

***Deconstructing Literacy, Numeracy and Ethnography:
Learning for Empowerment
Applied to Curriculum Development
in the Ethiopian Context***

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PART I: THE CONTEXT

A Synopsis of Nonformal Education in Ethiopia

Adult basic and alternative basic education in Ethiopia have mushroomed in recent years. Ethiopia is a federal republic composed of nine regions: Afar, Somali, Amhara, Oromia, Gambella, Benishangul Gumuz, Tigray, Harare and the Southern Nations, Nationalities, and Peoples Region (SNNPR). In 1994, the Education and Training Policy decentralized education administration to these regional states, and advocated the use of mother tongue as a language of instruction. Since then 22 languages are reported to be used as languages of instruction. Following the 1994 Education and Training Policy, Ethiopia has been guided by a series of Education Sector Development Programs I, II, and III.

While consciousness of and political will in support of nonformal education have not reached the level of unreserved enthusiasm witnessed in national literacy campaigns of the 1970s and 1980s, they have gradually rebounded in recent years. The Education Sector Development Program III for 2005/2006 – 2010/2011, Ethiopia's national action plan on education, specifically discusses the adult and nonformal education program and defines it to include a range of basic education and training components for out-of-school children and adults. The action plan defines the content of the adult and nonformal education to include literacy, numeracy and the development of skills that enable learners to solve problems and to change their lives. The action plan also outlines three sub-component modes of delivery for adult and nonformal education:

- 1) alternative basic education for out-of-school children between the ages of 7-14
- 2) a functional adult literacy program for youth and adults over 15
- 3) community skills training centers for youth and adults

The current Education Sector Development Program III advocates for the use of functional adult literacy, alternative basic education, and multi-grade classrooms, and other alternatives as a means of expanding universal access to education. The action plan issues a directive that alternative basic education and functional adult literacy programs will be expanded and that regional states will organize adult literacy programs and develop materials in the mother tongue. The action plan states that the learning materials will cover the areas of primary health care, prevention of diseases such as malaria, HIV/AIDS, etc, family planning, environment, agriculture, marketing, banking, gender, etc (Ministry of Education, 2005).

Ethiopia's national action plan states that functional adult literacy will be a voluntary program, taught by teachers, ABE facilitators, literate adults, secondary students and university students. It will be conducted in schools, alternative basic education centers and kebele facilities and the main costs of the program will be teaching and learning materials, training manuals and the training of literacy volunteer teachers (Ministry of Education, 2005). The government has set the target of reaching 5.2 million adults through functional adult literacy and 143,500 adults through the existing 287 Community

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Skills Training Centers between 2005-2011. The government has also committed to developing an equivalence system between skills gained through nonformal education and those gained through formal education. Education law that will include adult nonformal and alternative basic education strategies is currently under consideration.

When government does not have the capacity to reach all out-of-school children and youth through formal schools, NGOs or other civil society actors have become involved, mobilizing community to build learning centers, securing enrollment and training facilitators. In many cases, strong NGO-government collaboration has resulted in unique progress in alternative basic education. Many NGOs are now in the process of handing over nonformal education centers to government management, by Woreda Education Offices. Regional Education Bureau and NGOs alike cite the statistics that show the increase in overall gross enrolment ratios, being, in part, due to the mushrooming of alternative basic education.

Alternative Basic Education is a type of school equivalency program for children ages 7-14, in which learners cover the equivalent of the first four grades of primary school in just 3 years, and are then able to transition into the formal system. Alternative Basic Education is characterized by low-cost construction, community contribution to construction and school management, inclusion of disadvantaged ethnic groups, gender and special needs groups, teaching in the local vernacular, selection of a facilitator from the local area, accelerated learning and active and learner-centred teaching methodologies and flexibility in delivery of education. Alternative basic education has been adopted in Ethiopia on a national large scale, by many NGOs as well as Regional Education Bureaus, and though it targets children age 7-14, in many cases older youth up to age 18 and 19 participate in the programs, particularly in pastoral and extremely remote areas.

Alternative basic education for children and youth has gained much more numerical and financial momentum than nonformal education for adults, though large numbers of adults are indeed being educated. When communities are mobilized to build a center for sending their out-of-school children to school, functional adult literacy also often takes place in that venue. When these centers are run by NGOs that provide a stipend for fuel, particularly in pastoral areas, youth and adults who are busy engaged in herding during the day, will attend nonformal education classes in the center at night. Nonformal education is also occurring within the setting of a host of sectors, including savings and credit, microenterprise, health education, commercial sex worker rehabilitation, etc. Community Skills Training Centers are government-sponsored vocational training centers sprinkled throughout the country. They have encountered some challenges in implementation and maintenance of enrollment.

The Ministry of Agriculture has 25 colleges that train grassroots development agents to become agriculture extension workers. The plan is that every community of 300 households will have three development agents, one plant science expert, one natural resource management expert and one animal science expert based in over 15,000 Farmer Training Centers across the nation. Though little collaboration currently exists, there has

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been a growing awareness of the need to collaborate between Ministry of Agriculture extension agents and the broader adult and nonformal education sector (Tefera, 2006).

Since 2001/2, the Ethiopian government has allocated the highest proportion of its national budget to the education sector (Oxfam & Basic Education Association, 2006). The Education Sector Development Program III committed to increasing the contribution to adult and nonformal education from 164.1 million birr in the previous period to 288.2 birr in the current educational action plan. International donors have been quite active in funding nonformal education in Ethiopia. USAID has funded nonformal education for \$11 million from 2005-2009. The Italian Cooperation Agency has bilaterally allocated \$2 million euros to alternative basic education over a 3 year period and The Netherlands Embassy dedicated \$8.2 million euros to fund Literacy Education, Skills Training and Entrepreneurship Support for adult women. The German government has also supported support of adult through IIZ/DVV for the last years. The World Bank – Government of Ethiopia Pastoralist Community Development Program has been a major funder of nonformal education.

Community contributions to nonformal education expenditure should also not be overlooked. Across the nation, communities are contributing human labor for the construction of alternative basic education centers, locally available building materials like rocks, wood, sand and other such items. Communities also contribute human labor to the management of learning centers. In the TEACH project alone, USAID has funded 11.7 million for nonformal education, but this is conditional on a 15% matching funds, or \$1,755,000 million to be contributed by communities.

As education provision is regionalized in Ethiopia, likewise training is regionalized. Teacher Training Colleges are increasingly becoming involved in providing training to NFBE facilitators, by default, as well as formal teachers. Many Teacher Colleges are also becoming involved in upgrading nonformal education facilitator skills, so that after 2-3 intensive trainings during the mid-year break, these nonformal education facilitators can become certified. However little formally trained capacity in nonformal education exists. Addis Ababa University recently inaugurated a Master's level program in Adult Education and Lifelong Learning in April 2007, however the majority of regional teacher training colleges are at only a nascent stage of developing nonformal education departments and programs.

The TEACH Project

Taking Education to Adults and Children in the Hinterlands (TEACH) is a comprehensive USAID-funded alternative basic education program that seeks to meet the needs of unreached peripheral communities by using flexible approaches to education. The TEACH project advocates that education can reach the unreached, not only through provision of education services to children, but through three mutually reinforcing pillars of capacity building—educating children, educating the parents and community members that support them, and enhancing the government's woreda education offices capacity

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that are responsible for the provision of education. TEACH is currently operating in over 500 villages in Ethiopia's most remote and disadvantaged corners. TEACH works in eight regional states, including Afar, Amhara, Benishangul-Gumuz, Gambella, Oromia, SNNPR, Somali and Tigray and has enrolled almost 100,000 children, youth and adults to date.

The TEACH project reaches out-of-school children and youth through alternative basic education centers receive practical, learner-centered education, supplemented by information on health, rural development and food security. In three years, students learn the equivalent of four years of primary school, and graduates are then able to transition into the formal school system. TEACH also implements Adult Functional Literacy for non-literate adults with the aim of increasing parental support of child education, establish a culture of family learning, and promoting active involvement in community development. In addition, TEACH implements a women's empowerment component, called WORTH, which enables women to link literacy skills with savings, credit and livelihoods. The TEACH project involves over 500 communities in constructing and managing village learning centers.

Once these centers are constructed and operational, TEACH recruits facilitators (teachers) with the collaboration of the local community, targeting those who have completed grade eight or above. These facilitators are provided with training in subject content areas, as well as teaching methodologies of both children and adults. Many Ethiopian educational programs face textbook shortages, as well as lack of appropriate instructional materials. Therefore, one of the main aims of the TEACH project is to foster innovative teaching & learning. Therefore, USAID and Pact, together with partner NGOs and government education offices, are providing support to new curriculum development, textbook development and printing. This effort will ensure that innovative teaching and learning is sustained, after the initial training of facilitators.

ANFEAE's Capacity Building in Nonformal Education

The Adult and Nonformal Education Association in Ethiopia (ANFEAE) is one of these organizations, and holds specific responsibility for building the capacity of Ethiopian institutions to implement nonformal education through the TEACH project. In addition to building the capacity of civil society, ANFEAE has been particularly involved in engaging district government education offices in training and capacity building interventions. Following the completion of the TEACH project, 500 learning centers initiated by NGOs, will be handed over to the government's district government education offices. Therefore ANFEAE is building these offices' capacity so that they can more effectively manage nonformal education programs and ensure long-term sustainability into the future. ANFEAE has already exceeded its initial target of training 72 district offices, and has now expanded to reach 319 district government offices, and 1181 government personnel. These enhanced skills will make possible the management of improved basic education for hundreds of thousands of children.

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ANFEAE is also building the capacity of regional teacher training colleges, including Gondar, Debremarkos, Dessie, Debreberhan, Jimma, Assela, Robe, Adama, Jijiga, and Adwa Teacher Training Institutes. Many of these colleges are already upgrading the nonformal education facilitators so that these facilitators receive quality training and government-recognized certification. ANFEAE has conducted an assessment of the colleges' needs in the area of nonformal education and the TEACH project now plans to invest resources in enabling eight teacher training colleges to: develop nonformal education departments, provide training and experience-sharing opportunities for college staff, open a basic nonformal education libraries, become more directly involved in training facilitators in nonformal education techniques, and develop curricular and learning materials for nonformal education facilitators. ANFEAE has already provided colleges with physical and electronic libraries of nonformal education materials and has conducted an initial orientation to nonformal education for college staff in the education department. College staff who train formal school teacher trainers will also be given an induction training in adult and nonformal education teaching methods. These professional development institutions are being strengthened with the intention that each becomes a center of excellences in nonformal education for the surrounding area.

ANFEAE is a membership organization serving the nonformal education community in Ethiopia. ANFEAE builds capacity in nonformal education for a variety of organizations and has trained 2614 NFE facilitators and supervisors over the life of the organization. ANFEAE develops training and curricular material and provides its technical expertise to other organizations, including government curriculum development units. ANFEAE houses an extensive library on adult and nonformal education and related materials and has produced a series of 20 training modules and host of other materials on nonformal education. The organization is currently shifting from a focus on project implementation into national and regional advocacy and capacity building.

The Evolution of the LETTER Approach

The LETTER Initiative began when Nirantar, a Delhi-based NGO working on education for empowerment for women, approached Brian Street, an anthropologist with a key interest in literacy. Nirantar sought assistance in overcoming a challenge they were encountering in the process of educating adult women. Brian Street involved Alan Rogers, an adult educator, and Dave Baker, a numeracy expert at Uppingham Seminars for Development, a UK-based NGO, to find a solution to address these needs.

The challenge Nirantar faced was this: When working with and educating adult women, they did not treat women participants as ignorant and unskilled. Rather they sought to layer the empowerment content and curriculum they were teaching, on what women were already doing and thinking. Yet in building a new curriculum for adult women, they found that the women already held views which contradicted the knowledge Nirantar wished to impart. For example, when teaching science according to modern views, Nirantar divided all matter into animate and inanimate. They found that the women they talked with felt that rivers should be regarded as animate, not inanimate!

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This conflict, is often regarded as a clash between two cultures – a modern, scientific, rationalist, urban, schooled culture on one hand and a traditional, ‘superstitious’, irrational, rural and unschooled one. In the African context, it is often represented as a clash between global and indigenous knowledge systems. Yet what Nirantar faced was an interaction between a diverse array of cultures, not just two. Nirantar wanted to find out about the existing knowledge, beliefs, and practices of those they intended to teach. They sought to ask questions and explore a culture which was not theirs, and in the process, look more closely at their own culture.

The LETTER training team sought to use an ethnographic approach to answer these questions. The output of this endeavor was the creation of the training course, *LETTER: Learning for Empowerment through Training in Ethnographic Research*. The training course is carried out in a tri-part series. The first workshop enables participants to deconstruct the issues of literacy, numeracy and ethnography and provides them practical training in using ethnographic tools for researching local literacies and numeracies. Following this workshop, participants disperse to carry out their own local ethnographic case studies. In the second workshop, participants present their ethnographic research, then bridge their learning, integrating ethnography into the development of curriculum for adult and nonformal education. The third workshop helps participants to concretize these results into actual curricular material and apply the approach to the local context.

Outputs of the LETTER training series include:

- a group of trainers trained in ethnographic style research methods who will be able to train facilitators and others committed to viewing literacy and numeracy as social practices
- a set of written guidelines for others on how to conduct ethnographically-oriented research on local literacies and numeracies
- a set of written case studies of local literacy and numeracy practices in the local context
- a set of written guidelines on how to create adult and nonformal education curricula, based on the findings of local ethnographies

Uppingham Seminars for Development first piloted the first LETTER training in India, in which trainees from various countries in South Asia gathered to learn skills in using ethnography for literacy and numeracy and later returned to their home countries to conduct small-scale research project in their local communities. The second LETTER workshop revised these small-scale studies and guided trainees in how to build a curriculum based on the findings of these studies. Nirantar is now in the process of completing this process and consolidating skills and findings into curriculum development. The outcomes of this activity have been consolidated into the report, *Exploring the Everyday: Ethnographic Approaches to Literacy and Numeracy*.

The LETTER Approach Applied to the Ethiopian Context

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The relevance and need for application of the LETTER approach in Ethiopia was identified during dialogues between Alan Rogers, ANFEAE and Pact Ethiopia. ANFEAE spearheaded the initiative, in an effort not to simply carry out a series of trainings or case studies, but rather viewing the LETTER training, case studies, and resulting curricular material, as initial steps in the broader process of fomenting a movement—a movement that stimulates change the way nonformal education is perceived, designed and implemented in Ethiopia.

The LETTER Approach training series was undertaken to enhance the capacity of practitioners, researchers, curriculum developers, policy makers who are located in various types of institutions working in nonformal education, including government offices, NGOs, research institutions, and regional teacher training colleges. These colleges will then be linked up with civil society and government nonformal education implementers in their area, so that, through cross-fertilization and collaboration, each can become a nexus for innovate approaches, quality training, useful research and successful implementation of nonformal education. ANFEAE's ultimate aim in hosting the LETTER training is to influence the 'teaching' and learning of adults among a various of actors—in order to make adult literacy more meaningful.

The first LETTER Workshop on Learning for Empowerment through Training in Ethnographic Research was held at Fura Institute of Development Studies, Yirgalem, Ethiopia, from September 24-29, 2007. The workshop was organized by the Adult and Nonformal Education Association in Ethiopia (ANFEAE), in collaboration with Pact Ethiopia, Uppingham Seminars and the Universities of East Anglia, Nottingham and Kings College London. The following resource persons facilitated activities on the nexus between literacy, ethnography and numeracy: Brian Street, George Openjuru, Katy Anís and Alemayu Hailu. Alan Rogers was slotted to attend the event as a trainer, but he had a heart attack and pacemaker installed a few days before the event. He plans to attend the upcoming workshop.

The training was attended both by practitioners of nonformal education as well as professional development training institutions. In attendance were representatives of the following institutions of higher education: Kings College in London, Makerere University, Addis Ababa University, Arbaminch College of Teacher Education, Debremarkos College of Teacher Education, Jimma College of Teacher Education, Awassa College of Teacher Education, Assela College of Teacher Education, and Adwa College of Teacher Education. The training was also attended by representatives from the following implementers of adult and nonformal education: SNNPR Regional Education Bureau, Amhara Development Association, Agriservice Ethiopia, Oromia Development Association, Debremarkos College of Teacher Education, Christian Relief and Development Association, Pact Ethiopia and the Adult and Nonformal Education Association in Ethiopia.

Aspirations on the Application of the LETTER Approach in Ethiopia

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LETTER training participants detailed their types of identities, experiences and aspirations related to the application of ethnography to literacy and numeracy. They verbally delineated their aspirations for the training and how they plan to utilize what they learn.

- Participants from the Pact WORTH project want to learn more about how to implement literacy by valuing women's experience. Pact's TEACH project wants to integrate this new knowledge into the nonformal education program to improve the program. They also want to "learn, unlearn and relearn".
- Amhara Development Association wants to learn how to make programs that are more relevant so that so many adults do not drop out.
- Debremarkos Teacher Training College wants to apply the knowledge they gain to the development of curriculum for adult basic education learners and a curriculum for nonformal education facilitators. They are currently in the process of undertaking this activity, but are considering scheduling their tasks according to the sequence of the workshop so that learning can be incorporated.
- Agriservice Ethiopia wants to understand the link between literacy and ethnography and to learn how this can bring a more practical change in people's lives.
- Christian Development and Research Association wants to learn more about nonformal education so that this learning can be integrated into the training of adults in NGOs and CBOs that the institution is currently conducting.
- Addis Ababa University has recently started an adult and lifelong education within the Curriculum, Teaching and Professional Development Studies Department. They want to learn how to develop a teacher training module in nonformal education and to learn how to successfully implement EFA initiatives, even when there is lack of continuity or overlap of personnel who are responsible for the management of these endeavors.
- Jimma Teacher's Training College wants to understand a new literacy approach so that it can be incorporated into the Adult and Nonformal Education department's curriculum and training of professionals and facilitators.
- The Adult and Nonformal Education Association in Ethiopia wishes to apply an ethnographic approach to nonformal education in remote parts of Gambella state.
- Oromia Development Association wants to find a more relevant way of educating adults.
- Assela College of Teacher's Vice-Academic Director finds that the college has a lot of experience in formal education, but no experience in nonformal education. The college is currently responsible for training NFE facilitators, however they are using formal teacher education materials to carry out this task. They hope this workshop may help to devise new material for training of nonformal education facilitators, so they can develop experience in implementing nonformal education and formal education teacher training side by side.
- The Arbaminch Teacher Training College participated in the first TEACH workshop on nonformal education facilitator training. The college wants to get more information on nonformal education so that he they can start a department in this area.

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- Hawassa College of Teacher Education has already designed two courses for nonformal education and has been training facilitators using mother tongue education. The college wants to put the knowledge from the LETTER workshop into practice in the college so that they can start a department on nonformal education.
- The SNNPR Regional Education Bureau is implementing alternative basic education and functional adult literacy. Between all implementers, almost 300,000 learners are enrolled in NFE in the regional state. They already have an alternative basic education curriculum and are currently developing an adult basic education curriculum. They want to learn how the ethnographic approach can enhance the existing work that is being undertaken.
- ANFEAE wants to learn how to use ethnographic research as a movement which can influence the policy and currently prevailing approaches to nonformal education in the country, as well as to unlearn what is not useful, but is currently being practiced in Ethiopia's adult and nonformal education sector.

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PART II: DECONSTRUCTING THE ELEMENTS

Below follows an account of the activities of the first in a series of LETTER workshops in Ethiopia on *Learning for Empowerment through Training in Ethnographic Research*.

Anecdote: “So That’s Ethnography!”

“I was attending an adult education class and I observed the facilitator define the word, ‘family’, for the class. He said, “A family is defined as having a mother, father, son, daughter”. One adult learner raised her hand and said, “No, that is not a family. A family does not only include husband, wife, daughter and son. A family also includes my daughter’s husband’. When she said this, I realized that this is the inherent local knowledge that people they have. We should not ignore their experiences.”

- Destaw Asmare, Nonformal education Coordinator for the SNNPR region

Paradigms of Nonformal Education and Development

LETTER Ethiopia workshop attendees were first introduced to paradigm theories of development and how these have been applied in the field of literacy, according to Alan Rogers. The *technicist* approach was presented, in which problems are viewed as having technical (right) answers which can be provided by inputs. This creates a perspective on development that ‘the poor must change but the rest of society is ok’. The *critical* approach was also presented, in which problems are viewed as having social causes that can be only be dealt with through social - action. This leads to the assumptions that both poor and rich must change, that systems need to change. The first approach relies on a theoretical lens of *deficit* thinking, in which people are seen as lacking. The critical approach is founded on the lens of

disadvantaged approach, in which people are excluded by their oppressors.

The presenter introduced a third approach to development, called the *Diversity* approach in which all people are seen as different and equally valid. This seeks to celebrate ‘the other’, rather than trying to change ‘the other’. Participants were then asked to define their own thinking, and identify which paradigm they found themselves aligned with.

Understanding of the Role of Paradigms and Perspectives

In order to illustrate the concept of paradigms and how local knowledge can be viewed through many lens, groups enacted role plays demonstrating the many lenses or perspectives that could be utilized to understand and make meaning of a situation. Below follows the workshop attendees’ analysis of various literacy and numeracy situations, according to different lens of interpretation.

Role Play 1: Adult Basic Education Classroom

In an adult education classroom, students sit idle waiting for the teacher. When the teacher finally arrives, the class proceeds in a choral fashion, with repetitive chanting and

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repeating. The teacher says, “What is this? One. Repeat class. One.” “One.” “What is this? This is awoman. Repeat class. Woman.” Most students drop out of the course before completion. But one of the few who completes the course goes to apply for a job in a shop. The employer gives the potential employee a trial period. The person is not able to respond to the employer’s questions, even regarding his name. He silently tries to fill out the application. However, he is not at all able to correctly write down the unit price for all the items. The employer finds the mistake and announces that he has not gotten the job.

Participants identify how they understand different lenses applying to the role play.

Lens of literacy: The applicant is simply unable to fill out application.

Lens of numeracy: The applicant is unable to write down the unit price.

Lens of formal education: There is no relationship between the adult basic education and skills needed on the job.

Lens of gender: Women’s participation was absent, both in the class and in the shop.

Lens of government: There is a gap of policy, where quality adult basic education is not being provided.

Lens of power: Because the applicant didn’t get a good education, he can’t compete for a job and raise his position in society.

Lens of ethnography: The teacher ignored the existing knowledge of the students, as well as their local needs.

Role Play 2: Market Woman’s Use of Numeracy

A woman is sitting in the market with baskets of pepper, ginger, and many other spices around her. There are different sizes of emptied used tin cans sitting in each basket. An out-of-town visitor comes to the market and buys small quantities of each spice. He asks for a kilo of salt, but she uses tin can measures instead. He expects calculations to be done in one way. She uses another approach, pulling a store of birr out of a wrapped tissue and another store of birr from inside her blouse. He questions whether the price she has calculated is accurate. She is quite sure, and she directs him, saying, “You can go check with anyone in the market.” He is a bit confused, but he accepts the negotiation and goes off with his goods.

Participants identify how they understand different lenses applying to the role play.

Lens of literacy: She is a competent and successful business woman without any literacy nor any need of it.

Lens of numeracy: She had her own measurements. She had her own system of storing and putting money together. She did not seem to have need formal numeracy for her business transactions.

Lens of formal education: She may not have business training, but she knows how to handle her customers. However, she could not dialogue in the language of kilos.

Lens of gender: The question can be raised, why is it that women alone are involved in selling such small quantities of items, rather than larger value bulk selling. There is a

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question of power, of who is doing what. On the other hand, the marketwoman made choices about what options they buy had. Some participants say the market lady and visitor are talking on an equal basis, while others believe this situation is skewed to the 'poor people's scenario'.

Lens of government: The issue of tax arises- is she being taxed on the sale?

Lens of power: The market lady had power over the visitor and had confidence about her calculations of the price. She even advised him to check the veracity of her statements with any other seller in the market. She was the decision-maker, and she was firm in holding to her decisions. The buyer was powerless; he didn't know the system, while the market lady knows the system. She was able to manage her business, she is empowered.

Lens of ethnography: She has her own system of local knowledge. She is honest and feels her knowledge system is validated by others. She said, "If you want to buy from me, buy. If not, check with others in the market."

Role Play 3: Navigating Between Languages and Scripts

A visitor to a small town is looking for a particular hotel. After finding the hotel, the visitor stays overnight and the next morning before leaving, he must get a receipt from the hotel. On one small building are written three small items, the name of the hotel in Amharic script, the name in Afaan Oromo script and the name in English script. The visitor tries to communicate with the receptionist. He speaks Tigringa, but none of the three languages above. The two can't really understand each other, so they communicate through sign language. The receptionist claps and opens his palms three times to communicate the price of 15 birr. Eventually he gets a receipt of some sort and goes.

Lens of literacy: Literacy has its own context. He is literate in his own language. But his literacy is irrelevant when things are conducted in a second language. Participants explore sign language, nonverbal communication, and other symbol systems as a form of literacy.

Lens of numeracy: He has knowledge of numeracy, in his own language alone. Others bring up that numeracy is not a matter of knowing how to speak about numbers in a language, but rather a set of mental skills in calculating and strategizing that is not dependent on language.

Lens of formal education: If he had attended formal education, he would have learned the national language of Amharic. Formal education is dominating, in that this one language is being used as the common currency of communication.

Lens of gender: Participants note that women were invisible when it came to the exchange of money. However, the presenters of the drama respond that, "No, it is just that the receptionist on the following shift is a female."

Lens of government: Because of government policy, the visitor would have never learned any national language if he dropped out before grade 3. He has no ability to communicate with other ethnicities using the national language. Those with no education or nonformal education are excluded from the language of national discourse.

Lens of power: Some participants comment that the receptionist told him the price and he paid it. They say, "It's not common to try and cheat a client on the hotel cost. So the

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two had equal status”. But other participants feel that the receptionist was communicating an attitude of superiority when he made a comment about the visitor, “Ha! A man who doesn’t know the language!”

Lens of ethnography: Participants did not elaborate on how ethnography applied to the situation.

Role Play 4: A Visit to the Big City

A woman comes to visit Addis to see her family. She is not literate and is not able to read the sign on the bus. She asks some young boys for directions and they laugh at her accent. “Ha ha --did you hear what she said, ‘She must be from the rural village’. She becomes quiet and shy. She finds a man carrying a cell phone who looks more educated than the young boys. She quietly asks him for directions, but he wants to take advantage of her situation instead. “Come , I will take you by taxi.” He holds her shoulder, guiding her. She backs away. And the taxi driver moves toward her, reaching for her. She flees from the situation.

Participants identify how they understand different lenses applying to the role play.

Lens of literacy: This rural non-literate woman is different from urban, non-literate women. Her rural upbringing did not prompt her to ask boldly, “Is this bus number 4?”, like an urban woman would. Her parallel system to compensate for lack of literacy by orally obtaining information didn’t work in this situation. So there is a great difference between urban and rural populations in how illiteracy affects them.

Lens of numeracy: She can’t read the numerals on the bus.

Lens of formal education: The information post and signs only consider formal school system learning. The participants also raise the question, “Does formal education produce chauvinists?” The rural farmer and his wife lived with understanding between them. However, in the city, formal education created a situation in which men were powerful over the powerless. But others raise the question that it was hard to judge whether the boys in town had formal education or not.

Lens of gender: Some participants exclaim “Sexual harassment!”, while others retort, “No, it’s that the man missed one beautiful rural girl.” Participants found that her illiteracy as a woman exposed her to different kinds of dangers that men would not be exposed to. Her rural illiteracy was experienced differently than urban illiteracy. Whether because she was rural, because she came with suspicion or because she had had trauma in her own experience, she was more than urban non-literate women.

Lens of government: Some participants assert, “the government should be blamed for not providing nonformal education to the rural areas.”

Lens of power: She did not have any power in that situation. She is vulnerable and powerless and has to ask for someone’s help. The man wants to exploit her. The taxi driver tried to grab her. But on the other hand, she did have power in that that she was able to refuse and move away from the man before he touched her.

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Lens of ethnography: In her rural locality, she can ask anyone for directions using the oral system. Her local system works. But in the urban environment, her system didn't work.

Role Play 5: Numeracy No Good in the Local Restaurant

A woman who is a school graduate gets hired as a waitress. She is trained and uses formal literacy and numeracy to take all her orders. But the bar owner is not literate, and he wants the orders recorded in a different way, where only a few numbers are written and it's all done in the head. Later she finds that he uses this informal method to more easily evade taxes. However, she is forced to collaborate in the alternative method of calculating.

Lens of literacy: Literacy and numeracy are often taught separately, but she needed to use both in the way she recorded and calculated the orders.

Lens of numeracy: The restaurant owner introduced a new numeracy system that worked, but also helped him to obscure his income from the government.

Lens of formal education: At school, she learned one method of recording, but on the job she had to learn another system of recording. There was a contradiction in what she needed to learn. Usually the formal education method wins out, but this time, the nonformal method one.

Lens of gender: The manager was male and she was an employee. It might have been different if she were the owner and he the employee. He might not have conformed to her illicit numeracy system.

Lens of government: The owner himself only understands how things are recorded so he is "playing tricks" on the government.

Lens of power: As she was an employee, she had to succumb to the owner's methods, though they were less efficient than her own formal methods.

Lens of ethnography: She had to learn a "dubious" system of recording and learn the people's method, even though through collaborating with this, she became involved in enabling the owner to more easily evade taxes.

Unpacking Learning and Literacies

Katy Anis presented on theories of learning and how they relate to literacy. These ideas were then connected to some of Alan Rogers' theories on the learning of literacy.

In "Informal Learning and Literacy," Alan Rogers cites the following definitions of literacy.

"Learning is a natural activity which continues at all times. Learning is the way in which the experience of the external is internalized and utilized for growth, a way of drawing from the natural and human environment the sustenance for living. Much of it is making sense (meaning) of experience and using that for dealing with new experiences.

-Moll

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“A good deal of learning is intentional, planned and directed, but most learning from infancy until the end of life is unplanned, unintended and often unconscious, learning through tasks or play/imagination or social engagement; and this kind of learning results in tacit or implicit (unrecognized and unacknowledged) knowledge, understandings, skills and attitudes”

-Polyani and Rober

Learning and the Brain

The following are just a few of the cognitive and neurological factors that affect the brain's ability to learn.

- The brain remembers the first and last items of a sequence best.
- The brain learns best under moderate level of threat- some needed, but not too much.
- The brain remembers emotionally-charged content better, whether it is positive or negative.
- The brain remembers uniqueness and is stimulated to absorb new learning when you change location. This is why a trip of 10 days to an exotic, new place seems so long, while the days passed in your everyday environment seem to blend into obscurity. This has applications for moving learners around in the classroom environment and for taking learning outside the classroom.
- When the brain is relaxed, pleasure pheromones are released. So “making learning fun” has actual neurological foundations behind it.
- The brain literally connects new information to existing electrical synapses. Adding new information is like putting additional rungs onto a ladder, or adding new threads into a lattice work of weaving. This is why building on previous experience and making content relevant actually affects the neurology of learning.
- Over the first 9 months of gestation, 250,000 neurons a minute are produced, creation 100 billion neurons in the brain. This means that a child has the potential neural wiring to be almost anything (exquisite piano player, carpenter, mathematician) depending on what synapses are utilized or not utilized. However from childhood through adolescence, a person loses 20 billion synapses per day, if they are not utilized. (Eliot, 1999) Only the ones that are used will survive, which means that our brain is honing its skills. For instance, as we develop excellent skills in a few certain areas, we lose ability in others, liking having perfect pitch or speak fluent Russian.
- Language development happens naturally in the development of the young child, especially between 6-8 years of age.
- In late adolescence, 17, 18, 19, fatty sheaths form around existing synapses, making the synapses more easily function, and making it more difficult to form new sheaths. This means that what you are doing in adolescence you will become good at, while it will be more difficult to learn new things.
- Helen Abadzi conducted research on how children's and adult's brains learn literacy. Children tend to absorbing whole phrases and put them into use without getting it quite right, until later. They do not pull apart rules to understand. Adults break down and deconstruct elements to see patterns and rules. They tend to read letter by letter, instead of grasping a whole phrase for meaning. Helen

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used this observation to assert that adults spend so much time trying to grasp each letter that they forget the meaning of a sentence by the time they get to the end, and that this makes it difficult for them to literacy effectively as adults. This and other assertions were used by the World Bank to cut funding for adult literacy in recent years.

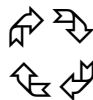
- The Abadzi theory was tested by the presenter in terms of its application to dance. Indeed the presenter did observe that young children learned Indian Classical Dance by picking up whole phrases of dance without perfecting the definition of the moves for several years. However adults tended to break down each step, learn it, then apply the next step. So the children learned quickly, but inaccurately. Adults took much longer to learn but could perform a very short piece with more precision.

The information above helps us to understand the way that many of the pedagogical theories and practices that have fallen “into vogue” are based on actual chemical and electrical features that are evident and traceable in the brain. For more information, reference Helen Abadzi’s research, 21st Century Learning Initiative, “What’s Going On In There”, The Scientific American Series on: The Brain, and other materials (see reference section).

Experiential Learning

Experiential learning:

- often involves more than one sense (sight, speech, touch, hearing, taste, etc). Greater than these physical senses for absorbing experience, is the sense of experience. In 1997, Motorola was trying to develop a chip that could be implanted in the brain which communicates experience.
- often touches the four quadrants – intellectual, spiritual, emotional, physical.



Learning often happens cyclically. You learn something new. You falter again when you reach what you can’t perform what you learned. Specifically from the correction of mistakes, you learn how to master the areas in which you faltered. You attempt the whole activity again. Eventually you master the activity.

The following experiential learning cycle delineates the process by which learning is fully absorbed or completed.

Experiencing ⇒ Sharing ⇒ Processing/Analyzing ⇒ Generalizing ⇒ Applying

Learning Styles

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Howard Gardner defined the following type of learning styles.

intrapersonal	-within one's self
interpersonal	-among people
spatial	-geometric, use of space
symbolic	-verbal, mathematical
kinesthetic	-movement
auditory	-hearing
visual	-sight

Learning Modalities

We often limit learning to one modality. The presenter asks the participants to pick one topic in the mind. Ponder how this topic could be taught through the following different learning modalities.

1. drawing or visual representation
2. Spatial representation through charts/graphs/etc.
3. interpretive movement
4. drama/skit
5. personal reflection
6. storytelling
7. sensation
8. mathematics and geometry
9. engineering and construction
10. song

Personalized Learning

The presenter guided participants to “Think back to when you didn’t understand something you really didn’t understand. It could be a family event, a spiritual test, a challenge at work, a topic at school, a skill you wanted to learn, anything. Then remember the ‘aha’ moment-when you finally got it. When it clicked and sank in and everything became clear. That was learning”. This type of memory is vivid in one’s mind because it relates directly to personal experience.

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Anecdote: Forced Learning ... by a Naughty Little Teacher

One workshop participant teaching at Addis Ababa University shared his experience of learning to swim, while in Germany. He decided he was going to learn to swim so he went to the swimming pool. He had studied all the theories of swimming, how to move the arms, the legs, but he could not put them into practice. So he simply sat in the water. A young girl came to the pool with her auntie and wanted to play with him. She asked, "Do you want to play with me?" "No, I'm relaxing." "Can you swim?" "Yes, I can," he responded. "Ok! Then come swim with me!" "No, no, no. I can't. I'm waiting for my girlfriend," he responded. "Who is your girlfriend?" He quickly looked around and pointed to a woman in the distance. The little girl takes off and runs over to the woman. (As he is retelling the story, the professor shakes his head saying, "Really she was very naughty.") The woman exclaims, "No that's not my boyfriend!" She comes over to the man exclaiming, "What did you tell this girl? What did you tell her to do?" "No, I didn't tell her to do anything." The little girl brings six of her friends around the professor and they taunt him saying, "Look, that's not his girlfriend and he can't swim. Hahahaha!"

After a little while, the girl approaches the professor saying, "Listen, I will teach you how to swim. But you have to admit that you can't swim and that she is not your girlfriend." He reluctantly agrees to her offer and shamefully admits the two admonitions. She begins to show him some techniques for swimming and then she goes to the deep end of the pool and dives in. He cannot make out the girl amidst the commotion of children in the deep end of the pool. In the meantime, the girl has swum underneath the water to behind the professor, and she suddenly gives him a big push from behind. He is forced into the deep water and has to start sputtering. Just as he is starting to get the hang of it, and she comes underwater and pinches his foot and he again loses his balance and has to start floundering. After spending 8 consecutive days at the pool with the little girl, he finally learned how to swim. Years later, he still writes letters back and forth with this girl in Germany.

After his story, workshop participants reflect: What is a teacher? What is the role of a teacher? To intervene when we don't think we can do something ourselves?

Self-Directed Learning

The presenter directed participants to think back to an experience where you had the motivation to learn. Why did you have motivation? Did you need the information? Was it was relevant to your life?

Participants share stories of how, when they went to do a PhD, they were forced to learn typing. No one could learn for them. They were supposed to learning important content from the university, but instead they spent weeks practicing, "asdf jkl;".

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Games

This information above, plus lots of pedagogical research, has led to an emphasis on active learning. Games are one type of learning scenario that incorporates many active learning methodologies.

Games have been developed in every society, whether they are formally educated or not. They may occur at the micro-level like children playing jacks. They may also occur at the macro-level, as when people coin the term “war games” for their leaders.

Below are some comments elements of game:

- Games are fun!
- They have a point, a goal (which is relevant or becomes relevant to the player).
- They enable the player to win or gain something (which is valuable, not irrelevant).
- They build challenge or competition.
- They often contain suspense or surprise.
- They often require you to demonstrate a skill or learn something.
- They often contain a mix of strategy and chance (i.e. requiring a learner to demonstrate a skill, while simultaneously engendering suspense).

The Continuum of Learning

The presenter related the concepts of learning presented above with Alan Roger’s theories about literacy and learning.

Alan Rogers defines the following types of learning, along the continuum of the learner’s control of their own learning (Rogers, 2008).

- ‘incidental learning’ is sometimes seen as that learning which takes place without anyone being in control,
- ‘informal learning’ as that learning which the learner controls,
- ‘non-formal learning’ as that learning where control is shared between learner and a ‘teacher’ (learning support agent), and
- ‘formal learning’ as that learning which is controlled by the learning opportunity provider.

He distinguishes between different levels of consciousness about the learning taking place.

- ‘task-conscious learning’ (where learning is not conscious but takes place while engaged in some activity and where achievements are measured not in terms of learning but of task fulfillment)
- ‘learning-conscious learning’ (where learning is intended and conscious and achievements are measured in terms of learning).

Formal schools have emphasized modes of reading and writing and memorization, or programmed learning. Yet this is one small slice of learning. According to Alan, “Thus

the natural learning which we all do, far from being unimportant is in fact the foundation of all new learning and all education (planned and assisted learning)” (Rogers, 2008).

Applying Learning to the Acquisition of Literacy Skills

Alan Rogers cites the following learning theorists.

“The processes of informal learning through which we learn to deal with unfamiliar types of texts, learn to adapt our style of writing to the requirements of new technologies, or learn to navigate the literacy environment of unfamiliar institutional settings” (Papen, 2005: 24) are often unconscious or semi-conscious. Making meaning and transmitting meaning are constantly being learned and relearned”

Illustration: We assume that a literacy primer enables you to read. However Nepali women who had studied with that primer could only read that literacy primer. They could not comprehend the news, read literature, poetry, etc.

Alan suggests the following skills and processes in relation to the learning of literacy.

- “Study of the processes involved in such informal learning of literacy shows that they are not linear, starting with simple words and moving to more complex words; rather they move from the *known* to the *unknown*.”
- “Informal literacy learning is always purposeful, associated with existing or changing identities, seeking identity confirmation, joining in a community of practice (Barton and Tusting 2005; Lave and Wenger 1991).”
- “Rather than learning literacy leading to change, it is change which leads to learning literacy. Such informal learning is always applied in a particular context, but it is almost always limited to that context and the activity in which it is embedded”.

Perceptions of Self and of Literacy

Alan asserts that the learned belief systems about literacy and the self will affect the motivation and confidence of the potential literacy learner.

Making meaning is defined as “the establishment of a relationship between the experience and the sense of self.”

Illustration: All have exposure to literacy, but there are various degrees of feeling excluded exist. For example, a less literate person may feel excluded when going to the post office, while a highly educated person may also feel excluded when trying to read an insurance policy or computer manual.

Integrating the Informal into the Formal

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Alan asserts that:

“Much informal learning is going on even *within* formal literacy learning groups or classes.....Thus with adults it is important to try to bring the unconscious informal learning of many years into consciousness-- give value to the informal learning acquired through adult life and build on it to make progress in further learning”

He also claims that: “a one-size-fits-all literacy learning programme can never be successful: each literacy learning group needs its own learning programme based on the informal literacy learning of the learners”. (The presenters asserts this why we are doing ethnography!! This is the point why LETTER workshop is being conducted.)

The following methods for integrating informal literacy learning into formal literacy learning are proposed:

- Task-related learning;
- Cyclic rather than linear learning
- Collaborative learning rather than individual;
- Real literacy activities and texts drawn from the literacy learners themselves rather than imposed from outside
- Critical reflection on both the literacy learning tasks and the contents of the teaching-learning materials;
- changed relationships of the teacher and learners where the teacher becomes a literacy mediator and scaffolder/mentor rather than instructor

Application of Theories of Learning to the Teaching of Literacy

Participants are put into groups and assigned to:

1: Develop an activity that leaves out and does not incorporate these elements and ideas about learning for an adult nonformal education class.

2: Develop an activity that builds on and incorporates these elements and ideas about learning for an adult nonformal education class.

Group 1: Adult Nonformal Education Class on Agriculture and Literacy where today’s topic is Planting Methods.

Group 2: Adult Nonformal Education Class on Health and Literacy – Topic Hand sanitation

Group 3: Adult Nonformal Education Class on Livelihoods and Literacy- Topic Savings

Group 4: Adult Nonformal Education Class on Gender and Literacy- Topic Women’s Empowerment

Group 5 is assigned to:

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- 1: Develop a rough outline of curriculum framework of an adult basic education course builds on and incorporates these elements of learning
- 2: Develop a rough outline of curriculum framework of an adult basic education course builds on and incorporates these elements of learning

Discussion

Following the session on learning and literacies, workshop participants debate the statement: “Rather than learning literacy leading to change, it is change which leads to learning literacy”. Participants debate saying that when there is a need, change itself precipitates literacy learning and sometimes vice versa. There is a situational pull and push factor occurring. Some agree, some disagree, and some believe it is changing coming from the outside, as well as motivation from the inside that leads one to learn. Some agree that this is maturation of the field, when practitioners evolve an ideology that adopts both extremes.

Participants wonder if the comment that people do not want literacy for general reading and writing means that a learner does not need any more knowledge? The presenter asserts that one has to remember that in reading papers and encountering authors’ idea, each assertion is only one lens on the breakdown of approaches. There is no need to be dogmatic in selecting one approach over another. The author is bringing his own personal model and we must think of this as a heuristic. Participants suggest developing an “ANFE Approach” to adult and nonformal education, pulling in bits and pieces from each theory and approach, according to what best suits the needs in a particular context. Yet others cite resistance to this idea, commenting how we are living side-by-side, amidst the traditional and the socio-cultural. Yet, what is prevalent in universities is the traditional viewpoint. So one model can’t be adopted.

Unpacking Numeracy

Katy Anís explored concepts of numeracy with workshop participants. The term, numeracy, refers to something broader than what people think of as math. It is a system of thinking to comprehend the world and explore patterns. In the context of development programs and nonformal education, numeracy means applying math to the practical. The Nirantar document on Exploring the Everyday defines numeracy as “strategizing or sequencing or generalizing—in other words, processes. There are also aspects of competitiveness, social skills, like turn-taking.”

Illustration: One example of numeracy applied to everyday life, is the case of an Afghan woman preparing for guests. She understands what quantity of food the members of her family eat. When preparing for guests, she must understand the quantity of guests and estimate raw materials correctly. It would be horrific to underestimate lest anyone go hungry. So she must slightly overestimate so that some food always remains leftover, -- yet not so much that it creates wastage of precious resources. As husbands often bring unexpected guests at the spur of the moment, she is required to conduct fast calculations

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and adjustments to her original calculations. This requires functions of addition, multiplication and division, as applied to physical elements.

Applying this same definition to the “developed” context, one finds that the definition of numeracy as “applying math to the practical” still holds.

Illustration: One interesting difference between the difference between the practical and theoretical is the GRE test which is used as a graduate school entrance examination in the U.S. This instrument tests less of individuals’ formal math training, rather it examines practical problem solving, comparisons, estimations and math applied to everyday living. Students who scored poorly in formal math tests have sometimes excelled in this examination.

The Evolution of Numeracy

In modern days, math is often seen as something inaccessible, a subject around which the average person feels a slight amount of trepidation. This is because, according to Michael Starbird, the written symbols currently used in mathematics were originally developed by Pythagoras. Pythagoras had a secret society whose members were vegetarian, practiced particular rituals and used mathematics as a secret language that kept them apart from the masses. This aura of exclusiveness to the masses continues until today.

Almost every society has developed some system of mathematics. Some societies used knots to count, or other small quantities to keep track of numbers. Numerical systems have developed around different bases, including 10, 20 and 60. For instance, the Babylonians used a 60-base numeric system, which is why we continue to count seconds and hours in divisions of 60, and why we count 360 degrees in a circle. However, most numeral systems developed around bases of 10 and 20, because humans have tended to use the 10 fingers and 20 digits as a reference for counting.

Numeracy appears among humans naturally.

Illustration: As a child, the presenter realized that when she was passing the triangle shaped park, if she went down the long side of the park, it was shorter than if she went around the two corners. But it wasn’t until she learned the Pythagoras Theorem that she came to understand this was a mathematical, geometric principle being applied.

Illustration: In some examples from the Nirantar case studies, when women were asked where the answer to the mathematical calculation came from, they responded, “the answer came from God,” or “it’s in their stomach” or “it’s in their head”. This phenomenon is fascinating in that it indicates people don’t know why they know, but ‘they know’. Though Western-trained academics may scoff at this answer, maybe the women are right. Maybe the answer did come from God, in terms of an innate ability to calculate planted by the divine in the human brain. Substantial research has been conducted on the onset of language in the human brain. However, further research is

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needed to track the onset and critical periods for numeracy development and the ability to conduct calculations.

Mental Calculations

Numeracy often develops (as spoken language does in young children) through the process of humans encountering objects and challenges to accomplish activities. Neurological studies show that regions in the right half of the brain display electrical activity when processing spatial and numeracy activities, while the left half of the brain lights up with engagement in activities related to language use. All humans, be they in “developed” or “developing” living circumstances in the world, developed these spatial and mathematical through everyday activities, be they trade, travel or construction. The Nirantar report cites that, “Many think maths is difficult, but for non-literate is part of their normal life” (Nirantar, 2007).

Illustration: There is the case of one camel trader in Tigray who learned to do written calculations and use Latin script numerals when he was forced to use a calculator because the community’s wholesale dealers and small-scale shopkeepers brought their goods to him to record. This activity also forced him to learn, on his own, literacy for the sake of numeracy. He needed to record the following types of transactions. “Tamiru has brought 10 kilos of sugar and he wants it to be sold for 10 birr.” Though the camel trader himself was Muslim, he would take the sentence to the only literate local man who had been trained as a priest through Ethiopian church education, and this man would correct his letters. It was specifically and singularly through these corrections, that the man learned how to write and record transactions without ever having gone to school. His learning occurred out of necessity and in reaction to forces in his environment.

Millions of individuals in the world who are not literate are involved in complex mathematical calculations, without any formal numeracy or mathematical training. The Nirantar case studies found that the level of calculation ability was related to the extent of the use of numeracy in people’s everyday life.

Illustration: Brian Street points to work in Brazil that has shown that Brazilian street children could do complex calculations in their head at rapid speed. They could not write these computations down in formal symbols, and yet they computed faster than those with formal numeracy training.

Illustration: The Nirantar research projects show how complex math was being applied in the arena of games. Games in Bangladesh required practitioners to demonstrate complex numeracy skills “from simple mathematical concepts and skills like counting, addition, subtraction, multiplication, division and measurement to highly complex concepts and skills such as proportion, estimation, ranking, strategic decision-making, applying logic in a situated context, identifying geometric shapes, angles, and stratifying

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objectives.” However these skills were not recognized by the community as counting as bonified formal knowledge and practitioners were not considered to be numerically numerate.

Many with formal numeracy training are sometimes not able to cope with the rapidity with which individuals untrained in numeracy compute in their head. This occurs to the point that those formally educated in math are sometimes intimidated by speedy calculations encountered on the street.

Illustration: In Afghanistan, merchants regularly switch between three currencies, Afghan Afghanis, Pakistani rupees, and US dollars. If they are trading with Dubai, they may also work in dirhams. They easily switch back and forth using mental calculations. When they interact with foreigners who are not used to the currency conversions, these clients are easily lost by both the context of current exchange rates as well as the rapidity of calculations. This opens an opportunity for the merchant to use the buyer’s ignorance for increased commercial gain.

Precision vs. Approximation

One of the key defining aspects of the difference between numeracy as applied to everyday life and formal mathematics, is the difference between the need for preciseness vs. approximation. It is common that populations with a long history of operating without formal training in math have developed grouping systems in which the label of one unit is used to refer to 100 or 1000 items of small quantity.

Illustration: Tigray camel herders use the term, one *betri*, to mean one hundred head of animals. There is no word for half or a fraction of this quantity. This example also highlights the high incidence of estimation of a set of groups being valued over precision, in certain contexts.

Illustration: Saraswati’s research on numeracy in rural Tamil Nadu found that sets of small items could be counted by estimation or by actual count. Unit sets such as one hand, bundle, or container were used. When Tamil Nadu traders scoop up a bundle of cigarettes between their thumb and middle finger, they estimate. When they purchase a load of bananas, whether it is large bananas or small bananas they use the same estimate to refer to this quantity. People used the size of the object, the space occupied and previous experience as factors in estimating. Counting in pairs was more common than individual counting, as seen in the case of counting of small sets of pebbles and cowrie shells. Saraswati found that the mode of enumeration that adults use for measuring agriculture or horticulture products depends on: the kind and size of objects, the convenience of units to help them count fast, and the standard number of units.

Multi-Modality

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A modality is any system of communication, such as writing, gestures, visual systems, kinesthetic symbols, etc. Humans often display multi-modality in the area of numeracy.

Illustration: In Afghanistan it is common to speak using Dari numerals and write these Dari numerals. However, women in nonformal education classes were sometimes observed verbally using numeral systems, but writing the numerals using the numbers written in English script. This is partly due to globalization, where most wall clocks, digital watches, and calculators are produced in China with Western numerals and are distributed to countries that have a multitude of numbering systems in use. This type of trade and interaction forces a common numbering system. In another example, Ethiopian texts, the script will be written in Amharic while numbers are denoted with Western numerals.

Numeracy is a system for identifying patterns, in whatever way they may unfold. Sometimes the way people use numbers in everyday life is different than the formal numbering systems.

Illustration: “Bus 27” is used as a name, a proper noun, not as an element of subtraction. $2+2=4$ is not always true. If you push the elevator button, “2” twice, this will not take you to the 4th floors.

If you merge 2 groups of training participants with another 2 groups, you end up with 1 group, not 4.

To illustrate the concept of multi-modality, Brian Street took a survey of the types of languages and scripts present in the training. Among the participants, the following numbering systems known by participants:

- Western Numerals
- Roman numeral
- Amharic Numerals
- Farsi/Dari Numerals

Knowledge of the following modes of oral or written communication among participants were identified:

- Afaan Oromo
- Amharic
- Dari
- Farsi
- Kambatinha
- Kelechach (Harare)
- Oromifa
- Portuguese
- Portuguese
- Rutana (SNNPR)
- Spanish
- Tigrinya

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As the Pendulum Swings...

According to the Alan Rogers model, the educated have often wanted to instruct the 'ignorant', since literacy and numeracy are seen the agents of cognitive development. Ethnographic approaches have sought to challenge these assumptions of arrogance by valuing the local knowledge that people possess. However, the Nirantar researchers who explored ethnography as it applied to numeracy, found that there was a high amount of inaccuracy in which small business women traders were losing money. *“When asked explicitly, the women said they felt confident in dealing with the literacy and numeracy around them. But we have seen that in many cases the women made errors while making their calculations. They were unaware of how much they were losing in their interactions with shopkeepers and contractors. So while at one level it was heartening to see that they do not see their ‘illiteracy’ as a huge barrier, we also realised that there clearly were areas where they were at a disadvantage, which they had learnt to live with (Nirantar, 2007).”*

Katy Anis presented the theory of the “Pendulum Process”, in which those in a particular field discover a principle and then the whole field rushes to adopt this principle. After a certain period, backlash is experienced, in which members of the field realize that the discovery was not the complete answer. Following this, the other extreme is again expressed. Gradually, through this tension a middle ground is reached, which simulates the process of a pendulum swinging to one extreme, then the other and gradually oscillating until it reaches a middle ground. However, even after reaching balance, the pendulum is never still. It is always slightly moving back and forth and this is what creates balance in ideology.

Illustration: This example is given of ‘participation’. When this realization was applied to development it was seen as the answer to all evils. However gradually articles started appearing called “The Tyranny of Participation”. Over time, the extremes moderated into scenarios where practitioners began to blend participation of the people with occasional executive decision-making. Another is given with the example of gender. In the West, for several decades, the unequal role of women dominated discourse. However in recent years, books have started appearing on “Men’s Roles, Men’s Health, Nurturing the Male Spirit”. The pendulum is swinging in an effort to stabilize in that context.

Applying the principle of ‘the pendulum process’ to numeracy, this means that an ethnographic perspective unearths local knowledge, values it, and shows its relevance in grappling with mathematical encounters. However, the Nirantar case studies showed that local knowledge in numeracy can also hit a glass ceiling. Other examples also illustrate the glass ceiling of being knowledgeable in the local or traditional system of numeracy only.

Illustration: In other examples in the Nirantar case studies, girls were learning to plant and distribute fertilizer using traditional measurements. However, there was a time when they needed to understand kilos and their inability hindered them.

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Illustration: In other cases in Ethiopia, women were able to use tin cans and small cups as measurements but they were limited from certain areas of trade when they were not able to operate in the medium of kilos and metric measurements.

Illustration: There is a case of an Afghan trader who had “made it big” with his sharp business skills. But he had grown to such a size that he needed an accountant to tabulate all his merchandise and income/expenses. However, once this occurred, he estimated that he was losing 10,000 Afghanis per month due to this inability to calculate. Why? Because others who could calculate were using their knowledge to siphon profit from him.

The presenter proposed that local systems of numeracy be identified, explored and valued. However, local system users can benefit from becoming multi-lingual, so to speak, or multi-modal in the use of numeracy. They are already competent and can become conscious of their own numeracy systems currently in use. However, with further numeracy education, they are opened to new layers of access and entry into other worlds of trade, industry and benefit as they become competent in more than one system of numeracy. “Numeracy enhancement” adds skills to a learner’s repertoire rather than devaluing or negating the role of her traditional system, an attitude that conventional numeracy courses often implicitly convey.

Illustration: This can be seen in the case of an Ethiopian woman who is competent in local measurements found in the market, but who enlarges her trading capacity, when she is able to understand kilos and quintals and deal with large quantities of grain with traders arriving from other areas. This also enables her to assume new roles of leadership, as she becomes a mediator or a ‘translator’, so to speak, between two audiences who are ‘mono-modal’, i.e. visiting traders fluent only in the formal system of numeracy or other female small scale merchants fluent in only the traditional system of numeracy.

Illustration: One example of an individual who is cultivating the application of the ‘middle ground’ principle is Ulrike Beyer of SIL. She works in the Turmi area with the Suri tribe who employ a 20 base numeral system and a language that was not written until recent decades. Ulrike has been involved in transcribing the language and developing the first set of literacy materials. As she has worked on the numeracy curriculum, she developed transitional materials that helped the tribe them adjust into a mainstream numbering system. The materials do not invalidate the tribe’s current system, but enable them to become competent to operate using both systems.

Unpacking Ethnography

Brian Street defined ethnography as the exploration of knowledge that people already have. Ethnography is continuous everyday life. Ethnography refers to learning meanings, norms and patterns of everyday life. It sounds like very specialist knowledge, but yet we

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are all ethnographers. All of us have knowledge of our worlds. The question is, ‘Who owns the information?’

When we use certain words, we often assume that the meaning is shared. However, sometimes meaning is interpreted differently by different audiences. Sometimes you will observe something, and describe it, assuming that the reader understands. This is not necessarily true. Ethnography sometimes requires us to describe what seems obvious.

Illustration: Brian Street presents an example when he was delivering a speech and every time he used the word *genre*, the students wrote down the word *gender*. The meaning the students left with was totally different.

The ethnographer must ask, ‘What lens am I using for seeing people’s practices and cultural behavior?’ As humans and as ethnographers, we start with our own lens.

Illustration: When Europeans traveled in Africa, they said, “They do not have politics.” When Europeans went to India, they didn’t think Indians believed in God. Later they realized that the ‘frame’ (see annex on key terms and vocabulary) needed to be shifted.

Ethnography can be compared to a turtle and a group of fish. The turtle who leaves the water and visits land, cannot describe what he has seen to fish who have never left the water. The turtle could not explain what he had seen because he had no words to convey that the fish would understand. The fish concluded, “It isn’t like what we have seen, so it must not exist.”

An ethnographic perspective is an adjustment to the range of meanings involved in any practice. The terms, ‘emic’ and, ‘etic’ come from the field of linguistic studies. A *phoneme* is the smallest unit of sound that has meaning, where as *phonetic* is a description of a whole set of language. Therefore in the field of anthropology, ‘*emic*’ is used to describe the insider, native point of view, while ‘*etic*’ is used to the outsider’s point of view. In ethnography, you don’t just try to capture the local. You say, “let’s understand their way of understanding the using *emic/etic* approach, the local vs. outsider view. The *emic* sheds light on the native perspective, while the *etic* or outsider account will pull the two together.

Ethnographic Techniques

One researcher has compared ethnography to juggling. “It isn’t a technique that you suddenly do. It is a technique that is slowly learned and absorbed”.

Observation refers to the technique of ‘sitting like a fly on the wall’ and watching watch is going on.

Participation Observation refers to the ethnographer joining in the activities of the group being observed.

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With ethnography, it is sometimes better not to ask direct questions. Because people may not be able to articulate that they are part of a larger system.

Illustration: Sometimes gypsies had learned not to answer questions or not to answer correctly because the questioner might force them to settle or trick them in some way. An anthropologist wanted to explore the life of gypsies so instead of directly questioning them, she herself took up the business of selling secondhand goods. The gypsies would associate with her and explain when she was doing it wrong.

The example demonstrates the use of participant observation as technique for obtaining information. The best way of learning as an ethnographer is to start doing something wrong, and allow others to correct you. The people are the ones with the knowledge and expertise and you are the learner. You learn their gender relations, health expertise, etc.

Taking an ethnographic perspective to development means that one says, “I need to stand back from the intervention and look at it.” However, in both observation and participant observation, the ethnographers’ presence impacts what is going on. Those being “observed” may adapt their behavior because of your presence. There are different views regarding the appropriateness of “interference” in ethnography. There is always the chance that a person’s presence may interfere with the data that is unearthed. To say one is not interfering indicates that one is not doing ethnography.

Can ethnographers claim to generalize? The search for a typical case is less useful than the search for a telling case. A good case study will enable the analyst to establish theoretically valid connections. Ethnography helps one make a theoretical argument that links the parts, albeit seemingly unrelated parts, in a coherent way. As we place generalizations and theories together, gradually we “layer up”, that is to say, our frame becomes more complicated.

There is a distinction among three approaches to carrying out ethnographic work.

Conducting Ethnography:

refers to framing and conceptualizing, in-depth long-term study of a social group. It is particularly anthropologists have “owned” this approach.

Adopting an Ethnographic Perspective:

refers to applying an ethnographic approach to a specific profession. It is less comprehensive than a full ethnography.

Adopting Ethnographic Tools:

refers to using tools of observation and participant observation to comprehend a certain world.

The extreme is characterized by the pure anthropologist who travels to an area and stays there for two years and then writes a Ph.D. thesis on a community. However, there is a middle ground between highly specialized skills and ethnography applied to everyday

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life. This can be characterized by disciplined ethnographic inquiry in which an ethnographic approach applied to a specific profession. Ethnography also involves different levels of involvement or ‘interference’. The recently developed field of Public Interest Anthropology assumes that the ethnographer has an obligation to get involved and try to change things.

Ethnography as a Window on Literacy and Numeracy

The word ‘literacy’ can be used in different ways. University professors in England say, “The university students these days are illiterate.” This usage is different than when the word ‘illiterate’ is used in a developing country context.

We may assume that people are not literate. However, our first question should be, “Are they literate?” Taking an ethnographic approach to literacy and numeracy means that we have to start from the premise that maybe people already have literacy practices. The question is, ‘How do we build on those practices?’ This question is different from assuming that people have no pre-existing literacy.

We have to recognize the different kinds of literacies people have. People may have different modes of communication, but they may need not be literate in all of them. Which register a person chooses to use is a choice, whether conscious or unconscious. When we want people to become literate, the question is “which literacy?” If we want all to be literate, we have to ask within which language should one be literate.

Searching for the telling case instead of the typical case shows us what has been overlooked and assumed to be common knowledge.

Illustration: For instance, along the drive from the Addis Ababa to the training center in Yirgalem, a tremendous variety of languages were being utilized. The presenter questioned the needs and use of script when he noticed that Isuzu cargo trucks had the word Isuzu inscribed in both Arabic and Latin script on the back of each truck. Multilingualism and multi-scriptism may be built in to the experience of being literate in Ethiopia in a way that it may not be in other places. If we walk around the town of Yirgalem, what we can induce, what can we infer? What can we learn about literacy practices?

In engaging in the study of literacy, it is useful to distance the difference between a literacy event and a literacy practice.

A literacy event is a specific event, a one-off occurrence of literacy.

A literacy practice is a repeated behavior, a demonstratable pattern than continues to occur.

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To make these connections you have to go beyond individual literacy events to connect them into a practice. One must move from the particular into the broader. How does a study of literacy events and practices in an Iranian village help us rethink our understanding of literacy? Brian Street found through his research in Iran that commercial literacy was developed by people who had learned literacy through the Q'uran. Commercial literacy practices and religious practices were found to have connections.

Writing stories about people's lives can also help find and identify literacy practices. In a book called *African Hidden Histories*, historians and ethnographers document the phenomenon of 'tin trunk literacy', where community members keep a host of letters, diaries, agendas, and other literacy materials in tin trunks. The presenter uses this phenomenon to encourage literacy ethnographers to ask, 'Is there a local history of literacy that is hidden? Are people doing things that I have not even thought about?'

Illustration: In one Japanese case, literacy had blossomed. Researchers wanted to know why. They found that much earlier books had been distributed to each household. No instructions were given. They wondered if they were going to be punished if they did not read the books. They inquired, but were not able to find out. Because they couldn't find the answer, they just started reading using their own devices and they eventually became literate.

What is the usefulness of ethnography as applied to literacy? Some ethnographic approaches of literacy and language have uncovered the importance of the role of the 'mediator'.

Illustration: Scribes of the Plaza refers to a case study from Brazil in which researchers discovered how people go to cribs in the plaza who mediate and write down written information and legal documents for them.

Illustration: Another case of mediation in Ethiopia is introduced in which any time a client visits the bank or post office, the officer on duty takes out a form fills this out for the client. Literate workshop participants accustomed to systems in other countries have found this process frustrating because it is time-consuming to repeat and spell each address and telephone number and the client could have filled out the form in the fraction of the time of the officer. However, since so many people are illiterate, a system has developed which assumes the client comes without literacy skills. Without having to question the client and embarrass them to disclose whether they are literate or illiterate, the officer, instead, mediates for all.

Ethnography helps identified local needs for literacy. In one case, program implementers worked with the community and found that people who had control over writing had control of the land. Therefore, farmers were not able to get access to land. The literacy program implementers engaged the learners so that they could gain the appropriate literacy skills for claiming land.

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The models of what counts as language and literacy are changing. The UNESCO literacy programs of the previous decades failed. They weren't sufficiently sophisticated in their understanding of literacy. This understanding was overtaken by Freirean literacy. Ethnography can help show how models of language and literacy manifest themselves in a different set of circumstances. For instance some assert that "English is a multilingual language". Those speaking English in Ethiopia, India, Belize or the U.S. may not be able to understand one another. Multilingual literacies are creating the need for linguistic and literacy ethnography to be conducted.

Workshop participants dialogued on the need to conduct lobbying work with those creating literacy materials, so that material developers receive cultural advice about appropriateness of what is being produced.

Preparing to Conduct Ethnographic Field Work

Presenters then presented guidelines and points to consider when conducting ethnographic research. This information serves as the basis for developing a set of guidelines for trainers of literacy and numeracy facilitators on methods of conducting surveys of the existing literacy and numeracy practices of their own learners.

The experience of one researcher, George Openjuru, demonstrated how he applied ethnography to the study of literacy and numeracy in one Ugandan locality. His research demonstrated that community members equated being 'literate' with having been 'schooled.' He also found that one woman who seemed to demonstrate competency in identifying letters and getting phone numbers dialed was actually not literate herself.

George Openjuru shared his experience to enable researchers to prepare for field ethnography. He highlighted the importance of explaining to interviewees one's objective and properly introducing oneself to the "gatekeepers". He presented an example in which he was in West Africa, and he took a picture of a man riding toward him on a horse and cart. Immediately after he took the photo, the man passed him and whipped his back with the horsewhip. He cautioned trainees to be careful with cameras or recording devices and gave the overall admonition to "take what you can take with out intruding."

Brian Street outlined guidelines to orient participants in carrying out their own larger-scale case studies to be conducted in preparation for the second workshop. He recommended the following steps to future ethnographers.

Case Study Steps

1. Choose a site, situation, or process.
2. Identify provisional questions that you would like to explore.
3. Identify methods of proceeding on your case study.
4. Conduct your research.

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5. Midway during the research, Ask yourself, “So what?” Of what relevance or useful is the data I’m getting? What contributions will it add? How will it help the beneficiaries? What are the implications for learning and teaching?
6. Prepare a presentation and present it to others.
7. Obtain feedback on your case study and incorporate that it into your future steps.

Preparing to Present Ethnographic Field Work

Ethnography involves collecting data about those being studied. This data can be spoken, written, or visual. However, ethnography is not just about collecting data, but also presenting data or materials. This may mean first, speaking about the data to others, second, writing for others, and third, demonstrating with visual aids.

Brian Street suggested that ethnographic presentations for this particular workshop purpose should cover sections on:

- Framing
 - Methodology
 - Data
 - Themes
- Framing – In order to communicate unfamiliar data to an audience, the data needs to be appropriately framed. What do we need to tell the audience so that they are on the same page and have enough context to comprehend. This is often one of the major problem issues with presentations on ethnography, that the research does not make the imaginative link to the audience. The presentation does not give enough to someone who was not there or does not understand the background.
 - Methodology – This section should contain a discussion of the techniques used and issues that arose, for instance, ethical issues, photographing issues, etc.
 - Data- There will never be enough time to present all the data that you will have collected. The data is potentially loose. The categories aren’t necessarily there and you must cull through the data to identify themes. Like a sieve, you must pull out the hay, stones and dirt, i.e. or the things are not relevant to the themes you are pulling out.
 - Themes – In moving from data to themes, you are on provisional grounds. You must look at the data and see if you can identify a theme and then can justify a position. The identification of themes is not an attempt to present the whole of what you have found. In 15 minutes you may be only able to present one or two themes.

Condensing the presentation of an ethnographic study into ten minutes forces discipline consolidation and making your presentation precise. Ethnographic material must be cut

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down. It is as if you must present your life's story in 15 minutes. Cutting down the Yirgalem mini-field work is practice for the larger case studies.

“Before You Go Out the Door:” Points to Consider When Conducting Ethnographic Field Work on Literacy and Numeracy in Ethiopia

After learning from the practice of fieldwork in Yirgalem and design of larger scale case studies, workshop resource persons highlighted the following points for consideration in the implementation of case studies.

Alemayehu Hailu identified his five concerns about ethnographies on literacy and numeracy in the Ethiopian context.

- 1st fear – that research results will contain too much data and statistics and not enough qualitative research or look at social practice
- 2nd fear- that literacy and numeracy will be equated with reading and writing without looking at the larger issues
- 3rd fear- that stereotyping in studies will lead researchers to deal with obvious issues and ignore hidden practices and social dynamics
- 4th fear – that putting people in two categories of literate and illiterate and that illiterates only will be studied
- 5th fear- that studies focus only on numeracy because it is more visible and easy to observe

Brian Street offered advice for researchers to consider.

- Ethnography should be considered as cyclical, with forward and backward movement.
- Ethnography is not just about those who are not literate, ethnography will need to cover all of the spectrum of literacy.
- Be conscious and aware that your very presence is going to change things and influence the situation.
- After you have collected data, there is a need to move from knowledge of the data to creation and provision of curriculum. In formulating your research question- How might these data help build new curriculum?
- What we will do with the information should be clearly answered so that the groups will be able to remain focused on achieving their plan.
- Do think about how exactly your research will feed into curriculum design and let the implications guide your study. But don't make the immediate leap that your study will immediately lead to the improvement of their skills.

George Openjuru offered the following comments on the proposed case studies.

- You may discover an idea, you go to the community and new experiences emerge and you realize your original idea might not be right. If you discover situations that shatter your original conceptions, come back and reformulate your original ideas.

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- The objective is to describe the situation as it is, not to alter it to suit your arrangements.
- Ask what may appear stupid questions.
- Sometimes people pull back when they see a tape recorder. Be careful about choosing when to use a tape recorder.
- The analysis and sorting into different categories is one of the most important phases of the research.
- Follow the pedagogical rule of starting from the familiar. Then later we can analyze and reflect on our own analyses.
- Don't add a new layer of comprehension for the audience by adding a new terminology.
- Be conscious and aware that your very presence is going to change things and influence the situation.
- Instead of balancing knowledge already acquired with new knowledge, ethnographers may tend to take acquired knowledge as greater as that which is newly adopted.
- Researchers may ask after we gather the data 'How will we generate the curriculum?' As we do this, we need to consider andragogical, pedagogical techniques. Literacy materials need to support and integrate the learner's own practices.
- As we begin to think about curriculum development, we should note that sometimes the information contained in Functional Adult Literacy primers is nonsensical and simply repeats a message that the learner already knows, instead of giving him information that he wants to know. For instance, the primer may state, "Planting cotton is good." But the farmer already knows this and he wants to be able to understand the information in the farmer's manual on how to utilize better techniques.

Anecdote: Do It Like The Monkey Does

"You should ask questions the way the monkey stops, faces you square and looks at you. Then he moves around and stops and looks again. Then he climbs a tree and looks at you from the top. Then he takes a good long look at your backside."

-George Openjuru

Discussion: Participants raise the following question for pondering, regarding the application of the case studies to curriculum development: If the whole society is engaged in a literacy or numeracy practice then, the researcher is the first beneficiary. The second result is that the data can be used as an entry point for future adult literacy curriculum development. However, what happens if a literacy or numeracy practice is common only to a few groups. "So what?" Is that lesson transferable and can it be incorporated into the curriculum?

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PART III: APPLICATION TO THE ETHIOPIAN CONTEXT

Small-scale Ethnographic Fieldwork on Literacy and Numeracy in Yirgalem, Ethiopia

After being oriented on guidelines for ethnographic research, participants then conducted ethnographic mini-fieldwork on literacy and numeracy in the area surrounding the training center in Yirgalem, as a preparation exercise in order to implement full-scale case studies in their own areas. The participants then consolidated this information on local literacy and numeracy practices in Yirgalem into visual, written and oral presentations. Below follows a summary of these case studies.

Case Study 1: Weavers Use Secret Symbols

Framing

The researchers first went to a local government office and the official in that office helped them located the weaver's house. The research team was then invited into the weaver's house and were served with a coffee ceremony.

Methodology

The research team utilized the unstructured interview method, taking the weaver's family members as a focal group. 6 family members participated in responding to questions and a lively discussion ensued. Researchers also took a handheld a video of how the material was woven.

Data Themes

The female weavers communicated that they used processed and unprocessed cotton. It takes 2-3 days for one person to process raw cotton. The weaver first takes out the seeds by hand in the house. These seeds are collected and sold to those who make oil from the seeds. The weaver uses an instrument called a *tinsel* to transfer the cotton to a *kasen*, a small threading device.

Measurements

1 *lekakit* (spool) of cotton is 5 *dabur* (local measurement) of cotton.

1 *nutella* (a local scarf) is composed of 80 *debur*.

160 *dabur* is enough cotton to make 1 *gabi* (local blanket).

It takes 7 days for a women to make a *gabi* and 3-4 days to make a *nutella*.

Gonfa are local pants specific to the Yirgalem area and a *kola* is a local skirt used by females. 120 *debur* of cotton will make one *gonfa*.

One pair of *gonfa* pants takes 10-11 days to make, while one *kola* skirt takes 4-5 days. However a men's scarf only takes 3 hours.

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Weavers use a local measurement of cotton called *kinnd*. A short person's garment takes 4 *kinnd*, while 4.5 *kinnd* is needed for a tall person's garment. 7 *kinnd* is needed to make a *gabi*.

Cost Estimation

The weavers are not able to read and write. However, they are able to estimate the number of days to complete an assignment. The design of the patterns, the type of garment, number of thread colors, and quality of embroidery are factors taken into consideration in estimating time. Level of decoration also factors into cost. A wedding garment will be very decorated from arm to shoulder, or up to the neck.

Designing Patterns

The weavers design patterns by themselves. They have evaluated the favorite designs of the customers, between 1999 and 2007, and then developed a new pattern. They evaluate and revisit their model once a year. After this period of time, the weavers come together and assess the market and discuss what to add. When asked how they control the market, the weavers responded that they come together and design a new style. The style remains for 2 years and "then we have to convert or no one will want to buy a new dress".

Secret Symbols

Weavers have their own system of symbols written on the cotton. Symbol exist to denote 100, 90, 50, etc. The symbols are secret signs of communicating between weavers and retailers. The symbols represent the minimum price that a piece can be sold for. The weavers have developed their own system of numeracy that can be read by no one except the producer and seller.

Discussion

Workshop participants asked if weavers presented their measurements in writing. The research team found that all measurements were conducted mentally. However to validify this, the ethnographers planned to visit more than one family and compare data results.

The research team pondered how to categorize the weavers' rational decision making. Their learning is based on experience. They keep one pattern only for one year. They change or innovate, in order to get more customers. They do this through coming together, discussing and achieving agreement. The researchers conclude this is an indication of mental maturity and analysis. Formally, they are not educated, but informally they are very educated. This questions the assumption that more literate societies are more educated and more able to advance.

Workshop participants pondered what adult educators could contribute to the weavers. Is there any point of intervening with adult basic education? Other participants questioned whether their weaving work supported them in hand-to-mouth subsistence alone, or whether the weavers were able to get one centimeter ahead economically. When the research team had questioned the weavers themselves, the weavers did indicate a desire

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for basic education, in order to make better or final product, or even just to be able to read and write so they could feel equal to other community members.

Case Study 2: Local Alcohol Makers and Oil Sellers

Framing

The research team went to a *gulit* shop (a petty trade shop). There they encountered housewives who had come to buy oil. These housewives were making *areque*, a local type of alcohol, in their home. The team interviewed the woman in the petty trade shop on whether she was buying for consumption or resale, what kind of measurements were used for resale, and the profit incurred. They interviewed the local alcohol maker on the number of liters of alcohol produced from one kilo of grain and what the margin of profit was. The women interviewed spoke Sidaminya only, no Amharic or English.

Methodology

The research team used village walk, observation, unstructured interviews, field notes, and data analysis.

Data

The team interviewed the woman purchasing oil and found that the oil she bought was used for resell in her village.

The team found that in terms of oil,
1 bottle is bought for 6 birr.
7 cups are found in 1 bottle.
1 bottle of oil can be resold for 6.5 birr.
However, 7 cups of oil can be sold for 7 birr.

The woman sells one cup for one birr. If someone prefers to buy the whole bottle, she sells it for 6.5 birr. So she found each bottle holds seven cups and the business is profitable.

The team also visited a female alcohol seller. The alcohol seller used a beer bottle as a scale to represent a kilo. She preferred the beer bottle quantity over kilos. She took 6 bottles and then she paid 36 birr. Though she was formally trained in numeracy, she did not hesitate and counted out 36 birr and gave it to vendor.

40 kilos grain makes 18 liters of alcohol.
18 liters of alcohol sells for 180 birr.
Each liter of alcohol is sold for 10 birr.

But when asked by how much she profits, she refused to give the answers, saying “How can I tell you. If I tell you one amount, this afternoon it may change”. She bitterly complained about the unlimited increase in the number of grain.

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The research team asked the women if she would be interested in nonformal education. She refused the idea saying, ‘I am old and I have a lot of children. I cannot attend a class properly because my attention is given fully to my children.’

On the village walk, they saw highland water bottle hanging on a stick. The team asked an old woman who indicated this is a sign for *areque* alcohol. She buys 40 kilos of grain and from this, 18 kilos of areque are produced. She is not able to state how much alcohol is produced from one kilo. When the research team asked one woman about profit, she responded confidently, yes my business is profitable. From her profit, she compensates the family income and fills the gap in family expenses. She said she also use the profit for social affairs like the women's *idir* (traditional funeral association).

Discussion

The research team surmised that the alcohol producer has learned quantities from the previous experience, not from doing actual calculations. Workshop participants questioned whether we can we infer “market knowledge” from such a small and rudimentary interaction? They debated whether “market issues” may or may not be called economic issues. Others asserted that the local alcohol making women are small-scale chemists.

The research team deduced that local illiterate people put up a stick with bottle, but literate people put up a sign. Workshop participants questioned this assumption, wondering why the women put up the water bottle symbol. Is it because she was not literate or because did not have the money to put up a signboard? Others asserts that she this sign for the sake of her audience, not according to her own literacy levels. The symbol allows illiterate customers coming from rural area as well as literate customers to find her shop. Presenters elaborated on how multi-modality builds on various symbol systems.

Case Study 3: Wezero Worknesh Sells Salt and Spices

Framing

The research team interviewed a market woman and took observations of various symbolic signs throughout the town. The team visited the only market in town located on the way from Yimare Hotel to Fura Training Institution. The market is open on Monday and Thursday and contains different types of shops including: wholesale shops, petty trade shops, beauty salons and kiosks.

Methodology

Observation, dialogue, interview, transact walk, interpreter/mediators, video clip, on-the-spot analysis

Data

The research team interviewed Wezero Worknesh, who is 70 years old and sells goods at the market every day except Sunday. She buys from a wholesale dealer. She uses

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different volume instead of formal units of measurement like kilos, and has different cups used as measurements for spices. She organizes the spices into small groups and uses plastic seals and corks to measure for resale.

Wezero Worknesh sells salt in tins, caps and cups at the prices of:

0.10, 0.15, 0.20, 0.30, 0.40, 0.50, 0.60 and 1 birr

She sells oil in plastic cups at the prices of:

0.25, 0.30 0.50 0.60 of a birr

In terms of profit, she buys 50 kilos of salt for between 32 to 35 birr. Over 10 days, she makes 4 birr in profit. She checks how many kilos she bought using the *kunt* sack. She knows the size of the sack and this keeps her from being cheated. The team felt “she had convincing power” in terms of buying, selling and managing money with the client.

Her traditional measurements involved addition, subtraction, multiplication and division. The researchers described her as adding and subtracting “in her own way”. The research team asked her to count to 100. She could recite 1-100 in a reciting, rocking format. She counted to 99, and then she said “90-10”. She explained that this meant 100.

During the village walk to and from the interview site, the team noted different types of plastic symbols to denote sale of *injera* bread, sugar cane or presence of a hotel. The research team asked a woman on the street what a written sign says. The sign literally said “There is *injera* for 70 cents”. The woman replied, “*injera* for sale.”

They later found that a local alcohol house used a plastic yellow sheet to show the color of *tej* alcohol and put a cross on the door to indicate alcohol was sold inside.

Themes

Yet, Wezero Worknesh doesn't use liters for liquid she uses kilos. Locally one kilo is assumed to be equal to one liter. The team questioned whether her systems are consistent.

From the sign reading encounter, the researchers inferred that the woman on the street could not read, yet she understood the idea communicated on the sign. The team deduced that you don't need to read in order to know the meaning of the sign, especially if you reside in that area. They also interpreted the cross on the “alcohol-house”, to refer to the fact that the shop sold only to Orthodox Christians since local Protestants or Muslims do not drink).

Discussion

The research team felt that they did not ask enough questions. They wished they had asked about the amount of time Wezero Worknesh spends in the market, as well as her family status – which might have led them uncover further information relevant for the research. Their ability to communicate with her was limited, as she spoke only the local dialect. This was exacerbated by her hearing problem.

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The research team questioned their initial perceptions. They had assumed that the women would be cheated by customers, that she would not be able to calculate measures and would thus need assistance, and that she would be uncertain about the accuracy and precision of the measurements. However, when purchasing sugar cane from her, they found her measurements was accurate.

The researchers inferred from her counting recital that she was familiar with numbers. Yet workshop participants questioned how relevant it was to ask her to count the numbers. It does not reflect her ability to calculate.

Case Study 4: Blacksmiths Use the ‘Rule of Thumb’

Framing

The research team sought to understand the way people accomplish their daily activities, the extent of literacy practices and the extent of numeracy practices.

Methodology

Field Observation, Participant Observation

Data

The research team observed the activities of a blacksmith in Yirgalem Market Center. The research team found blacksmiths obtained raw materials from surrounding areas and purchased items by weighing the material or using the ‘Rule of Thumb’.

The blacksmiths defined their ‘Rule of Thumb’. A small piece of metal is measured with hands. A larger piece is measured using the distance from the elbow to the end of the hand. This rule is used as a standard in the area in which the distance from the elbow to finger is considered equivalent as a half a meter.

After producing the materials, the blacksmiths sell them to customers at a fixed price. A hammer is sold for between 5-10 birr. A knife is sold for 3 birr. An ax is sold for 20 birr.

Discussion

The research team concludes that blacksmiths “are not able to use modern measurements”, but used traditional measurements like ‘Rule of Thumb’. The blacksmiths were “unable” to read and write.

Other participants assert that the blacksmiths used their previous experience, instead of modern instruments. Participants connected this to learning; when you do the same thing, you reinforce something you already know. When you add something new, that is new learning.

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The initial conclusions of the research team provoked a discussion about how ethnographic work requires suspending one's own system and learning a new one on people's own terms.

Participants raise the questions. What kind of self are we asking them to fashion? What kind of personhood is being shaped by the tools and artifacts which they use?

Case Study 5: Cabbage Sellers Tell Time

Framing

The research team interviewed a 40 year-old farmer who buys and sells cabbage from a village. He has 5 children and his elderly mother lives with him. His father died at a young age, and he has never been to school. He does business through discussing with his neighbor. The man did not speak the national language, Amharic, and used his neighbor to interpret.

Methodology

Village walk, observation, unstructured interview, interpreter mediation

Data

The farmer has not had any access to school and is now engaged in petty trade. He buys cabbage in his village and takes it to the rural town to sell. He buys the cabbage at a lower price in the rural area and sells for a higher price in the populated area and this is how he generates profit. With the profit, he subsidizes his household earnings and diversifies the family income.

The wholesale price of cabbage is 40 birr. He sells 3 pieces of cabbage for 50 cents. He is excellent in counting. He was not asked to count orally, but he says he feels very capable of and confident in counting. He cannot write the numerals. He calculates the profits he gains from cabbage. The team asks, "if you bought this cabbage for 30 birr and we buy it for 40 birr, what is the profit?" He is able to calculate the figure correctly. He feels capable of generating for the family and has the ability to track fluctuation and can see when income is increasing and decreasing.

He said cabbage work is very difficult. If he leaves the cabbage in the market until afternoon, it will dry up. So he should take it home. For this, he needs to be able to judge the time adequately. When he leaves his home, he approximated the time by looking at where the shadow of his house rests. He knows the time when to leave the market in order to get back to his home in time. He uses the shadow of his body or trees or animals, to tell him the time. Even during the rainy season or on cloudy days, he said he could tell the time precisely.

Discussion

The research team concludes that the man engages in petty trade, but it is not well-organized business activity. However, he has developed excellent reasoning and time

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management skills. They also assert that you can't assume an adult is illiterate by ignoring all the life skills a person has. Workshop participants debate about what the definition of illiterate vs. non-literate.

Case Study 6: Micro-business in Yirgalem's Wednesday Market

Framing

The team focused on petty trade encounters and local signboards in the Yirgalem area. Types of materials sold varied including coffee, salt, beer, cotton, vegetables, fruits, etc.

Methodology

Observation, Visual documentation (photos), interview

Data

The team interviewed an old woman selling coffee and tins. She sold amounts ranging from 10 cents to 1 birr. The team asked the old woman about the price of coffee. One glass of coffee is .65 cents. The team asked how much 3 cups of coffee would cost. She responded "2 birr", when the exact price was 'actually' 1.95. The team observed no written records. When asking about whether she profits from business, she said, "Sometimes I gain, sometimes I lose."

The team next interviewed a woman selling vegetables, fruit, and eggs. She buys good from a retailer and resells them. She knows how much profit she makes from each item. Though she doesn't have any records, she feels she knows how to make good profit.

The team next observed a sign used to identify local alcohol house. There were two types of tomato paste cans used as measuring device for portioning out local beer. The first sold for 1 birr, and the second for 50 cents. While serving customers, the brewer was also spinning cotton to make a *gabi* blanket. The brewer buys 1 kilo of cotton for 8 birr. 2 kilos of cotton are needed to make 1 *gabi*. When she has financial problems, she sells the spool of cotton thread by itself.

The research team noted three types of languages being used on signboards: English, Sidaminya, Amharic. They found two scripts in use: Latin and Amharic. They noted that a sign outside the secondary school with a picture of a finger pointing above the words, "Don't Point Fingers" in English. They noted pictures of cow, electric devices, a symbol denoting a house where charcoal was for sale.

The team took up acquaintance with a boy who spoke Sidaminya. He counted for them in the local language.

- 1-Met
- 2-Lame
- 3-Sase
- 4-Shole
- 5-Onet

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6-Lee
7-Laml
8-Sete
9-Onse
10-Tone

Discussion

The team concluded that the coffee seller was “perfect in managing interactions”. However, participants noted that the team said the coffee seller didn’t state the “actual price” of 3 cups of coffee. Yet, maybe for her the approximation of 2 birr was sufficient, instead of 1.95. The group debated on when it is appropriate to make a judgment, for instance, around systems of numeracy and approximation vs. precision.

The research team concluded that everyone has knowledge and their own way of communicating. Both literate and non-literate people use signs and symbols. Terminology discrepancy issues arose around understanding the difference between scripts and languages. Some said, “three types of scripts are used – English, Latin, and Amharic”. Others said, “Three languages are used – English, Sidaminya, Amharic and two scripts- Latin or Amharic.

Workshop participants discussed why particular scripts were used on particular signs. The team concluded that people use English to describe something that is part of a wider world. Political dimensions were explored in how the regional government mandates that a sign must be written, with the local language first, then Amharic national language, the English international language. Each regime recognized different languages for different reasons. They assert that previous regimes were academic-oriented so Amharic was the language in use. The current regime is ethnically-oriented so local languages are in use.

Participants raise the question of why a secondary school has a signboard even though everyone knows that the site is a school. Some conclude that the identity of a school means that it must have a sign board.

Case Study: Script and Language Use in Yirgalem Religious Sites

Framing

The research team aimed to observe literacy use in different religious institutions, investigating the reasons for choice of script and choice of language. The team observed behaviors exhibited in relation to text use and power relations involved in accessing the different types of text and language. The team sought to identify what was common and different between the various institutions and from this, draw implications for literacy education. The team visited: an Islamic mosque, an Ethiopian Orthodox church, and a Norwegian-origin Protestant church.

Methodology

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Observation, visual ethnography and documentary photography, unstructured informal interviews, permission seeking. The method of photography created problems where the police were troubled when the group (which included 3 foreigners) took a picture of a sign with a cow, without having asked permission from local authorities. They came and reprimanded the team and want to take them the government station.

Data

Mosque

- Developing rapport
- Going through layers of local and bureaucracy to get access to the religious authorities
- Noting how scripts were respected
- Juxtaposition of the sacred and profane texts
- Noting the choice of texts

Orthodox Church

- Use of script on grave sites
- Taking note of correlation between religion and books, even pictures of books painted on wall, books for religious purposes painted and decorated
- Use of text and pictures of church to raise funds for construction

Protestant Church

- Knowing which institutions needed an escort to enter and not
- The man vociferously introducing himself on the street
- The way the pastor understood the group (as development workers coming to start an education program) influenced the literacy material they brought for the group

Themes

- Literacy was visible in all three religious sites in religious texts and religious literature.
- Some scripts and languages were being used for certain purposes and by certain groups only.
- Selective deployment of different languages
 - Arabic for the Q'uran
 - Amharic for local messages and *hadith* (oral traditions), church fundraising
 - Ge'ez for holy texts
 - Sidaminya for banners

Discussion

The research team identified the following hanging leads to be explored.

- Why the exclusive use of some languages by religious leaders only (Arabic, Ge'ez)
- Why certain scripts and languages were chosen for different purposes
- Why certain posture adopted when reading the holy text
- How authority was related to the use and command of scripts and language

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The team deduced that the religious institutions could support the teaching of literacy (without mentioning that each of them was already engaged or had been engaged in literacy work).

Workshop participants noted that the presentation focused on the incidence of texts and scripts, but did not show how this was applied to the use of literacy by the followers of the religious or literate practices being employed by non-literate followers. They asked whether future case studies focus specifically on this ethnographic emphasis or whether they should look at an applied angle.

Case Study Analysis

Throughout the presentation of case studies, recurring themes were identified.

- Multi-modality (written, visual, gestural)
- Choice of language and scripts
- Market Knowledge and Literacy
- Transactional skills
- Different systems of containers
- Local labels and meanings of numbers
- Numeracy systems and procedures
- Number system conversion
- Women creating local systems of measurement and recording without any formal education
- Processing of materials
- Tools (or artifacts) used
- Clothes and symbolism
- Identity
- Economics and power overlaid with literacy issues

Methodology

The case studies also revealed common or recurring methodologies and questions that arose from the use of these methodologies.

- Identifying local authorities
- Working through mediators
- Carrying out a village walk with an ethnographic eye
- “Transact Walk”
- Observation
 - Informal interviews
- Checklists
- Visual ethnography (use of video, photo footage)

Methodological Questions

- Reflexivity- analyzing one’s own methods
- Understanding numbering and measuring systems “in their own terms”
- Number conversions (from local system into a system comprehended by others)

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- Questioning researchers' assumptions
- Understanding when value judgments are being made
- Questioning the level of detail needed
- Deciding what terminology is used and how this terminology determines assumptions

Lessons Learned

- Every account of numeracy involved some type of calculation, and most of the investigations of local systems of numeracy described systems of measurement, weight and units. We have to penetrate inside the procedures and systems that people are using; there may be ratio, percentage and proportion going on with people's decision-making.
- We have to watch the precision of our documentation of local numeracy systems and conversions so that we are accurate and so that we do not confuse the audience.
- Detail is important in the observation phase. This is necessary to be able to adequately describe things in the presentation of the case study.
- Researchers and outsiders are often concerned (or over-concerned) with accuracy
- A theme that runs through the accounts of numeracy is the question of approximation vs. precision. The case studies raise the question: For certain systems "Will approximation do? Will it work within limits?"
- How do we get to the terms of the participants, to understand the value they put on the relationships between approximation and precision?
- How do you get at or uncover transactional skills?
- Numeracy system switching has not been as fully explored as language switching.
- Multi-modality includes various symbol systems, not just literacy and numeracy.
- How representative are the cases one sees?
- The mini-case studies showed that we must move from beyond description of behavior into explanation of behavior.
- We must take account of policy and politics, when making our deductions.
- Terminologies researchers use when drawing conclusions (e.g., time management, illiteracy, numeracy and measurement) have implications for how our listeners hear what we are saying and what assumptions the listener applies to ethnography.
- Ethnographic work requires suspending one's own system and learning a new one on people's own terms.
- As educators, we start with "implications for education", but with ethnography we have to start with the people's own experience. When we do not, this has led to great educational failure
- What kind of personhood is being shaped by the tools and artifacts which they use?
- What kind of self are we asking them to fashion through the implications we draw?

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Ethnographic Case Studies on Literacy and Numeracy in the Ethiopian Context

Workshop participants formed groups and designed outline of the larger-scale case studies to be completed in their own localities. After completion in January 2008, these case studies will serve as the first such collection in the country and will be used to inform literacy and numeracy teaching of adults.

Case Study 1: Literacy and Numeracy Practices of Idir Funeral Community Associations

Research Team

Meseret Asseffa, Addis Ababa University

Eshetu Mammo, Adult and Nonformal Education Association in Ethiopia

Research Question

The team will identify and assess literacy and numeracy skills existing among *idirs* (traditional community funeral associations). The team will ask the questions: Where did they gain their leadership skills? If they are successful in mobilizing people, what is their secret? The group should focus on the implications of the research for literacy and numeracy education for *idirs*.

Methodology

Informal discussion, listening observation, document analysis, observation focus, group discussion, individual interview

Schedule

Site Selection -October

Simple Observation –November

Development of Tools- November

Collect Data- November

Analysis of Data- December

Discussion:

After receiving feedback on their research question, the team refocused their study on how social practices in literacy, vary from person to person. The team wants to see how these “veins and arteries are working in their environment.”

Case Study 2: Ethnographic Study of Literacy and Numeracy in the Yuke and Serbo Skill Training Centers in Oromia Zone

Research Team

Abraham Gemechu, Jimma College of Teacher Education

Addis Alem Feleke, Adult and Nonformal Education Association

Kalid Hassen, Jimma College of Teacher Education

Research Question

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Yebu and Serbo Skills Training Centers are the two major adult trainings centers in Jimma Zone. Adults are trained there in various skills like carpentry, woodwork, etc. High drop-out rates are common in the centers. The team proposes to assess the current practices pertaining to literacy and numeracy practices in order to understand how this relates to high drop-out.

Methodology

Observation, interviews, checklists. Methods will be adapted according to observation.

Schedule

- | | |
|--|----------------------|
| 1. Observation | Oct 6- Oct 8, 2007 |
| 2. Analysis and interpretation of data | Oct 10- Oct 20, 2007 |
| 3. Summary and findings | Nov 15- 25, 2007 |
| 4. Reporting | Dec 30, 2007 |

Budget

<i>Item</i>	<i>Unit</i>	<i>Total</i>
Transportation	100 birr each X3	600
Per Diem	3 days x 3 people	
Stationary	300	300
Computerization of Findings	450	450

Discussion

Participants raise the question this may not be a necessary area for study, if these centers have been over-studied by other institutions. The research team responds that they wish to specifically use their findings to help explain high drop-out rates. Participants guide the research team to be creative in finding a budget to finance their activities.

Case Study 3: Milk and Milk Products

Zewdu Deriba, Oromia Development Association
 Girma Baissa, Assela College of Teacher Education
 Sisay Kahisay, Adwa College of Teacher Education
 Destaw Asmare, SNNPR Regional Education Bureau

Methodology

- Interview
- Photograph
- Video Documentation

Research Question

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The research team plans to identify the literacy and numeracy skills of women in Assella town who are part of microfinance association that milk from rural areas and resells for profit. The group specifically seeks to understand how they calculate profit and the use of different containers. This information will be applied to the development of learning materials.

Schedule

October 14- December 14,

Discussion

In response to feedback, the participants reasserted their intention to carry out their planned design.

Case Study 4: Documenting Literacy and Numeracy Practices of Traditional and Religious Community Institutions

Atsede Maru, Debremarkos College of Teacher Education
Basazen Derese, Debremarkos College of Teacher Education
Negussie Hailu, Agriservice Ethiopia
Solomon Tadesse, Amhara Development Association

Research Question

The team will investigate what written literacy texts are available in traditional and religious institutions at the community level (e.g. *idir*, *ekub*, and *senbete*) etc. Who writes the texts? Who reads them? What value is associated with these text? What numeracy practices are occurring in these institutions? Is there counting, computing, measuring units, record keeping? It is proposed that these local institutions have their own system of preparing, printing, archiving written text. The implications of the findings will be to develop curriculum materials that fit into the specific context of community institutions by taking into consideration their practices. These findings will be used to prepare curriculum, prepare facilitators raining manuals, and implement programs in the regional teacher training college.

Methodology

Observation, informal questioning, discussion, audio-visual ethnography through photos

Discussion

Participants ask whether the group will look at associations led only by illiterate or literate people as well? Participants ask how these findings will be directly translated into curriculum materials and the orientation of nonformal education facilitators. They ask how the local, traditional and wider use systems of numeracies will be integrated together. After discussion of potential pitfalls of the study, the Amhara team chose to focus its attention on avoiding the stereotyping of literacy and ignoring the social dynamics. The team will try to explore the hidden parts of those institutions. The team plans to use this case study as a pilot, and carry out repeated further ethnographic

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research in the process of developing a sound NFE curriculum for the teacher training college.

Case Study 5: Literacy and Numeracy of Women’s Small-Scale Business in Awassa

Research Team

Destaw Asmare, SNNPR Regional Education Bureau
Markos Mekuria, Awassa College of Teacher Education
Kebede Jobir, Arbaminch College of Teacher Education

Research Question

The research team will investigate:

- how much money women lend from microfinance institutions
- how much money they lend
- how they manage their business
- how they record items and costs
- how they calculate their profits
- how they obtain credit

The research team will look for themes in skills of writing, calculating, recording measuring, etc.), modalities used for signs and symbols, and how materials are bought, processed, and resold. The results will be fed into the development of curriculum. One of the team members is involved in implementing and monitoring programs that reach about 300,000 learners in the region.

Methodology

Observation, informant interview, visual ethnography, focus group discussion, audio recording

Schedule

The budget and plan will be indicated after “communicating with a sponsor”.

Discussion

At first, the researchers mentioned they would use the data to discuss other forms of income generation and “tell them other ways”. Participants questioned the validity of this approach. Participants asked what would a program look like that would help the women improve? After responding to the feedback from the group, the team plans to select women’s group in the poorest and most non-literate end of the spectrum. They re-emphasize their wish to bring significant outcomes from the data gathering process.

Case Study 6: Exploring Literacy & Numeracy in 3 Adult Education Projects

Research Team

Makda Getachew, Pact Ethiopia

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Minna Addisu, Pact Ethiopia
Yared Antonios, Pact Ethiopia
Selamawit Admasu, Christian Relief and Development Association

Research Question

The team will explore existing local experience/skills in numeracy, literacy, coping mechanisms, power relations, past experience, and use of language. Researchers working in three different projects will explore these themes in their own projects.

The team will apply the questions to:

- CRDA: assessing CRDA training techniques, process and their effect and impact
- WORTH: investigating savings and credit groups in terms of how they engage in literacy activities and what numeracy skills they use to manage their fund and loan management (including documentation)
- Farmers of the Future pilot project: investigating the effect of school agriculture practice on adult's education in terms of how adults learn the piloted agricultural practice in the non-formal center and replicate on their own farmland and how adults their existing literacy and numeracy knowledge and experience to the pilot project

Methodology

The team will use observation, focus group discussion, review of material and documents, structured and unstructured interviews, checklist, and visual ethnography. The team will interview people in rural and urban settings, training centers, women's groups, children in schools, and the school community

Discussion

The team received feedback that their project seemed too scattered and did not display coherence across the three activities. The team responded by stating their intention to create a common checklist and focus on common themes that emerged from the qualitative data.

Next Steps

In a review of the initial aspirations of participants, the group found that it had accomplished the task of learning about ethnography and how to present ethnographies. However participants still felt they wanted to know more about designing valuable curriculum material to enable adults to become empowered to take charge of their own education and learning.

Participants discussed plans for upcoming workshops will enable them to present their ethnographic research and then learn how to integrate ethnography into the development of curriculum for adult and nonformal education. The third workshop will help them to concretize these results into actual curricular material and how the approach can be applied in a local context.

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Dates were proposed as:

Workshop II: January 14- January 20

Workshop III: March 10- March 16

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**PART IV: WEAVING IT ALL TOGETHER:
LEARNING FOR EMPOWERMENT APPLIED TO CURRICULUM
DEVELOPMENT**

Below follows a set of guidelines on ways of developing appropriate curricula and teaching-learning materials from ethnographic case studies in adult literacy and numeracy and recommendations on how the work can impact improved nonformal education delivery in Ethiopia.

Below follow sample curricular frameworks and curricular activities based on the knowledge and skills gained in the LETTER Approach Training Series.

(further information to be inserted following the implementation of LETTER training sessions II and III).

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ANNEXES

Acronyms

ABE – Alternative Basic Education

ANFEAE- Adult and Nonformal Education Association in Ethiopia

EFA- Education for All

NFE- Nonformal Education

SNNPR- Southern Nations, Nationalities and People's Region

TEACH -Taking Education to Adults and Children in the Hinterlands project, Pact Ethiopia

Key Terms and Vocabulary Used in the Training

Artifacts or 'tools'- The term artifacts refers to objects that are seen more than physical objects that serve a purpose. They begin to take on identity and meaning and are used as a construct to signify someone's identity. Texts can also be tools or artifacts.

Code Switch- Moving between one language, dialect, register or system of written or verbal communication depending on the situation and context

Critical approach- a paradigm of viewing development in which problems are viewed as having social causes which can be only be dealt with by social action

Deficit Approach- a paradigm of viewing development in which people are seen as lacking.

Disadvantaged Approach- a paradigm of viewing development in which people are excluded by their oppressors

Diversity Approach - a paradigm of viewing development in which all people are seen as different and equally valid

Emic- the insider, native point of view

Ethnography –defined in this context, as the exploration of knowledge that people already have

Etic- the outsider point of view

Frame- setting the stage and describing the introduction of a concept or intellectual topic. Also the lens of perception through which we perceive a situation.

Genre- a particular style, type or approach. The word is usually used to refer to intellectual concepts or products.

Heuristic- a type or an ideal model that is used for the purpose of explaining

'*in their own terms*'- understanding a system of meaning in the way that the participants themselves think about it

Input – providing theoretical ideas to be used as a foundation for learning within a training workshop

'*Layer up*'- adding various layers of meaning in order to make one's understanding more complete

Lens- the frame of reference through which through which we perceive a situation

'*Letting the data fall out*'- letting themes emerge on their own, from data that one has collected

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Literacy event- a specific event, a one-off occurrence of literacy

Literacy practice- a repeated behavior, a demonstrate-able pattern than continues to occur

Meaning- the range or continuum of meanings involved in any practice.

Mediators – those who “mediate” or translate communications between different worlds, including between literate and non-literate ‘worlds’

Modality- any system of communication such as writing, gestures, visual systems, kinesthetic symbols, etc.

Mode- see modality

Multi-modality- the use of more than one mode of communication in a parallel fashion

Observation refers to the technique of “sitting like a fly on the wall” and watching watch is going on.

Participation Observation refers to the ethnographer joining in the activities of the group being observed. The researcher observes, but also participates in a cultural practice.

Reflectivity- an approach to doing ethnography, in which you reflect on the content being discussed

Reflexivity- reflecting on one’s own approach about the modes or methods one is utilizing and how this affects the data that is collected through ethnography. For instance, one may ask, ‘How am I collecting the data? How am I presenting it to other people?’

Register- a style of speaking in a style specialized to a particular audience

Switch – (see code switch)

Technicist Approach- a paradigm of viewing development in which problems are viewed as having technical (right) answers which can be provided by inputs

‘Theme it up’- establishing a set of themes that are common across a set of data

Transactional skills- skills necessary for completing a business transaction or other type of interpersonal interaction

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List of Participants on LETTER Training Workshop I- Ethiopia

	Name of Trainee	Organization	Telephone	E-mail
Participant	Kebede Jobir	Arbaminch College of Teacher Education	(0911959258)	butajobir@yahoo.com
Participant	Atsede Maru	DebreMarkos College of Teacher Education	058-7714878	Atsede1977@yahoo.com
Participant	Abraham Gemechu	Jimma College of Teacher Education	0911-905932	
Participant	Addis Alem Feleke	Adult and Nonformal Education Association	0911-871445	anfeae@ethionet.com
Participant	Markos Mekuria	Hawassa College of Teacher Education	0916-824853	Damboya2002@ yahoo.com
Participant	Kalid Hassen	Jimma College of Teacher Education	0911-767660	khassen@yahoo.com
Participant	Sisay Kahisay	Adwa College of Teacher Education	0914-745204	
Participant	Eshetu Mammo	Adult and Nonformal Education Association	0911-662596	shetuye@yahoo.com
Participant	Meseret Asseffa	Addis Ababa University	0911-651481	Messeret13@yahoo.com
Participant	Abraru Sherif	Pact Ethiopia	0911-415825	abrar@pactet.org
Participant	Destaw Asmare	SNNPR Regional Education. Bureau	0911-341274	dstwasmr@yahoo.com
Participant	Solomon Tadesse	Amhara Development Association	0911-254124	ada.hq@ethionet.et, solomontad@yahoo.com

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Participant	Negussie Hailu	Agriservice Ethiopia	0911-169082	nighailu@yahoo.com
Participant	Girma Baissa	Assela College of Teacher Education	0911-148022	ggbayessa@yahoo.com
Participant	Zewdu Deriba	Oromia Development Association	0912-070725	odacbrc@telecom.net.et
Participant	Basazen Derese	Debremarkos College of Teacher Education	058-771-4837	
Participant	Selamawit Admasu	Christian Relief and Development Association	0911232469	selamawita@crdaethiopia.org
Participant	Makda Getachew	Pact Ethiopia	0911621017	makda@pactet.org
Participant	Yared Antonios	Pact Ethiopia	0911662312	yared@pactet.org
Participant	Minna Addisu	Pact Ethiopia	0916826045	mina@pactet.org
Resource Person	George Openjuru	Makerere University	256-772-503307, 256-712-503301, home 256-414 566103, 256 755 03301	george.openjuru@yahoo.co.uk
Resource Person	Brian Street	Kings College	44 -0-20 78483157, fax 44 20 7848 3182	brian.street@kcl.ac.uk, brian.street@btinternet.com
Resource Person	Katy Anis	Pact Ethiopia	00 251 9 11 05 25 20	katyanis@yahoo.com
Resource Person	Alemayu Hailu	Adult and Nonformal Education Association	0911 66 83 45	Alemh40@yahoo.com
Resource Person	Alan Rogers	University of East Anglia	0044-1603-970491	alan.rogers14@btopenworld.com, info@uppinghamseminars.org

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Resource Persons:

Alan Rogers, familiar with literacy and its connection with ethnography and curriculum development through the LETTER Approach, alan.rogers14@btopenworld.com, info@uppinghamseminars.org

Allison Lide, familiar with curriculum development for nonformal education and the LETTER Approach, allisonlide@yahoo.com

Ash Hartwell, familiar how brain research affects learning in the developing country context, as well as with the development of large scale nonformal education programs, ashtrish@igc.org

Brian Street, familiar with ethnography and its connection with literacy and numeracy through the LETTER Approach, brian.street@kcl.ac.uk, brian.street@btinternet.com

Dave Baker, familiar with numeracy and its connection with ethnography and curriculum development through the LETTER Approach, d.baker@ioe.ac.uk

David Archer, familiar with the application of the REFLECT Approach to nonformal education, david.archer@actionaid.org

George Openjuru, familiar with the practice of ethnographic field work as applied to literacy, george.openjuru@yahoo.co.uk

Lisa Deyo, familiar with development of curriculum for nonformal education (especially for adult women and application of sectoral approaches like health and income generation), lisa_deyo@yahoo.com, lisadeyo@gmail.com

K.N. Anandan, familiar with the application of “discourse-oriented pedagogy”, especially as it applies to the teaching of a second language, anandan.kn@gmail.com

Malini Ghose, familiar with the application of the LETTER Approach to curriculum development in the South Asia context, malini.ghose@gmail.com, mghose@gmail.com, nirantar@vsnl.com

Susan Malone, familiar with curriculum development for minority languages and in multilingual environments, susan_malone@sil.org

Suzanne Griffin, familiar with development of nonformal education for change programs, especially for women and with a health approach, suzannegrif@gmail.com, sgriffin@imcworldwide.org, sgriffin@savechildren.org

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Subir Shukla, familiar with scaling up large scale changing in teaching and learning practices, familiar with curriculum development and multigrade approaches, subirshukla@rediffmail.com, subir@hotmail.com

Udaya Manandhar, familiar with learner-generated curriculum development and scaling this process up in large scale programs, UManandhar@savechildren.org, udaya_m@hotmail.com

Ulrike Beyer, familiar with developing literacy materials in newly written languages and with transitioning learners from 20-base to 10 base numeral system in Ethiopia, ulrike_beyer@sil.org

Waheed Chowdury, familiar with scaling up large scale change movements at the community level, wahid.swapon@gmail.com

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