming process. Incorporating 10 different ways of doing something into a teaching process will be quite difficult for the facilitators.”

“We should avoid imposing one way. We should understand where our learners are coming from and that we each do things a different way. Our job is to help the facilitator feel more comfortable with that approach.”

“What’s wrong with the way they’re doing it? Why define a particular model as the right, autonomous way if the way they are doing it already works for them?”

“But we have seen that these ways do not work in all situations. Not knowing the standard way puts them at a disadvantage, so isn’t that why we have to introduce a more autonomous model?”

“We must remember that the learner is not passive and the teacher does not have to teach every single situation or context. The learner too has to take responsibility for her learning.”

The question of how to make the instructional transition from the learners’ informal, individual methods to more formal, autonomous methods while maintaining a social-practice perspective was of pressing concern. Possible ways forward were discussed. For example, to first identify the purpose for which the learner wanted the numeracy and to juxtapose that with what they already knew. Taking the BGVS, Rajasthan case study, if the women wanted to be able to read and maintain their diaries (where they recorded their embroidery work) one would have to begin with a detailed analysis of the diary entries; observing the practices of people making the entries; identifying common processes; and then evolving some methods. Similarly, decomposing numbers into smaller components was clearly a common method that all the researchers observed. Even though people did calculations differently the process was similar. Yet this process was not reflected in the curriculum. A common understanding gleaned from all the examples could be developed, which could offer a place to begin.

Participants were also unsure about how materials developed on very localised insights would be relevant across a number of villages. Issues like how culturally-specific the material could be came up for discussion. In the Nirantar case study, calendars were found in several homes. This was interesting to document as part of the research but would be challenging to convert into material:

“On the basis of our study we can say that calendars should be used in the curriculum. But we studied only Hindu households. The Muslim calendar is different from Hindu calendars. Though both are based on the lunar calendar, the images are different, the holidays marked are different and so on. So there are culturally-specific details that one would have to consider if we want to develop the material widely. Do we do more research to understand other contexts? Do we simply include this information from other sources? The programme would have to take decisions on such issues.”

Moving Beyond the Immediate

Throughout the workshop deliberations participants expressed concern that focussing on the local would lead to overloading the curriculum with utilitarian information. Learners could easily become bored if activities only revolved around concrete aspects of their lives, such as counting knots or measuring grain. They debated whether programmes should include experiences that can broaden the perspectives of the learners and may even simply be fun, or whether programmes should stick to the principle of activities being useful and familiar. Participants explored questions such as ‘Are maths games or puzzles ‘relevant’?’ and ‘What happens to topics that are not articulated as a need?’ The excerpt below shows how some of these discussions went:

“It seems there is a danger in limiting ourselves to a utilitarian and narrow approach to learning, if we only teach-learn what can be used or what exists in the local environment.”

“Is the learner always able to articulate what she wants/needs to learn? What about particular concepts or skills that we think learners should have?”

“There is quite a bit of danger in us deciding what is needed or what is important. There is probably a bit of guidance required but to say, ‘This is what you need to learn and we’re going to teach it’ is problematic.”

“How can the learners know, if they have had so little exposure?”

“This is where the guidance comes in, and slowly expands their exposure. For example, a topic like bar charts is so unused; I would say teach it when it becomes relevant (and one can create avenues for this), not just automatically or in a vacuum. Games are full of concepts and resources that are both utilitarian and relevant.”

As organisations working for social change, the issue of whether focussing only on the local would lead to reinforcing the status quo was an area of concern. Participants shared several examples of local practices which were discriminatory and regressive. Therefore they constantly argued the need for outside intervention to create spaces for discussions that challenge existing hierarchies and lead to a transformation of social relations. Many felt that one could begin with the local but not remain there. The question of whether ethnography and transformative education were compatible, or the extent to which they are, was raised continuously through the workshop process.

Formal and Informal

Another recurrent theme was the differences and intersections between the formal and informal learning, methods and curriculum. Some research studies pointed to the fact that adults were not interested in formal practices such as learning multiplication tables. Many people could calculate mentally, but could not perform the same calculations on paper or name the process. This led to the participants speculating about why a strong emphasis is laid on people learning formal methods (even in literacy programmes) if their indigenous methods were working for them. But some of the studies, such as the Nirantar study about practices related to measuring weights, clearly showed that people in fact regularly interacted with formal structures where not having formal knowledge or knowing standard procedures was a distinct disadvantage. Participants were also acutely aware that many of the learners who attend their programmes do so to access the formal system. So when they come to a class they may even demand to be taught along the lines of the formal system.

There were discussions around the meanings of different terms like 'formal', 'non-formal' or 'informal'. Following the World Education, Nepal research presentation, for instance, participants discussed definitions of formal and informal maths practices, since some of the girls had 'formally' learned maths, and yet were unable to solve a written problem. At first, formal maths was defined as 'school maths' or specific processes that are taught, and informal maths was defined as 'mental maths', until it was realised that mental maths also takes place in 'formal' maths. The need for precision and correct answers in formal maths was noted as a distinction from informal maths, where approximations seemed to work fine. However, rather than arriving at answers, more questions were raised: Who defines these terms? And why are all practices posited against the formal as though that is the benchmark, when in fact a vast majority did not use these methods? While such issues are probably not immediately resolvable, participants agreed about the need to acknowledge that people do learn a great deal outside of any formal contexts, and programmes need to consider why learners so often do not apply what they formally learn, and revert to what they learn informally.

"Adopting an ethnographic approach means that we use what they do know and are capable of, but we don't limit them to that context, we try to help them expand to other contexts. This means transferring skills from a contextual model to a somewhat more autonomous model. It seems to be best to learn in a context and then transfer to other contexts, rather than offer autonomous skills out of context or only in a formal educational setting, and then try to apply them in other contexts."

For the participants the possibility of finding links between informal methods and formal schooling was interesting and important. The Plan Bangladesh study gave rise to questions such as 'Why are indigenous games, which involve a number of numeracy tasks, not used in schools? How do the children playing these games fare in school maths? How do the numeracy skills exhibited in the games fit with the school curriculum?'

LITERACY, NUMERACY AND POWER

"The comfort and familiarity with numbers and the speed with which people calculated depended on the extent to which they encountered numbers and were required to calculate in their everyday lives. This again was determined by social hierarchies of gender, caste and community."

Issues of power and social justice related to literacy and numeracy practices were discussed regularly at the workshops. These were issues of deep concern for the workshop participants, since the generally accepted paradigm is that literacy and numeracy are tools for empowerment. The ethnographic research revealed subtle and sometimes hidden aspects of power relationships in the community that suggested that empowerment was not a simple issue of possessing more skills. It also revealed the potential spaces for subverting such power relations.

Addressing Issues of Gender, Caste and Class

A subject that several of the studies touched upon was the power-laden nature of transitions between traditional and standard measurement systems. Several case studies, such as those of Nirantar, BGVS and Mahila Samakhya, illuminated how class, caste and gender relationships were embedded within practices of calculating, measurement and commerce. But when analysing a situation such practices must be located within the larger reality that 'lower castes' or less-educated people often have to depend on 'upper castes' or educated people in commercial transactions, for loans and employment, and where women were at a further disadvantage.

Workshop participants were concerned that perhaps even if the women were armed with the measurement or calculation skills they needed, they might not have the social power or strength to challenge power relationships. Where women were being cheated

in the marketplace because of a lack of knowledge of the weighing system, it became clear that the solution was not simply to help the women learn how to measure — they must also be socially prepared to challenge the shop-owners in the case of cheating. This is no simple feat, and thus confidence-building strategies and an analysis of these social interactions and issues should be addressed in curricular materials.

Thus many of the module designs focussed first on getting women to critically reflect on unequal social relations and then to bring in skills needed by women to lessen dependence or to question injustices. For instance, the BGVS module outlined in the previous section included a discussion on the exploitative working conditions of women doing home-based embroidery and handicraft work. Workshop discussions then focussed on possible solutions to these issues beyond literacy and numeracy.

Social Relations Determine Numeracy and Literacy Practices

Some studies pointed out the socio-economic and occupational differences in the kinds of maths people knew and the range of their maths skills and abilities. The Mahila Samakhya study, for example, documented several occupation-related numeracy practices, where caste and gender relations are important determinants:

“We gave the man and woman in one family some seeds to count. The woman counted the seeds in 20s, but couldn’t give a total; she simply counted up to 20 seeds and then began again with more seeds, counting up to 20 each time. The husband gave the exact total of 420 seeds. However, the woman knew the measurement (capacity) of household items much more accurately than the husband did.”

The study showed that people with higher incomes were more comfortable working with a higher range of numbers, whereas poorer people were only comfortable working within a smaller range of numbers, commensurate with their income. They were, in a way, locked into a ‘numeracy trap’.

The Nirantar study mapping the literacy environment found that gender relations determined access to information:

“Our observations and discussions clearly showed that it is the men in the community who are generally engaged in writing and reading information in public places. This was because public spaces are largely out of bounds for women. In contrast, women who had at least been to the literacy centre had written and drawn on walls within their homes.”

This link between socio-economic status and numeracy abilities revealed important areas for curriculum developers to address.

ETHNOGRAPHIC RESEARCH METHODOLOGY

“Ethnographic research can not only extend us and our understanding but those being researched can also gain from the research process by hearing new values, perspectives and ideas. It is a method that sensitises and validates.”

The process of conducting the ethnographic research was a new challenge for many of the workshop participants and, at first, most participants expressed hesitance and uncertainty about conducting the research ‘correctly’. But after presenting their own research and hearing others’ research at the second workshop, participants expressed appreciation for the process and for what they had learned along the way, along with greater confidence in their research. They expressed eagerness to continue their research, to return to the field to clarify data, to fill in gaps and to try and answer some of the new questions that had arisen from their initial set of data. This became an important theme — that research almost always raises more questions, so repeated trips to the field will probably be necessary to continue to try and elucidate the inner workings of the context and questions being explored.

About Methods

Participants also reflected on the methodologies they had used — such as the pros and cons of structured interviews versus spontaneous research, and the need to do more observations, learn more effective and creative ways of understanding people’s methods of numerical calculations, and sharpen skills of discerning patterns from so many disparate examples.

“When we did our research we tried hard to find out how they calculated. We didn’t get much more than ‘the answer came from God’, or ‘from our stomach’ or ‘it’s in our head! There must be some other ways to get this information!”

Reflexivity, or the awareness of what researchers bring to the process and the ‘lenses’ through which they interpret situations, is an important premise of ethnographic work. On reviewing the studies participants felt that the research reports could be strengthened by including the researchers’ personal background, biases, emphases, etc — that is, acknowledging the perspective the researcher brings to the research.

Empowering the Researched

A very encouraging and exciting realisation for workshop participants was discovering that conducting the ethnographic research itself was a validating and empowering experience *for the people being researched*. When someone who had always identified him/herself as being illiterate and uneducated was able to solve a calculation problem using a method that the researcher could not understand, the person and his/her

family were often visibly proud:

“In one village, I remember sitting down with a man and trying to understand how he does maths in his head. It was very exciting to be actualising the whole idea of learning from people in the community. It was also positive for him and there was a sense of pride in his family, that this man could educate these ‘city people’ about how to do maths. For me this is what ethnography is all about.”

LOOKING AHEAD

Teachers as Ethnographers

The inclusion of facilitators in conducting ethnographic research was recognised as a possibly important way forward. Only one organisation, Nirantar, had involved facilitators in their research, but their experience was very positive, with the facilitators immediately recognising the potential of the new approach.

“How did the teachers involved internalise the process or use the insights?”

“Both at the level of perspective and in very practical ways. After we did the research, ideas began to click and they began to ask, ‘Why aren’t we using these things in our classes?’ We told them it was too early to use this approach, that we were still exploring. But soon after, during a numeracy training they used some local materials and observations they’d made from the research anyway.”

During the workshop the need to understand and capitalise on the funds of knowledge of the facilitators was discussed. The World Education, Nepal case study suggested that the numeracy background of the programme’s facilitators has a definite impact on the learning of their students, and facilitators who have a background in traditional schooling may find it difficult at first to adapt to taking an ethnographic perspective that embraces students’ existing funds of knowledge. Such observations highlighted the need for special training programmes for facilitators, for them to gain experience in doing some ethnography themselves first, in order to fully appreciate the potential of a different approach.

“We need to think about teacher training. For us it was exciting to include the teachers in the research, but it was also difficult to manage because it was a simultaneous process of research and training. So we need to see how we can rework the regular training we have for our trainers. We need to evolve different methods to communicate the theoretical discussions we’ve had at the workshop to a grassroots context.”

So while the process remains to be fully explored, it is clear that involving facilitators

is going to be a vital aspect of taking an ethnographic approach. The other workshop participants found this process very exciting and were hoping to be able to try it.

Ultimately participants recognised that the development of new curricula and materials is a time-consuming process and starting from scratch may not be viable for many organisations. Thus it will be necessary to work with existing literacy/numeracy curricula and pedagogy, and modify them from a social-practice perspective, rather than wait for the time and resources to develop completely new materials. Several organisations felt that as a first step this would be the most feasible strategy.

“Working in the area of adult literacy and numeracy is a lonely business. There are not that many organisations working in this field. But the workshops have created a sense of community. And even if it’s informal, it’s important to stay connected and share our experiences and to expand this community.”

“Perhaps one of the most powerful themes was the awareness that we gain in the process, both about ourselves and about those people whose lives we are trying to learn more about and understand better. Those insights may come in surprising ways, each one contributing to a deeper level of awareness that we can bring to our work of serving the marginalised by embracing their knowledge and experiences.”

The outcomes of the project were many: a series of rich and interesting research reports coming out of South Asia and written by practitioners; module outlines that can be developed further by the organisations; a documentation of the training process that can be used by other interested parties; and the building of skills and conceptual understanding related to using ethnographic approaches which can be taken forward by the participants and participating organisations.

GLOSSARY

- Addah** informal chat or discussion, commonly used in Bengali
- Bandhej** tie-and-dye technique, practised in the Indian states of Rajasthan and Gujarat
- Basti** neighbourhood, especially in North India; can also refer to a slum
- Dalit** refers to Hindus who are socially, religiously, economically and politically oppressed and discriminated against in the Indian subcontinent. Usually used to describe persons who come from any lower caste though technically authentic Dalits are kept outside the caste system as unworthy of entering the social and religious life of Hindu society.
- District/Mandal and block** administrative units in India. States are divided into districts and districts are further divided into mandals or blocks.
- Deepawali** annual Hindu 'festival of lights'
- Haat** makeshift market where villagers come to sell their produce
- Haath** hand
- Mandi** wholesale market
- Panchaang** traditional Hindu calendar with details of festivals, auspicious days etc.
- Panchayat** village-level elected body
- Pandit** learned man, of the Brahmin caste
- Parchi** note on a small piece of paper, or informal receipt
- Scheduled Castes** communities that are accorded special status by the Constitution of India. Also known as Dalits.

READING LIST

- Baker, D.A. 'Funds of Knowledge and Numeracy', in *Reflect: Journal of NRDC*. London: Institute of Education/NRDC, 2005.
- Baker, D.A., Street B.V. and Tomlin A. 'Mathematics as Social: Understanding Relationships between Home and School Numeracy Practices' in *For the Learning of Mathematics*. 2003.
- Barton, D. and Hamilton, M. 'Ethnography in Practice', Ch. 4 of *Local Literacies: Reading and Writing in One Community*. London: Routledge, 1998.
- Green, J. and Bloome, D. 'Ethnography and Ethnographers of and in Education: A Situated Perspective' in Flood J., Heath S. and Lapp, D. (eds.), *A Handbook of Research on Teaching Literacy through the Communicative and Visual Arts* (pp 181-202). New York: Simon and Schuster Macmillan, 1997.
- Gutstein, E. and Petersen, B. 'Rethinking Mathematics: Teaching Social Justice by the Numbers' in *Rethinking Schools*. Milwaukee, USA, 2005.
- Jeffrey, B. and Troman, G. 'Time for Ethnography' in *British Educational Research Journal* Vol. 30, No. 4, pp. 535-548. August 2004.
- Lareau, A. and Schultz, J. *Journeys through Ethnography: Realistic Accounts of Fieldwork*. Boulder, Colorado: Westview Press, 1996.
- Mace, J., 'Research as Practice', pp. 75-83 in Fowler, E. and Mace, J. *Outside the Classroom; Researching Literacy with Adult Learners*. Leicester: NIACE, 2005.
- Mitchell, J. 'Typicality and the Case Study', pp. 238-241 in Ellen, R.F. (ed.) *Ethnographic Research: A Guide to Conduct*. New York: Academic Press, 1984.

Moll, L., Amanti, C., Neff D. and Gonzalez N. 'Funds of Knowledge for Teaching: Using a Qualitative Approach to Connect Homes and Classrooms', in *Theory into Practice*, XXXI (2), pp 131-141. 1992.

Nirantar, *Windows to the World: Developing a Curriculum for Rural Women*. New Delhi: Nirantar, 1997.

Papen, Uta. *Adult Literacy as Social Practice: More than Just Skills*. London: Routledge, 2005.

Rampal, A., Ramanujam, R., Saraswati, L.S. *Numeracy Counts*. Mussoorie, India: National Literacy Resource Centre, 1998.

Rogers, A. *Adults Learning for Development*. London: Cassell, 1992.

Saraswathi L.S. 'Practices in Enumeration by Counting and Computation of Sets of Objects in Rural Tamil Nadu: Implications for Adult Education Programmes', unpublished.

Silverman, D. *Interpreting Qualitative Data*, Chapter 3 and 4. London: Sage, 1993.

Smyth, J. *Teachers as Collaborative Learners*. Buckinghamshire, UK: Open University Press, 1991.

Street, B. 'Review Article on Books on Ethnographic Research', *Journal of Research in Reading*, 16(2) Special Issue 'The New Literacy Studies'. September, 1993.

Street, B. and Lefstein, A. *Literacy: An Advanced Resource Book*. London: Routledge, 2007.

Street, B. *Literacy and Development*. London: Routledge, 2001.

Street, B.V., Rogers, A. and Baker, D.A. 'Adult Teachers as Researchers: Ethnographic Approaches to Numeracy and Literacy as Social Practices in South Asia', in *Convergence*, XXXIX (1), pp 31-44. Montevideo, Uruguay: Journal of the International Council for Adult Education, 2006.

Websites (for numeracy)

www.nrdc.org.uk (for reports on research on adult education in the UK)

www.maths4life.org (for reports and research on adult numeracy in the UK)

PARTICIPATING ORGANISATIONS

NIRANTAR (India)

(See Partner Organisations)

PLAN (Bangladesh)

Plan is an international humanitarian, child-focussed development organisation without religious, political or governmental affiliation working in 61 countries. Plan began working in Bangladesh in 1994. Plan Bangladesh staff work directly with communities and the poorest children in a continuous action-and-reflection cycle.

Address House # CWN (B) 14, Road # 35, Dhaka 1212, Bangladesh **Tel** 880-2-9861599, 9860167, 8826209, 8817589 **Fax** +880-2-9861599 **Email** plan.bangladesh@plan-international.org **Web** www.plan-international.org

WORLD EDUCATION (Nepal)

Founded in 1951, World Education is a private voluntary organisation that provides training and technical assistance in non-formal education across a wide array of sectors. World Education has worked in over 50 countries. World Education Nepal's mission is to help rural people of Nepal improve their livelihoods through a community-oriented and participatory development process. Non-formal literacy is its main focus.

Address P.O. Box 937, Kathmandu, Nepal **Tel** 977-1-4422385/86 **Fax** 977-1-4415303 **Email** deeva@wei.org.np **Web** www.worlded.org

BHARAT GYAN VIGYAN SAMITI (India)

Bharat Gyan Vigyan Samiti (BGVS) was set up in 1989 with the objective of creating an environment conducive to literacy. In the 1990s BGVS was involved with the national literacy campaigns. Today, BGVS links literacy and continuing-education work with other development and social-justice issues. BGVS has units in 22 states and union territories of India. Its national network, Samata, works for the empowerment of women.

Address YWCA Hostel No. 2 (basement), Avenue 21, G Block, Saket, New Delhi 110017, India **Tel** 91-11-26569943 **Email** bgvs_delhi@yahoo.co.in, komalsriv@gmail.com

ANDHRA PRADESH MAHILA SAMATHA SOCIETY (India)

Launched in the state of Andhra Pradesh in 1993, APMSS implements the Mahila Samakhya programme of the Government of India. It operates in 12 districts, covers 2,833 villages and reaches one lakh women. APMSS works on social and gender issues as well as education, health, governance, natural resources and asset building.

Address 12-13-485/5, Nagarjuna Nagar, Tarnaka, Secunderabad, India **Tel** 91-40-27150233 **Fax** 91-40-27150557 **Email** apmss_ms@yahoo.co.in **Web** www.apmss.org

LAYA (India)

Laya is a non-government organisation working mainly with tribal communities in North Andhra Pradesh since 1985. Their work is in creating learning opportunities for tribal communities to effect social change.

Address 502 Kurupam Castle, near Walter RTCD Dept., East Point Colony, Visakhapatnam 530 017, Andhra Pradesh, India **Tel** 91-891-2530071, 2735332 **Fax** 91-891-2784341 **Email** layarc@gmail.com, laya@sancharnet.in **Web** www.laya.com

BUNYAD FOUNDATION (Pakistan)

Formed in 1994, Bunyad's primary focus is literacy and non-formal education of underprivileged groups like child labour, girls and young women in rural areas. It also works with public-sector schools. Bunyad works in partnerships with local communities, district/provincial and federal governments.

Address 24.5 km Badian Road, near Village Theatre Post Office Burki, Lahore Cantt., Pakistan **Tel** 92-42-5600621, 5600692 **Fax** 92-42-5600293 **Email** bunyad@brain.net.pk **Web** www.bunyad.org.pk

GRAM VIKAS (India)

Gram Vikas is a rural development organisation, working with poor and marginalised communities in Orissa since 1979. Gram Vikas' Mission is to promote processes which are sustainable, socially-inclusive and gender-equitable. The organisation currently serves a population of over 200,000 across 557 villages in 17 districts of Orissa.

Address PO Mahuda Village, via Berhampur, Dist. Ganjam 760002, Orissa, India **Tel** 91-680-2261863, 2261875 **Fax** 91-680-2261862 **Email** info@gramvikas.org **Web** www.gramvikas.org

SEVA MANDIR (India)

Seva Mandir works in the rural areas of Udaipur and Rajsamand districts in Rajasthan. Established in 1969, Seva Mandir's programmes include institution-building, women's empowerment, early childcare and development, health, education and natural-resource management. It has run various literacy programmes since its inception.

Address Old Fatehpura, Udaipur 313001, Rajasthan, India **Tel** 91-294-2450960, 2451041 **Fax** 91-294-2450947 **Email** edu@sevamandir.org **Web** www.sevamandir.org

PARTNER ORGANISATIONS

ASIAN SOUTH PACIFIC BUREAU OF ADULT EDUCATION (INDIA)

ASPBAE's primary purpose is to strengthen the theory and practice of adult education as a contribution to individual and social development. ASPBAE's membership covers a diversity of groups and individuals involved in formal and non-formal education, working with and through government agencies, universities, NGOs, community groups, trade unions, indigenous peoples, women's organisations and the media.

Address ASPBAE Secretariat, c/o MAAPL, 9th Floor, Eucharistic Congress Building No.3, 5 Convent Street, Colaba, Mumbai 400039, India **Tel** 91-22-22021391, 22816853 **Fax** 91-22-22832217 **Email** aspbae@vsnl.com **Web** www.aspbae.org

NIRANTAR, A RESOURCE CENTRE FOR GENDER AND EDUCATION (INDIA)

Founded in 1993, Nirantar has worked towards fulfilling its mandate of empowering women through education. Nirantar has sought to achieve this through direct field interventions, designing innovative programmes, training and capacity-building, creating educational resources and research and advocacy work. Nirantar is involved with the women's movement and other democratic rights movements and brings concerns central to these movements into its educational work.

Address B-64 Sarvodaya Enclave, Second Floor, New Delhi 110017, India **Tel** 91-11-26966334 **Fax** 91-11-26517726 **Email** nirantar@vsnl.com **Web** www.nirantar.net

UPPINGHAM SEMINARS IN DEVELOPMENT

A small informal group based in the UK, its main objective is to organise participatory seminars and workshops on the general theme of education in developing societies. The focus is on non-formal and adult basic education in developmental contexts but the field covered has been wider including language, social exclusion and managing diversity. It grew out of work undertaken in the 1990s by Education for Development (UK). Its convenor is Professor Alan Rogers.

Address Hill House, 8 Station Road, Reepham Norfolk NR10 4LF, U.K. **Tel** 44-1603-870491 **Email** info@uppinghamseminars.org **Web** www.unppinghamseminars.org