

Peace Corps literacy handbook

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Peace Corps of the United States of America

Information Collection and Exchange

Manual M0021

October 1984

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Acknowledgements

Special acknowledgement of the extensive editing done by Donna Frelick is made with many thanks by the authors.

In addition, the following people read drafts and offered information and help:

Bonnie Cain

Jenny Campos

Leon Clark

David Evans
Kathie Judge
Paul Jurmo
Steve Taylor
Joan Hanlan
David Kahler
Bob Loser

About this handbook

Activities which are aimed at the development of literacy skills can range in scope from a national campaign involving thousands of learners, professionally designed materials and a standard curriculum to an individual effort involving a single teacher and one or two learners working with only the materials at hand.

For a Peace Corps Volunteer or other development worker, literacy work may be a full-time, primary project or a secondary activity undertaken in support of a primary project in another area, such as agriculture. Literacy activities may also be designed to respond to a need of the community which is completely separate from the development worker's primary area of responsibility.

This manual is meant to provide an introduction to literacy work for Volunteers and other development workers in any of these situations. It is designed to provide straightforward information on planning and preparing for literacy work, to offer guidance on program and materials development and to suggest strategies for evaluating and improving programs. The handbook also presents several short case studies as examples of various types of literacy projects.

No handbook can contain everything a community worker would need to run a successful literacy project. This handbook is a guide to the "basics" of literacy work. Other resources that can expand on the information presented here are identified in Chapter Nine. It is best to keep in mind that the most useful resources are those that are close by, and the reader is urged to contact local institutions and individuals who are involved in literacy work, education, extension and other related fields. These groups can offer instructional materials and other aids in the language being taught, technical expertise and valuable insight which can make preparation for a literacy program much easier.

In order to do justice to the topics covered, the authors have had to limit the scope of this handbook somewhat, focussing on some aspects to the exclusion of others. For example, The handbook assumes that the language to be taught uses an alphabet, since the languages in most Peace Corps countries use some form of an alphabet. For languages that use characters, the specific methods described in this handbook may not be too useful.

Similarly, there are a large number of literacy organizations, each with its own strategy and methods. To include all of the many literacy approaches in detail in this handbook would be an impossible task. The authors take responsibility for the choices of which methods are included. (Chapter Two provides detail on three major literacy strategies and Chapters Three to Seven present a model for implementing a project. The model draws elements from the major literacy strategies and materials and methods based on the efforts of many literacy organizations. Chapter Nine includes the names and addresses of those institutions

The handbook can best be used by reading through each chapter once before beginning the project and then using Chapter Nine to tap into a network that can provide additional information and assistance. Counterpart workers and community people should be involved in this network from the beginning to strengthen the project and to help ensure its continuation. As the project progresses the literacy worker and the community can learn from their experience together and from the specific feedback of learners in the project. This experience should provide the foundation on which to build a strong ongoing program.

Chapter 1: Introduction

General estimates provided by UNESCO and the World Bank (In this last quarter of the 20th century) indicate that the world is still far from reaching universal literacy. Although substantial numbers of individuals have become literate in the past three decades through concentrated national and international efforts, population increases have exceeded increases in literacy rates. All regions of the Third World experienced a decrease in their illiteracy rates between 1960 and 1970, but from 1970 to 1980 illiteracy rates increased. Africa and the Arab States are estimated to have illiteracy rates of around 70 per cent. Asia follows with just under 50 per cent, and Latin America has a rate of about 20 per cent.

High rates of illiteracy are one characteristic of many countries in which Peace Corps Volunteers work. Illiteracy has a close correlation with poverty; It is estimated that the 25 least developed countries (where the per capita income is less than \$100 per year) have illiteracy rates of over 80 per cent. Illiteracy is also high in those countries with high population growth rates. The proportion of women illiteracy is growing steadily, and illiteracy rates are higher for rural areas than for urban areas.

Despite progress in providing formal primary education and the allocation, in some instances, of one quarter of their national budgets to education, many developing countries are lagging behind in providing literacy for children. UNESCO has projected that if current trends continue less than 35 per cent of school-age children will be in school in the 25 least developed countries by 1985.

History

Reading and writing began 5000 or 6000 years ago as tools of political and religious elites. This skill was transferred between the elites of different nations more quickly than between the elite and the less powerful within one country. In the Western world, until the middle of the 18th century, literacy was a skill taught only to the children of the privileged. The needs of the industrial revolution for skilled workers produced a move toward universal

education, and this rapidly spread literacy among a larger proportion of the population of the industrializing countries. From the beginning of recorded history to 1750, literacy rates in Europe and North America were never more than 10 per cent. By the end of the 19th Century Sweden, Scotland, Germany, England, Switzerland, France, the United States and Canada had all reached literacy rates of 90 per cent.

Whatever the history of literacy had been in Third World countries prior to their "discovery" by the West, the era of colonialism brought an emphasis on the education of elite groups in the language of the colonial power. Education and literacy were often used as a means of binding the elites of the colony to the culture of the imperial power.

Before the Second World War, most international assistance for mass literacy was funded by religious organizations. These organizations saw literacy as an aid in the practice of their religions, but they also argued that literacy was important to the development of the communities in which they worked.

After the Second World War, the newly independent governments of Third World countries placed new emphasis on literacy for all their citizens. Mass literacy was seen not only as an element of national pride but also as a way to bring together many diverse social, tribal and linguistic groups to create a unified nation.

In response to this expressed need, during the First and Second Development Decades (1960-1980), the development programs of the UN, the World Bank, USAID and later the bilateral programs of Japan, Western Europe and the socialist countries stressed literacy as a tool for the development of the economies of the Third World.

Until the 1960's these programs relied heavily on the literacy methods developed by an earlier practitioner, Dr. Frank Laubach. The Laubach method depends on individual, one-on-one teaching using a standard curriculum and materials.

In the middle of the 1960's, UNESCO began the ten-year Experimental World Literacy Program using a new approach called functional literacy. Functional literacy focuses on teaching literacy in relation to the everyday "life skills" of rural people in Third World countries.

In the 1970's the teachings of Paulo Freire began to influence the development community and literacy slowly became viewed as a process of empowering the poor of the Third World to deal with the fundamental issues affecting their lives.

In the 1980s, each of these methods - Laubach, functional literacy and the Freirian approach - are being used. Much has been learned from each type of program. Successful experiments and programs have taken place using radio, TV and self-instructional media. A number of large scale or mass campaigns have been attempted, especially in the socialist countries. There have also been many successful efforts on a smaller scale. This broad background of experience provides much information to draw on in designing literacy activities which truly meet the needs of the community.

The value of literacy

The value of literacy continues to be debated by development experts. Some feel it is essential to the solution of development problems; others feel the price of universal literacy is too great for a poor country to bear given pressing needs for health care, clean water and improved food production. The debate has not resolved the question of how relevant literacy is from a societal point of view, but for many individuals in these societies, literacy has great personal value. Even the poorest countries of the world use written documents to support government activities that affect the lives of their people, and a person without literacy skills is often at a disadvantage in a society which depends on the written word. An illiterate person lives in a society where written documents and signs are important to his life but have no meaning for him.

Literacy has some specific benefits for society, too. Communications can be made through radio, through television or face-to-face, but those methods have no permanence. The written word provides an inexpensive and easy way to transport records or information. A farmer can refer back to an agriculture pamphlet to remember how much fertilizer to use. A mother can refer to a health manual when her baby is sick. The writing on a bottle of insecticide can save a life.

In a small community, most information is passed by word of mouth, and conversation is one of the pleasant features of village life. The written word can provide a permanent history for that village conversation, can carry that conversation from a family in one village to relatives in another and can provide an indisputable record for the legal transactions of ownership, sale and marriage. This aspect of literacy may have little economic value, but as modernization changes the lives of people, links to their traditional past can help to lessen the disruptions of development.

There are a number of measurable benefits of literacy as well. World Bank and UNICEF statistics show a correlation between literacy and such development indicators as good health and the practice of family planning. This correlation is particularly strong for literacy in women. Literacy also correlates very strongly to family income and socio-economic standing.

One statistic in particular seems to show a clear correlation between adult literacy and development. A high literacy rate among the adult population encourages the establishment and maintenance of a primary school system, and the correlation between primary education and other development indicators is extremely high. In Tanzania, after a mass literacy campaign increased adult literacy from 25 per cent to 60 percent, adults began pressuring the government to expand primary education. Six years after the literacy campaign began, enough schools had been built to accommodate every child in Tanzania.

There are countries where the literacy rate is high, but the level of economic development is low, such as Sri Lanka and Argentina. But only resource-rich countries like Iran, have shown strong economic development with low literacy rates. The provision of literacy through both primary and adult education appears to be a necessary factor in sustained economic growth.

Researchers Rogers and Herzog have provided a summary of the findings of research into literacy and its effect on both the process of development and the lives of individuals in Colombia and Brazil. They argue that:

- As the individual gains reading skills, he is able to extend the scope of his experience through the print media. Messages in the print media tend to promote change; therefore, a literate person who is exposed to these messages will tend to have a favorable attitude towards new ideas.
- Literacy permits the individual receivers, rather than the senders, to control the rates at which messages are received, stored, and interpreted.
- Literacy also provides individuals with the means of delayed retrieval and use of print information.
- Literacy unlocks more complex mental abilities. Whereas the illiterate individual is largely dependent on his memory, the literate individual is able to manipulate symbols. This ability to generalize through symbols, the faculty of restructuring reality via the manipulation of symbols, and the ability to empathize with strange roles are all mental capacities that facilitate one's effective functioning in a rapidly changing urban-industrial world.

Levels of literacy

Literacy skills can be described on a number of different levels. Being able to write one's own name is one degree of literacy. Being able to write this handbook is another. Thus the definition of what literacy is or what a person should be able to do to be called literate can vary widely. One working definition describes the major elements of literacy skills as:

- Skill in the language itself, the ability to read and write.
- Communications skills, the ability to communicate to others using the written language.
- Learning skills, the ability to learn using the written language.

In some literacy programs, only the first of these elements is taught, but that skill is of little use in national development. A literacy worker must understand that the first element without the other two is of little value. Attainment of even a low level of skill in all three elements is of much greater value than a high level of skill in the first only.

Quite often, national statistics on literacy do not measure the attainment of these skills. Instead they may measure formal education or participation in literacy programs. In some cases if a person answers yes to the question, "Are you literate?" he is judged to be literate in other cases, attendance at school, even for only one year, marks a person as literate. In fact, World Bank and UNESCO data have long accepted that a person must have attended school for at least four years if he is to gain and hold a meaningful level of literacy.

Much of the discussion about the role of literacy in social and economic development is based on the assumption that literacy and illiteracy are clearly definable and widely understood terms. In fact, even within organizations, definitions of literacy have been evolutionary. An early definition of literacy offered by UNESCO in 1963 stated, "A person is literate when he has acquired the essential knowledge and skills which enable him to engage in all those activities in which literacy is required." UNESCO elaborated further that this essential knowledge could be equated to "a set number of years of primary schooling," usually four.

Functional literacy, a concept proposed by UNESCO in the late 1960's, broadened the definition of literacy to refer to the acquisition of an integrated store of knowledge, skills and know-how.

By 1975, UNESCO had modified its early, more stringent definition to reflect its experience in literacy work over the years. In issuing the Declaration of Persepolis on the 10th Anniversary of the Congress of Ministers of Education for the Eradication of illiteracy, UNESCO defined literacy "to be not just the process of learning the skills of reading, writing and arithmetic, but a contribution to the liberation of man and his full development...Literacy is not an end in itself, it is a fundamental right." (International Secretariat for Literacy Coordination, 1975)

The difficulty of literacy

Developing literacy skills in adults is a difficult but not impossible task. Smaller efforts in which a few dedicated teachers work hard with a few students have usually proven successful. In fact, UNESCO's evaluation of its ten year Experimental World Literacy Program found that, when all factors were considered, small indigenous literacy programs had the greatest chance of success.

This is not to say that large national programs involving millions of people have not been successful. In this century large, national-government sponsored literacy programs have been successful in socialist countries like Cuba, Burma, Tanzania and the USSR because of strong political will. A similar feeling of national purpose has led to successful literacy campaigns in capitalist countries, in this century, in Turkey and Brazil. A literacy worker involved in a campaign where the full dedication of the national leadership is focused on literacy may safely enjoy great success. Many literacy workers, though, may be involved in programs where the governments back programs with more rhetoric than resources. In this situation literacy workers must work even harder to gain the support of local community leaders which is so essential to the success of the project. Often the motivation of each individual learner becomes the key to the success of these literacy programs.

For formally trained community workers or PCVs, reading and writing are a natural part of everyday life. They often have not experienced illiteracy as an immediate problem. Most literacy workers learned as children in school and have had constant practice in using literacy skills at college and in their work. They may take literacy for granted and probably think it is easier to learn to read, to write or to do mathematical computation than it is.

Learning to read as an adolescent or adult is much more difficult than it is as a child. The learner must first be able to recognize the letters of the alphabet. Most alphabets have between 30 to 50 letters, ten digits and a zero. The learner must learn how to make the sound that each letter represents, how to draw each one, how to put them together to make a word and how to sound out the word.

Common sense would say that when someone gets to that point they can read that word, but a new learner may not understand what the word means. The learner may be able to write the word and make the sound of the word, but can not connect the sound with a meaning. Making that connection may take time. Making sentences and making sentences into paragraphs requires yet another set of different skills.

Some empirical research has focused on the success rates of literacy programs. Most of this research has concentrated on the performance of learners on course exams and not on their ability to apply their new skills to real life situations. There has been little research directed at the elements of a project that decrease difficulties in learning. However, some general trends can be identified.

A literacy program will be easier for learners if:

- literacy is taught in the first language, or mother tongue, of the learner;
- differences between the spoken language and the written language are not great;
- there is a large amount of literature available to the learners in the language of instruction;
- the learners can perceive immediate economic gain from becoming literate;
- the project is small and has a dedicated staff or- the project is large and is part of a mass mobilization campaign assisted by a political ideology;
- the learners perceive that the program is responsive to their expressed needs.

A literacy worker- may have little control over some of these factors. Nonetheless he should be aware of the elements of a project that act as constraints to success .

Numeracy

Illiterate adults quite often have strong oral math skills, as some of these skills are very important to their work and personal lives. But using these existing math skills to process new information or solve new problems often presents major problems for those who are illiterate.

Illiterate farmers may have difficulty with the agricultural math required to work with improved farming methods, even though they have long known how many seeds to save for next year's planting. Mothers may have difficulty with the correct proportions of ingredients in the rehydration solution which can help their children survive diarrhea, even though they have a thorough knowledge of the ingredients required for traditional dishes. Both buyers and sellers would benefit in the marketplace from an understanding of unit pricing. And use of a calendar is essential to some family planning methods.

Numeracy skills, which involve the use of written numbers to perform simple computations, are among the most relevant of all those skills which depend on reading and writing. For that reason numeracy is often included in literacy programs.

There are both similarities and differences between learning the skills of literacy and numeracy. Both require the learning of abstract symbols and their combination to form different concepts. Both require the learning of psycho-motor skills to reproduce the symbols, and both require that the literate person be able to learn from and communicate with symbols that stand for reality.

Numeracy involves a set of abstract concepts about functions that can be used only with numbers. This adds a complexity to numeracy that literacy does not have.

Adult, nonformal and literacy education

Adults often do not learn well in a formal environment that resembles school. They learn more efficiently in an environment that reflects the fact that they are adults and not children.

Special educational methods which recognize these needs have been developed for teaching adults. They are variously classified as adult education, nonformal education and for this specific task, literacy education. Adult education is a well established general term. Nonformal education is a newer term that encompasses all out-of-school education efforts including literacy, health education, agriculture extension and other forms of adult education. Literacy education is a specialized form of nonformal education. The specific use of the terms is not as important as the common underlying theory that the learner is central to the process of learning.

Involving learners in this central position is in contrast to the formal school tradition in which a teacher teaches and students listen and learn. Research and experience have shown that adults work better in a learning environment over which they have some control. Adults learn better if they participate in the decisions that design the curriculum, the methods, materials, and schedule. Adults may choose to use a school room as a meeting place for classes or they may prefer a room in someone's home. The important factor is that they choose.

Adults have a lot of demands on their time. Thus, scheduling of classes often becomes a prime determinant of participation in literacy activities. Other activities will be pulling the learner away from literacy classes. The adult, therefore, needs to have a clear understanding of what he is doing and why, a strong motivation to learn and a perception that learning is valuable to him.

Malcolm Knowles has analyzed the basic research on adult learning in *The Modern Practice of Adult Education*. He uses the term "androgogy" to define the process of education for adults, a process in which the participation of the learner is central. The following is a summary of the principles of Knowles androgogy:

- The psychological climate of the learning environment should be one which causes adults to feel accepted, respected and supported; in which there exists a spirit of mutuality between teachers and students as joint inquirers; in which there is freedom of expression without fear of punishment or ridicule.
- The adult's concept of self-directiveness is in direct conflict with the traditional practice of the teacher telling the student what he needs to learn.
- Every individual tends to feel committed to a decision Of an activity to the extent that he has participated in making it (or planning it).
- The adult's self-concept and self-directivity argues for a learning-teaching transaction that is one of mutual responsibility of learners and teachers.
- Being Judged or evaluated by another adult is the ultimate sign of disrespect and dependency. For this reason, evaluation should be a process of self-evaluation, in which the teacher devotes his energy to helping the adults get evidence for themselves about the progress they are making toward their educational goals.

In *The Adult Learner: A Neglected Species*, Knowles outlined five hypotheses concerning a learner-centered approach to education based on the work of psychologist Carl Rogers:

- We cannot teach another person directly; we can only facilitate his learning.
- A person learns significantly only those things which he perceives as being involved in the maintenance of, or enhancement of, the structure of self.
- Experience which, if assimilated, would involve a change in the organization of self tends to be resisted through denial or distortion or symbolization.
- The structure and organization of self appear to become more rigid under threat; to relax its boundaries when completely free from threat. Experience which is perceived as inconsistent with the self can only be assimilated if the current organization of self is relaxed and expanded to include it.
- The educational situation which most effectively promotes significant learning is one in which (a) threat to the self of the learner is reduced to a minimum, and (b) the perception of a number of possibilities is facilitated.

Philip Coombs coined the term nonformal education (NFE) in his book *Attacking Rural Poverty* to refer to a variety of out-of-school educational activities such as agriculture extension, health education and literacy education. He argued that all had similar problems and should be functioning under the same adult education theories.

NFE expanded the principles of Knowles's androgogy to state that the process of education should help to empower the learner. The use of discussion and discovery were meant to help the learner develop an awareness of his situation and develop plans to act upon that situation. NFE was seen by Coombs as a way to provide mass education in societies too poor to afford formal schooling for all of their people. As the concept developed NFE came to be seen as a way to overcome some of the more oppressive aspects of formal schooling.

Literacy education has been affected by both adult education theory and the theories of NFE. Early adult literacy classes were run exactly like those of formal education, and many literacy classes are still run in this way. However, many projects are beginning to put the learner central to the process and to involve him in the planning, implementation and evaluation of the literacy project. Literacy classes are using group discussion on important issues as a focus of the literacy learning. This adds to the interest and

relevance of the classes, but it also expresses the view that the adult learner is a full person adding another skill to his store of knowledge.

This participatory view has even changed the vocabulary of adult education. In NFE programs the adults are referred to as learners, not students. Teachers still sometimes play the role of a teacher, but they are primarily facilitators who help the learner learn under his own direction.

Chapter 2: Strategies

During 1975, which most literacy practitioners view as a year of international "stock-taking" in the literacy field, an FAO publication began with these lines:

"The effort and pain are worthwhile. The path to development and liberation probably does lead through the bramble bush of literacy."

A large part of getting through that "bramble bush" is developing an understanding of the three major strategies used in literacy programming today - the Laubach method, the Freire method and the functional literacy method. Some variation of one or more of these strategies serves as the basis of most literacy work and specific modifications have been made to design programs for women and children, two groups traditionally underserved by literacy programs.

A strategy consists of a theoretical base on which a comprehensive set of activities are built. Those activities are supported by materials and techniques that are consistent with the underlying theory. A strategy provides a coherent framework around which to build a literacy effort. A strategy is based on an understanding of how adults learn literacy skills, and ideally reflects the cumulative experience of thousands of practitioners over the past forty years. A strategy may also provide a set of field tested materials and techniques, which can be of great help to literacy workers who have little previous experience or limited time to devote to literacy work.

Debate exists as to which of the three major strategies presented here is most effective and whether any of them is truly successful. Elements can be taken from each of the three strategies to create a composite that is most appropriate to the local situation.

The Laubach method

Dr. Frank Laubach began his literacy work in 1929 in the Philippines where he was a missionary. Now, his work is carried on by Laubach Literacy international, an institution that has worked in almost every country in the world.

The "Laubach method" is a comprehensive system that includes a teaching methodology, a specific set of materials, the use of volunteer teachers and the publication of literature for new literates.

This strategy uses a one-on-one method, called "each one teach one," by which one literate volunteer teaches one illiterate person to read. That new literate then volunteers time to teach another illiterate person. The eventual goal is that the whole community achieves literacy.

Advantages of the Laubach approach are the speed with which adults learn to read in their own language; the fact that each learner is taught on a one-to-one basis and can continue by teaching someone else; and the ability to reach many people in a sort of chain reaction.

The Laubach method uses a highly structured curriculum and standardized teaching materials. The basic Laubach teaching tool is a pre-designed picture-letter-word chart. Each picture on the chart has been carefully chosen to represent both the shape of the letter to be learned and a word that begins with that letter. In the Spanish language example on page 20, the letter P is represented by a man with his weekly

pay (pago) and another man who is unemployed (vago) represents the letter "V". The teacher uses the chart to help the learner recognize the letters of the alphabet and the sounds they represent.

As soon as the learner understands the picture-letter-word associations the teacher moves on to simple stories in a reading primer that is keyed to the words on the chart. This first primer has a vocabulary of only 120 words; it is followed by a second primer that adds another 1000 words to the vocabulary list.

Charts and other materials which have been developed in about 300 languages for more than 100 countries are used in both Laubach and non-Laubach programs. Learning initial letters, words, and reading in the context of a picture gives the learner the satisfaction, usually in her very first lesson, of reading a message. With tints beginning, a number of other skills essential to reading and writing are introduced in careful sequence. These include learning all the letters and their combinations, learning whole words, and word analysis. In all the Laubach teaching materials, reading and writing go hand in hand, with practice provided for the learner in writing letters, words and sentences as she learns to read them.

The results of Paulo Freire's work have led to criticism of Laubach's method as lacking relevance for the illiterate populations of developing countries. In response to some of this criticism, materials have been changed to reflect the concerns of those learners.

The Spanish language example represents a modification of the earlier Laubach method. Instead of beginning with the chart, the attention of students is drawn to a large picture of, for example, workers outside a factory. Discussion which arouses student interest in the subject of work and unemployment is led by the specially trained teacher. Then the word chart with "pago" and "vago" are shown and the method proceeds in the usual manner.

Laubach International's efforts depend on volunteers who receive an average of 12 hours of initial training. Each volunteer teaches one-on-one, though the Laubach materials are also used in group classes. Laubach has found that volunteers who are close in education and economic standing to the students make the best teachers, though teachers of any educational level and economic standing can offer valuable help. Special consideration is given to encouraging new literates to transfer their skill to other members of their community.

Many Laubach groups have produced follow-up literature for new literates to read. Some of this literature has been produced by professionals and is based on research into the reading needs and desires of their clients. In some cases, follow-up literature has been produced by learners and new literates with the help of trained leaders. More than 50 of these "books from the people" have been published for Latin America and provide an impressive source of reading materials for a new reading population.

Laubach International's office in the United States is listed in Chapter Nine. That office only provides materials in English. Local Laubach groups exist in many Third World countries, and they produce materials in the local languages. Even if a literacy worker is not going to use the whole Laubach method, she would benefit from contacting the local Laubach group. They will have reading materials for new literates and other materials that may be helpful in supplementing beginning literacy activities.

The Freire method

Paulo Freire is a Brazilian-born educator who became interested in literacy education as a way to help poor and disadvantaged people overcome the psychological, social and political constraints related to their poverty. He believes, like Laubach, that people can use literacy skills to improve their problem-solving abilities. He also contends that underlying thought patterns have to be changed if literacy skills are to lead to problem-solving action. His method focuses on small groups which become centers of learning and discussion.

Freire hypothesizes that the educational system itself can be the source of some very limited ways of thinking. He has analyzed the educational system for adults and described two types of education:

banking education and problem-posing education. The metaphor of banking is used to describe a system in which the teacher "deposits" knowledge into the students, a system which is dominated by the teacher. In banking education all of the power of decision-making is in the hands of the teacher. The teacher becomes the active subject of the teaching while the students become the passive objects of the teaching.

To overcome their poverty, Freire believes that members of poor communities must learn how to look objectively at their lives, analyze their problems, plan a course of action to change the situation, act on that plan, and then reflect on that action in order to plan again to act. He calls this process praxis. The problem-posing method of education uses praxis as its basis. Learners become the active subjects of their learning and the teacher becomes a facilitator of the process of praxis. Through this process learners move from being the objects of history to becoming the active subjects and makers of their own history.

Freire's literacy programs use a series of pre-literacy activities to help develop a dialogue within the learning group. Discussion is centered on several drawings which help the group distinguish between "nature," which cannot be changed, and "culture," which can be changed. The first pictures are of a flower and of a vase which has a flower drawn upon it. The learners discuss the difference between the flower that was produced by nature and the flower on the vase which was produced by a person. The artist is part of the human culture; the flower is part of the world of nature. The discussion moves on to the subject of how people are the active makers of culture and can control that world. The learners begin to see that they are actors in the world of human culture and that they have the power to control the world around them.

In his literacy programs Freire analyzes the language looking for a few key words that have most of the letters and sounds of the language. These he calls Generative Themes, words that are related to concepts that have great emotional significance to the learners. Then literacy workers produce a set of visual objects that each have one of the words written at the bottom, with that concept depicted in the drawing. The following is an example of the use of these visual objects.

In this example from a World Education project in Ghana, as in most programs based on Freire's principles, the learners sit in a circle with the facilitator in an equal position with the learners. The sessions begin with the facilitator showing a drawing of a man dropping his ballot into a ballot box. Under the picture is the Twi word for power, "tumi". The learners are asked what the man is doing. They reply that he is voting. The teacher then asks them if he is exerting power. This begins a discussion in which the learners express how they feel about voting and the limits to their own power. The discussion moves on to the question of what other types of power the learners have. In the beginning, group members usually say they have no power. But as discussion progresses, they identify ways in which they do have power. They can vote or not vote. They have some power over raising their children. Or, they can get together with their neighbors and build a community well.

The group breaks up into smaller discussion circles of only two or three people. Each circle discusses power and the ways in which they have power to control elements of their existence. A spokesperson from each circle then explains to the whole group the forms of power the group has identified. The facilitator helps the learners to make a plan to use some of that power to improve their lives. (That plan will be reflected upon at the next meeting.)

After the plan is decided upon, the facilitator points to the word under the picture and asks what it is. By then, all the learners know it is power, "tumi." The facilitator then uses that word to explain the sound of each letter, how the letters come together to form a syllable and how the syllables form a word.

Leon Clark, who designed and implemented this project, tells a story about the first session of one of the literacy classes:

"Following the discussion, the word "tumi" itself is presented and the participants are asked to repeat the following sounds derived from the word:

TA	TE	TI	TO	TU
MA	ME	MI	MO	MU

Once the participants are able to give the sounds orally (in memorized, rhythmic sequence as they cannot read yet), the facilitator asks them to form as many words or phrases as they can by combining sounds. Almost everybody can make 'tumi' and most people can make several other words. During one session, a participant made the sentence 'Ma me tumi,' which means 'Give me power.'"

After a number of sessions dealing with words that explain other sets of syllables, the learners have learned how to read and write all of the letters and how to make simple words. Then the class is ready to begin to read and write simple stories, letters and other reading materials.

The discussions that begin each of the initial learning sessions help to add motivation to the learning process. That process allows the learners to gradually understand what these first words represent. Educational research shows that when learners discover something on their own, they will learn it better and remember it longer than if they are simply shown or told that bit of knowledge. This discovery technique is one of the powerful parts of the Freire approach.

Freire has been criticized for having merely repackaged existing knowledge of adult education and covering it with revolutionary rhetoric. Indeed, John Dewey, in the early part of this century, called for a pedagogy that made students into active learners. However, Freire does present a deeper analysis of the psychology of the learner from a developing community, a learner who may be oppressed by poverty, a sense of powerlessness and a narrow view of the world.

He argues that humans operate on three levels of consciousness:

- Intransitive awareness, in which the individual is caught in the belief that all of life is ruled by magical forces over which she has no control.
- Naive transitive awareness, in which the individual understands the real human and natural forces that are working upon her, but her analysis of her problems is blinded by emotion.
- Critical transitive awareness, in which the individual can rationally analyze her problems and develop ways to solve those problems.

Freire feels that literacy education should help the learners to progress from intransitive or naive consciousness to critical consciousness and that that process of conscientization is more important than learning to read.

An interesting application (and study) of the consciousness raising process among rural immigrants in urban settings is provided by Barndt, in her study of womens' literacy programs in Peru. Barndt used photographs taken in various sections of Lima, including the squatter settlements learners came from, as a way in which to identify generative themes and thus words (and content) for the literacy program.

Other recent applications of Freirian methodology have taken place in the former Portuguese colonies of Guinea Bissau, Angola and Mozambique in each instance, the national government has backed the use of the methodology, thus supplying the political endorsement which is often needed to make it successful. Chapter Nine lists resources on -the Freirian approach.

Functional literacy

Functional literacy uses a single focus on a subject of interest to the students as the content material for developing literacy skills. Usually the subject matter is related to some aspect of the learners' work or family life - such as agriculture, health or small business. Materials are problem-oriented with possible solutions being presented in the course of the literacy program. Materials are based on the learners' store of knowledge and whatever significant gaps may exist in their knowledge. Thus a functional literacy

program is of necessity based on a study of the immediate milieu, the identification of current practices related to the content area, and suggested new practices to remedy the situation.

For a community worker involved in agriculture, health, fisheries or some other content area, functional literacy may provide a method for integrating her primary Job with a literacy effort. The literacy worker could design a program that taught literacy related to the functional skills she was trying to transfer.

A UNESCO document summarizes the concept of functional literacy in this way:

"Briefly stated, the essential elements of this approach to literacy are the following:

1. Literacy programmes should be incorporated into and correlated with economic and social development plans.
2. The eradication of illiteracy should start within the categories of population which are highly motivated and which need literacy for their own and their country's benefit.
3. Literacy programmes should preferably be linked with economic priorities and carried out in areas undergoing rapid economic expansion.
4. Literacy programmes must impart not only reading and writing, but also professional and technical knowledge, thereby leading to a fuller participation of adults in economic and civic life.
5. Literacy must be an integral part of the over-all education plan and educational system of each country.
6. The financial needs of functional literacy should be met out of various resources, public and private, as well as provided for in economic investments.
7. The literacy programmes of this new kind should aid in achieving main economic objectives, i.e., the increase in labour productivity, food production, industrialization, social and professional mobility, creation of new manpower and diversification of the economy."

An example of functional literacy might be a literacy program for farmers interested in improving their production with the use of chemical fertilizers. Current fertilizer use practices would be assessed. Problem areas would be identified and these problems and their resolution would provide the content of the functional literacy materials. That is, literacy materials would present reading, writing and concepts of numeracy using the words and ideas that are needed to read and use information about fertilizers.

As the learners move on -to reading simple sentences, those sentences describe improved farming methods using fertilizers. In this way, the learners are learning how to read, calculate and write while focusing on one specific content- area. They are motivated because the subject matter they are studying as they learn literacy skills is of interest and value to them. They are learning about improved agricultural practices as well as literacy. The objective is for the learners to develop sufficient literacy skills to continue learning on their own.

A number- of functional literacy programs have been carried out- around the world focusing on different job skills and development sectors. Health, family planning, agriculture, home industry and other subjects have been used as the basis of study. Functional literacy programs in Tanzania provide excellent examples of national and community organization for functional literacy work. (Tanzanian "Food is Life" literacy campaign also provides an interesting case study of the use of radio in large-scale compaigns and the importance of village level study groups.)

At the same time, the UNESCO Mali functional literacy project exhibits a number of ways of meeting national development priorities, particularly in agriculture, through literacy work. The Jaipur Farmers' Literacy Project in India, with its focus on introducing new plant varieties and new agricultural methods, is also rich with teaching materials and methodologies.

A new variation on functional literacy, called specific literacy, is now being tried in a number of countries. The Senegal case study in Chapter Ten contains a good example of this form of functional literacy. In this strategy, the Job of the student is analyzed to see exactly what literacy skills are needed and only those skills are taught. In specific literacy, the student may learn very little, but all of what she learns will be of immediate value. This can greatly increase learner motivation.

One group of learners could participate in a series of short specific literacy courses. For example, a group of farmers might first learn how to read directions on cans of pesticide. A few months later the group might learn how to read the information on bags of fertilizer and how to do the simple math needed to calculate application rates. Several months later there might be another session on a related topic.

This could go on for a year and the farmers would have learned a good deal that was valuable to their work. After their success with specific literacy they might be willing to spend three months learning more general literacy skills. Having acquired some of the skills needed for general literacy, their learning would go faster and be easier.

The specific literacy strategy is a planning tool that allows the literacy worker to focus on skills that are of value to the learners. Anzalone and McLaughlin in Making Literacy Work: The Specific Literacy Approach describe their methodology with these questions that a literacy planner should ask:

"For a specific group of people, working and living in a particular environment, how do existing literacy skills relate to what is required to get along on the Job? Is the level of literacy, and not something else (i.e. insufficient technical skill, lack of tools or credit) causing difficulty? For the particular group, would a specific increase in literacy skills make a noticeable contribution to improved productivity or social well-being? If so, would a short-term literacy training intervention be feasible, and would it likely lead to the desired improvement in skills?"

There are five considerations that characterize their planning approach:

- Specific literacy starts in the workplace. The planner looks first at how literacy is involved in the work of the learner. This does not rule out literacy activities that relate to health, family planning or other parts of a person's life, but it puts the emphasis on work.
- Specific literacy uses a diagnostic approach. The planner must attempt a comprehensive diagnosis of the work tasks, their literacy requirements, the existing literacy abilities of the learner and the way in which literacy skills are performed or circumvented in the work place.
- Specific literacy identifies turning points in economic life that may act as an incentive to learning. The planner looks at changes that are taking place in social and economic life with which literacy might be able to help an individual cope. Increased competition or new technology might lead to these turning points.
- Specific literacy assesses the limits of a short-term intervention. The planner must define a set of goals and objectives that can be accomplished in a short period of time.
- Specific literacy looks for generic skills. The planner cannot design a different program for each individual, so skills that are common to a number of work situations are preferable to those that are specific to one.

The specific literacy approach has a lot to offer to a literacy worker who will be living in a community for a short time only and whose primary work is in another area of development like agriculture or health. The literacy worker can use this planning tool as a way to focus on literacy goals that support her primary Job end that can be achieved in a short amount of time. (Further information on the specific literacy approach is found in Chapter Nine.)

Literacy for women

Many educational programs are designed and implemented in ways that unconsciously favor males over females. Although such discrimination may not be planned, it is nonetheless real. Currently, a disproportionate number of females are illiterate in the world. In 1960, 58 percent of illiterates were estimated to be women. By 1970, this percentage had risen to 60 percent and it is still rising. There is a growing consensus that special effort should be made to target literacy efforts at women and girls. This

arrangement has been highlighted in a recent UNICEF publication, "Women at the Turning Point" by Dr. Lyra Srinivasen.

There are practical as well as ethical reasons for targeting literacy programs at women. In the developing world, young children are more likely to spend time with their mothers than with their fathers. This follows naturally from the traditional role of women as workers in and near the home and the traditional role of men as workers outside the home. Since children spend more time with their mothers, a literate woman may be more likely to pass on her literacy skill to her children than would a man.

Statistics presented earlier show a strong correlation between literacy in women and a number of development indicators, particularly lower infant mortality and fertility rates. Many development workers, like Dr. Srinivasen, think that some effects can be assumed. Literate women in a family are more likely to demand equal educational treatment for girls in the family and in the community. Literacy should give women more options for business or work outside traditional occupations.

Depending on the cultural setting for the project, there will be a number of issues that will have to be resolved before beginning a literacy class for women. Although this manual cannot present and resolve all the issues for all situations, a discussion of a few of the major issues provides a beginning for those who may be planning special programs for women.

For example, experience in some cultures has shown that husbands and fathers, particularly when they themselves are illiterate, may be unwilling to let their wives and daughters participate in literacy programs. There is no easy way to resolve this issue, but a literacy worker can be mindful of the need to involve men in preliminary discussions and perhaps think in terms of a parallel program for men.

This thinking is part of an effort all literacy workers should make to look at the culture and power structure in which learners live. In any project there will be people whose support will be vital to the project. The learners should be enlisted to identify and design a strategy to gain the support of key people in the community. The program should then begin by involving those important people, both men and women, in the decisions that shape the project.

Another concern that is particularly relevant to women's literacy projects is time since in traditional societies women, quite often, have less free time than men. Their duties of cooking, cleaning, child-rearing, farming and other work span the whole day. Many community workers conceive of learning as something that a learner must focus attention on to the exclusion of other work. That may not be possible in a women's literacy program. A literacy effort may have to take place around one of the women's everyday activities.

The literacy worker has to be innovative in finding time and places to run the program. For example, the program could take place around a well while women are washing clothes. A program could take place while women are doing hand work or shucking corn.

The program could also run in shorter sessions. If women are able to spare 30 minutes in a day, this may be enough to teach part of a lesson. The whole program might take considerably longer, but the final result would be the same.

The women's workload may also be heavier at certain times of the year, such as during the growing season. The literacy worker must identify those periods of the year in which women are least busy and plan literacy programs accordingly.

A women's literacy project in India that was coupled with child care, health and nutrition education found that even after scheduling the classes late at night, only about 60 of 550 women stayed in the program. Literacy workers found that since they were working with mothers of young children, their clients had too many demands on their time to participate. At the end of the project they decided that the proper target group was teenage girls who were not yet married. They still had enough time to spend in the classes, and the child care knowledge would be useful to them when they began their own families.

Women have many of the same motivations to learn to read that men do, but they may feel some needs more strongly. As was mentioned before, women may want to learn to read to pass that skill on to their children. The married women in a village may have all come from other villages, while the men were born in the village where they live. These women may have a need to communicate with their families in other villages. The literacy worker should find out from prospective learners what their priority needs are in the area of literacy and build a program around those needs.

Children

A literacy worker may see literacy as an adult need, but the adults in her community may prefer a literacy program for their children. If the literacy worker is living in a community where there is no school or where attendance is low, she might consider working with children. Children may be easier to teach and often have more free time than adults. The adult community may be willing to put more effort and resources into a literacy program for their children.

Although children may be more willing to sit in a classroom and listen than adults, it does not necessarily follow that this is the most efficient way for them to learn. They, too, will learn quickly if they are interested in what they are learning.

Sylvia Ashton-Warner, who taught reading to Maori children in New Zealand, used a method akin to the Freire approach, taking words from the environment as the basis for literacy instructions. She asked each child to choose a word each day. The child would tell her word to the rest of the class, then the child would be encouraged to tell why that word was important. Usually, some personal story came out around the word. The teacher wrote the word down on a piece of paper for the child to learn that day.

Once the children each had a number of words they had learned, the teacher began to show how words are made of letters and how the letters make sounds. The words were all ones that were special to the children, and that gave them an added motivation to learn.

Using literate children as instructors for adults often presents difficulties, since many adults feel the child is too inexperienced to be a teacher. Yet, children who are literate can be effective teachers of illiterate children. Such peer teaching has been experimented with in a number of Asian countries in projects coordinated by INNOTECH, the instructional technology wing of the South East Asian Ministries of Education based in Manila. These projects found that older students can be very helpful in teaching younger students if they have good materials and guidance. A literacy worker who is focusing on children should consider older children as a possible source of teachers. (Dr. Thiagarajan's Programmed Instruction for Literacy Workers, listed in Chapter Nine, presents the elements of the INNOTECH model adapted for literacy work.)

Chapter 3: Feasibility study

In any community, literacy is only one of many needs. The community may need a protected water supply, better ways to produce or store crops, primary health services or greater opportunities for earning income, in addition to literacy skills. Addressing any of these needs demands time and resources, both of which are very limited in many developing communities.

Discovering where literacy fits in among the community's priorities and thus how much time and resources community members can devote to literacy activities is the first task of a community worker with an interest in literacy. A short feasibility study can tell the worker whether literacy is a priority need of the village, whether prospective learners have the necessary motivation and time to participate in literacy activities and whether the necessary resources, leadership support and skills exist to begin a literacy effort.

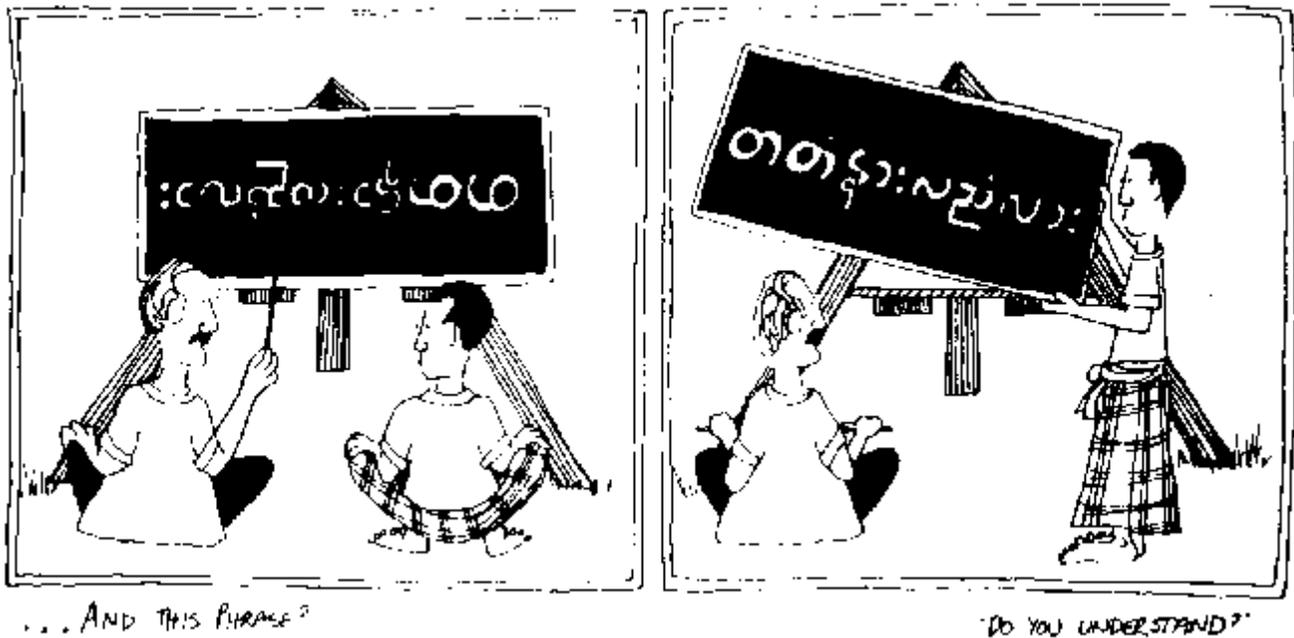
A feasibility study need not be elaborate, but the answers to a number of important questions must be found before a literacy effort can be undertaken.

Are the literacy worker's skills sufficient to do the project?

The literacy worker may have to plan the course, train and manage teachers, develop a curriculum, make instructional aids and do direct instruction. If the literacy worker is really starting from scratch, with no help from existing programs, he must have a wide range of skills. He must assess his own talents and decide if he meets the resource requirements of the project. Community members, learners and existing programs can all supply resources to support the literacy worker, and making the best use of all of these resources is important to the ultimate success of the project. Still, in the beginning at least, the literacy worker himself will have specific tasks to do and must be able to do them well.

To teach someone how to read and write, the teacher must be knowledgeable and literate in the language of instruction. A literacy worker need not be a native speaker of a language to teach literacy in it, but he must have a minimum level of fluency. The main difficulty comes in not being able to make the sounds that correspond to the letters he is teaching. The correct pronunciation of each of the letters in the alphabet is vital to the learners' understanding and recognition of the letters. Pronunciation can sometimes be difficult for those who have low levels of language fluency.

Figure



If the literacy worker does not have sufficient language skills, he might consider a role other than teaching in the project. Some literacy workers have overcome their own fluency problems by enlisting the help of a literate native speaker. Others have managed this problem by using the names of objects that begin with the correct sound so students can understand, but this still requires some fluency in the language. If the literacy worker's skill in the language is weak, he must design a program that relies on local teachers or instruct tonal aids that compensate for the language deficiency. Those resources must be available if the project is to succeed.

A counterpart from the community can be an invaluable help in solving many of these problems. The literacy worker should make every effort to identify interested members of the community and to work closely with them on the project. This counterpart can complement the literacy worker's own skills, provide invaluable insight and help ensure that the project will eventually be independent of the literacy worker.

Of course, literacy is not an all or none proposition. The literacy worker may find that he does not have all of the skills needed to implement a large project and cannot provide them through kits counterpart or others in the community. He can, in this situation, begin the project on a small scale, maybe teaching only one person. Then, as his skills increase and community support develops, he can expand the scope of the project.

Who in the community wants to learn how to read and write?

Literacy is considered valuable by almost everyone. When asked if they want to become literate, people who cannot read and write will almost always say yes. The societal value placed on literacy helps to add personal motivation and community support to literacy programs. However, for a program to be successful, the people who will be learners must have made a decision of their own that literacy is something they need and want.

Figure



For the feasibility study the literacy worker should do more than Just ask people if they want to become literate. Potential learners should be asked why they want to learn, how much time they will be able to devote to study and whether this is something they really want to work for or just something they feel they should do. (Chapter Four gives specific advice on how to do a needs assessment that will provide detailed answers to these questions.) A literacy worker may find it helpful to ask the learners to make some kind of commitment before the classes begin. This might include work to set up a study place or a commitment of payment in kind (for example, food) for teachers or something similar. This show of commitment should give an indication of the strength of the desire to learn.

The answers to these questions will also help determine the likely target population for a literacy project, the group from which most prospective learners will come. When asked about literacy, the members of some groups may show greater interest than others in the community. Thus, although a target population could include the entire community, it may very well be a smaller group, such as the younger men of the village, women attending a health clinic, farmers in a coop or vendors in the marketplace.

What is the learner's motivation to become literate?

The literacy worker should know what the learners want to do with their literacy skills. This insight into learners' motivation will be of help later in designing a curriculum.

Some people want to learn simply to become literate and see no functional need for those skills in their life. For them, that desire to learn is sufficient.

If the learners perceive a specific need for literacy skills, they will have a stronger motivation to learn. This motivation will be a major factor contributing to the realization of project objectives. If learners are not sure why they want to learn or what they will do with literacy skills after the course, their motivation may not carry them through the difficult tasks that they will have to do.

A general statement of motivation, such as, "I want to learn to read and write," may be a sign of weak motivation. Specific statements like, "I want to learn to write letters to my family" or "I want to learn to read instructions at work" show stronger motivation as well as awareness of how literacy skills can be put to use. If the statements of motivation are tied to important aspects of life, like work, and describe a direct benefit to the learner, the motivation will be even stronger. For example, if a learner says he wants to learn to read and write to advance to a higher position in his place of work and he has good reason to believe that this will happen, his motivation to read and write will be supported by the motivation to advance at work.

Figure



Does the literacy worker have enough time for this effort?

The amount of time needed for a project is dependent on its goals. To teach a specific literacy skill such as reading the information on a bag of fertilizer may take only two weeks. To bring adults to a level of literacy where they can read and write simple letters may take six months to a year. More complex skills may take even longer to teach.

If the literacy worker is going to teach classes as well as help to organize and manage the effort, the project will demand much of his time. If he has other job duties, he might be overextending himself. If he is near the end of his stay in the community, he might not have enough time to complete his work. A literacy worker must consider these issues carefully to avoid raising expectations that he cannot fulfill. The factor of time argues for early involvement of local people who will be able to carry on the project after the literacy worker has left. A strong commitment from a counterpart to carry on the work after the literacy worker has left will extend the effective time of the project.

Is there sufficient community support?

When the idea of a literacy program is first discussed, the community may well give it a lot of verbal support. The literacy worker must be clear as to what real support he needs and ensure that adequate financial, material and human resources exist and can be devoted to the literacy effort. A community whose highest priority is gaining access to health care or clean water may not be willing or able to allocate scarce community resources to literacy, even though a number of community members may want to participate as learners.

Before beginning detailed project planning, the literacy worker should have a general idea of what resources he will need - space, salaries for teachers, funds for supplies, technical assistance and so on. One of the most important of these will be the support of key people in the community.

Rural communities usually have strong leadership and power structures. The most important people in that leadership structure must agree with and support the project for it to succeed. If the literacy program is seen as a threat or a waste of time by the leaders of the power structure, the project may not succeed. A literacy worker can have all the teachers and supplies but lack the support of one important person, and the project will fall.

Figure



The literacy worker must first analyze what he needs to do to get verbal support from the leadership of a community. He must secure the agreement of the power structure that influences the lives of the learners before the project begins. In this way, he can ensure that the program will not be disrupted by employers who want to control the time of the learners and that the help of local officials will be available when needed on specific problems.

These very people can also provide the program with other kinds of resources. Employers may be willing to give release time for the learners to study or incentives for learning by increasing the salary of successful learners. Community people and local officials may be willing to contribute books or money or allow the use of a school building after hours. All of these resources can help to make the program more successful.

There are also key people within the group of learners. Within each group, some people are listened to more than others. The literacy worker should identify the leaders within the group of potential learners and involve these people in the planning for the project. They, in turn, will be available to promote the project among the target group, and their participation in the project will help to draw and maintain the interested learners.

The role of participation in community level projects has been recognized for some time. A study of agricultural development projects by the United States Agency for international Development (USAID) found that community participation was the single most important factor contributing to project success. When that participation was analyzed, formal two-way communication was found to be the most important element. This communication consisted of regular, formal meetings where clients of the project could talk with the project staff, learn about the project and offer their suggestions. In these meetings, the project staff responded to the suggestions and later reported on action they had taken on those suggestions.

In Tanzania, literacy projects were organized at the local level with a high degree of community participation. Participation took the form of governance committees which chose teachers, decided on content, and arranged for meeting space and for the production of new reading materials.

Even at the stage of a feasibility study, community involvement should play a strong role. As the literacy worker is exploring the possibility of a project and trying to assess its chances of success, he should hold regular formal meetings with the community to discuss what he hopes to do and to ask for advice. Out of that dialogue comes information essential to the design of the project and the support that will help ensure that community resources will be available to the project.

Is there anything to read?

An environment which provides opportunities for reading and writing is necessary if learners are to put into practice what they have learned. Often little exists for new literates to read, especially when literacy instruction is in indigenous languages. The need for literature to read is important to sustained interest in literacy learning, and it is also a factor in the level of success that a project can attain.

Illiterate people may speak a language that has no extensive written literature. Literacy programs in these languages may serve as a stepping stone to learning a national language such as French or English or they may be designed with a more specific functional orientation.

Even in languages that have a large literature, like Spanish, if the learner has no access to written materials at his reading level, he may lose his literacy skills.

In one evaluation of a large literacy project in Colombia, access to a newspaper that was simply written and interesting to adults, "El Campasino," produced the strongest correlation with level of literacy skill. This correlation was even stronger than with attendance at formal school.

As part of the feasibility study, the literacy worker should identify both local and national sources of reading materials which might be used during and after the literacy course. He might also explore ways to produce literature locally. For example, traditional folk stories have been recorded and transcribed in Senegal, Mali and Tanzania to provide reading materials. The literacy worker should identify the places in which he sees people reading and the purpose for their reading as an indication of the kinds of reading materials that are both popular and available.

What are the chances of success?

Learning to read is difficult for adults for a variety of reasons, and a literacy worker may not achieve a high rate of success in a general literacy program. The literacy worker should ask himself if he is willing to work hard at an ambitious program that may only benefit a few learners. He may experience more success with a more limited approach, such as a functional or specific literacy strategy.

Figure



The literacy worker will want to learn what kinds of literacy activities have been tried in the past with what kinds of success or failure. In inquiring of past efforts and analyzing how the community views those efforts, he may well uncover valuable data which will help him plan a new activity.

What are the costs and benefits

A formal analysis of costs and benefits may be beyond the scope of a small project. But an awareness of the community perceptions of costs and benefits can be a great help in planning. The cost of making a group of adults literate in terms of their time and the time of the literacy worker may be quite high, but the community may perceive the benefits to be well worth the effort. The feasibility study may show that the project will be difficult and may project a very modest success rate, but that is far from being a sure failure. If the effort looks like it will have some success the benefits can be worth the work.

Chapter 4: Planning and preparation

As with any other development project, the first step toward designing a literacy program is to decide upon program objectives. Then, available resources must be identified, with particular emphasis on how to best organize and mobilize them so that program objectives can be met.

If the feasibility study discussed in Chapter Three shows that there is a real need for literacy in the community, the literacy worker is ready to move into the planning phase. This phase includes a number of planning and preparation steps:

- Step 1. Implement a basic needs assessment to determine who will benefit from literacy instruction and to identify and analyze training requirements;
- Step 2. Identify resources both within the community and at regional and national levels and enlist support for the literacy program;
- Step 3. Identify and place learners in appropriate learning groups;
- Step 4. Design a curriculum and related lesson plans;
- Step 5. Assemble needed materials, word lists, etc., to support the curriculum;
- Step 6. Select teachers if necessary and organize teacher training;
- Step 7. Organize an opening ceremony for the program.

Step one: Conducting a needs assessment

While a needs assessment does measure the total demand for a project's services, its mayor concern is with the specific elements of those services which are most in demand. On one level, the assessment should examine the need for literacy training and the number of potential learners for the project. This information is critical, no matter what size the program is to be, as identification of the number of potential participants will have an impact on the entire planning and implementation process.

The assessment should also identify the specific literacy skills needed by the potential learners. Particular attention should be given to how learners plan to use new literacy skills as well as what motivates them to learn. This information will be used in designing a curriculum to fit specific needs. If prospective learners indicate that they want to use literacy skills in farming, for example, then agricultural skills such as keeping farm records should be included in the curriculum. If they want to use literacy skills to read a local newspaper, then content related to the newspaper should be in the curriculum.

An informal feasibility study like the one suggested in Chapter Three will have provided information on whether literacy is a primary or a secondary need. This information gives an important focus to the project that must be taken into account before doing a specific needs assessment. If literacy is a primary need, then the needs assessment should be designed to provide information on how to make general literacy instruction relevant and of interest to the learners. In many communities where literacy skills are needed, other needs will surface as more important. Improvements in agriculture, health, family planning and sanitation will, most likely, be among the primary needs. The data from the needs assessment, therefore, will be used in planning a program that supplies literacy skills which are related to and can help the community achieve these primary goals.

The needs assessment should focus on the group that the earlier feasibility study identified as the most likely target population for the project. In carrying out the needs assessment it is important to gather as many opinions from this group as possible. If the number of prospective learners is less than 25, each individual can be questioned. If the group is large, only a sample of the group need be questioned. A good rule of thumb is that 25 people is a sufficient number to question unless the target population is extremely large.

The following is a general guide to the questions that might be asked of potential learners.

- Do you know how to read and write?
- If not, have you ever tried to learn to read and write before?
- Are you interested in learning to read and write (or improving your skills)?
- How would you use reading and writing skills?
- How much time would you be able to spend each week in class?
- Would you be willing to provide some money, goods or services to the teacher to help pay for her time?
- What kind of work do you do?

Questions should be asked in an informal way using the list as a reminder. The questions in this list reflect general categories of information needed. Specific followup questions are needed to give a more detailed picture of the learners' needs. These questions will vary according to time, place, interviewer and subject, but the examples below provide a general indication of what is needed.

Do you know how to read and write?

Follow-up on this question should yield data on the actual skill level of the learner. If the response to the question is "yes," the data collector should have some simple materials to test the reading and writing abilities of the potential learner. A list of common words or a primer from an existing literacy program can serve this purpose, but the interviewer should also ask the potential participant to demonstrate any abilities she has that are different from those of the prepared material. With this information a curriculum can be developed that builds on existing knowledge and learners of similar skill levels can be placed in learning groups together. Of course, a person with a great deal of literacy skill may not be interested in any further literacy learning.

If not, have you ever tried to learn to read and write before?

The answers to this question can provide insight into problems that may occur in the program, methods and materials that may be appropriate and constraints to learning that may exist. If the potential learner has had some learning experience, but remains illiterate, questions like "What did you like or dislike about that learning activity?", "Why did you stop?" and "how would you do things differently now?" can help the literacy worker design a more appropriate structure for learning.

Are you interested in learning to read and write (or improving your skills)?

A simple yes or no should be followed up with a question of "why?" Additional questions which examine possible problems and constraints on participation should be asked to determine the extent of the person's interest. These might include questions like, "Why have you never learned to read and write?" "What might keep you from attending classes?" "What makes learning to read and write difficult?"

The answers to these questions (and others in the survey) can help provide an understanding of the positive and negative forces that influence a person to participate or not participate in a literacy project. Researcher Kurt Lewin has developed what he terms a "force field analysis" to identify these factors that affect an individual's decision to change behavior or participate in a learning activity. The details of the theory are not needed here, but a general understanding can help a literacy worker analyze part of the data gathered through a needs assessment.

In a Lewin force field analysis, the data collector tries to uncover all the possible positive motivational forces influencing an individual. For literacy instruction these might be higher prestige, a better job, a greater ability to understand government procedures and documents that affect her and so forth. Then the data collector examines the negative forces which work to keep the individual away from learning activities. Possible examples of negative forces in the case of literacy instruction might be neighbors making fun of adults sitting like children in a class, fear of failure, lack of time and distance to the place where the classes are held.

Once a detailed list of the positive and negative forces are made, the literacy worker should try to determine which forces are the strongest. (This is often difficult to do and to some extent is subjective. It might help to present the list to the learners themselves for discussion. They could be asked to rank them from the strongest to the weakest, and the literacy worker could then try to make her own determination.) For each of the strongest forces listed, the literacy worker must think of strategies to overcome it with one or more of the positive forces listed. Some of these methods are instructional in nature and are discussed in Chapter Six.

How would you use reading and writing skills?

In following up this question there is a danger of "leading" the respondent to reply in a certain limited way. Questions like, "Would you use these skills to write letters to friends?" might lead the prospective learner to say "yes" when that is not really a strong need for her. Questions like, "What do you need reading and writing for in your work or in your home?" or "When do you have to ask others to help you by reading or writing something for you?" will give a better picture of the real needs of the learners and the uses they perceive for literacy skills.

How much time could you be able to spend in class each week?

The data collector should ask the prospective learners specific questions about how much time, what time of day, and how many months they are willing to devote to a literacy program. She should attempt to gather information on any seasonal work or religious activities which might keep people away from a literacy course. As this specific information is collected from a number of possible learners, a pattern may develop that will indicate the most convenient time to schedule learning activities. If the potential learners' time is extremely limited, a shorter, specific literacy approach might be more appropriate for the project.

Would you be willing to provide some money, goods or services to the teacher to help pay for her time?

The literacy worker should be clear about what is needed to support the project. If some form of compensation for the instructor is important, she should know what part of that compensation should be paid by each learner. If a contribution is needed, the data collector should explore options for providing that resource which do not create a hardship for the learner or discourage her from participating.

What kind of work do you do?

In this question the data collector should look at details of the tasks the learner must perform in her main occupation. For example, if someone says she is a farmer, the literacy worker should find out what crops she plants, if she buys seeds and fertilizer and how she sells her produce. Questions of this sort will yield data on specific tasks which may require literacy skills. It can also help in grouping learners who have similar Job needs. The data collector should also look at secondary or seasonal work as well as the learner's hopes and expectations for changing her primary occupation.

Once completed, this simple assessment should provide information on the total number of learners who express interest, what kind of work they do, what past experience they have had with literacy instruction and some indication of what they plan to do with new literacy skills. Information will also be available on the kinds of resources learners are willing and able to provide to the program. This data provides a basis for all the planning and preparation activities that follow.

Step two: Identifying resources and mobilizing support

The preliminary feasibility study and needs assessment should show whether there is sufficient community support for the project to be successful. Once this is established, the literacy worker must plan how to use all available resources to support the project and develop specific methods to ensure community involvement.

The search for resources and support should not be limited to the village neighborhood or worksite where the project will take place, though the search begins there. The support of district or regional officials is often important to project success. National literacy programs or large projects in other areas may have recommended practices that must be followed and can almost always offer materials, methodologies and technical advice. It is essential to seek the support of these key people and groups before launching the project.

Within the community the literacy worker must first identify the individuals and groups who make up the local power structure. The power structure can include progressive farmers, religious leaders, successful businesspeople or traditional healers as well as government representatives, large employers and the mayor, village chief or headman. The literacy worker should begin a regular schedule of meetings with

key people to discuss project plans and progress. This regular dialogue can help ensure that there are no major misunderstandings and provide a framework for resolving project problems as they arise.

If they are included in the planning process early, the leaders of the community can help to make local resources available to the project. For example, wealthier literate people in the community may be able to donate used reading materials to the project. Local leaders can arrange for space for learning in a school, community center, church or other public place.

Once these easier commitments are made and time has been spent involving people in the planning process, community leaders may be more willing to provide resources that involve some cost. Employers may be willing to increase the pay of workers who become literate or a local government official may be willing to give certificates to successful learners. The wealthier members of a community may be willing to give money or in-kind contributions that can help to compensate the instructors.

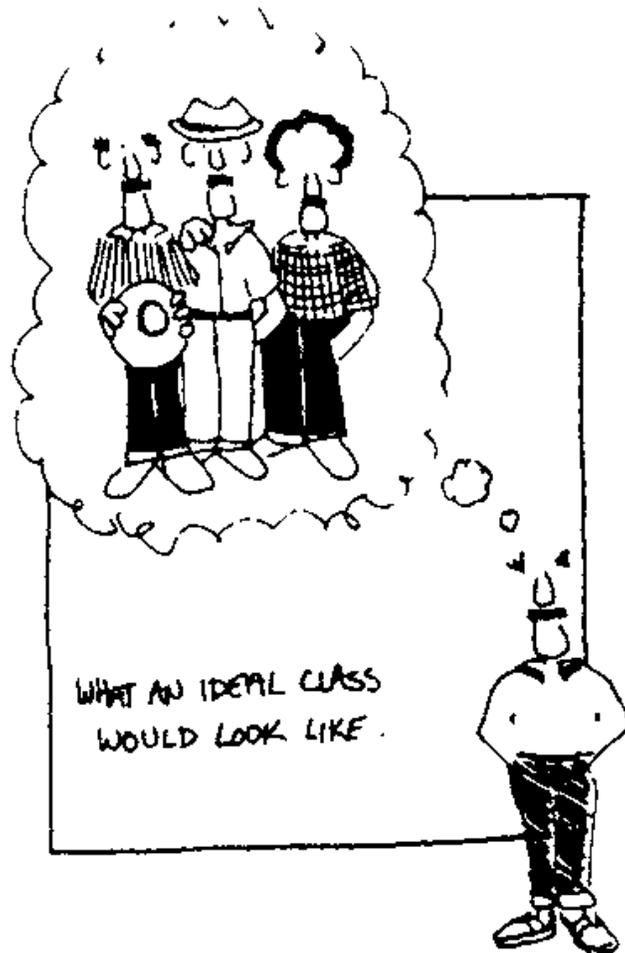
The participation of one particularly influential learner may also help motivate other learners in the classes. For example, if the leader of a local women's group joins the literacy classes, it may encourage the participation of other women. Or, an influential farmer who is an enthusiastic learner might act as a strong motivator of others in the class. Time and effort spent involving these people in the project can have a high pay off in securing the participation of others.

Step three: Identifying and placing learners

In many cases the feasibility study will have identified a target population from which potential learners may be drawn. How many members of that population actually participate will depend on their interest, the number and skill of available teachers, the ability and experience of the project manager, government program requirements and any number of other factors.

If the literacy program is large and well supported, or if the number of interested learners is small, all of those who wish to learn can be included. If the project is a small, pilot effort and the number of those who want to learn is large, some selection may have to be made. Care must be taken to ensure that the selection is equitable and that those who are not selected are given opportunities to participate at a later time if possible.

Figure



The needs assessment should have provided information on the learners' literacy goals and what their existing level of literacy skills are. This information, when possible, should be used to group learners with the same level of beginning skill and with similar literacy goals. In a small program, this grouping of learners may not be possible, but in larger programs it will improve the functioning of each learning group and make it easier to provide a curriculum focused on their needs. (More information on grouping learners can be found in Chapter Six.)

The literacy worker should begin a schedule of regular meetings with the learners, just as with the leaders of the community, to ensure their input into the planning process. Once the literacy program begins, meetings should continue on a regular formalized basis. This is particularly important in large projects in which the learners and the program administrators may spend little time together. Planning meetings should provide the opportunity for learners to suggest improvements in the program and allow the administrators to explain what is being done and what is planned for the future. It is important for administrators to provide follow-up on any suggestions or questions that came up in previous meetings in order to show learners that their "feedback" is being taken seriously.

Planning sessions can sometimes become focused on the negative, with learners complaining about what is wrong with the program. The administrators can become defensive and dialogue ceases to be of value. One method for structuring meetings to avoid such problems is to ask people to begin by listing what is good about the project. This helps to ensure that the positive elements of the project are not thrown out in an effort to solve minor problems. Once this list is made, the leader asks for a second list of ways of how to improve the project. In discussing ways to improve the project, the group must present

criticism in a positive and constructive way. Then both learners and administrators can discuss how and by whom the improvements will be made.

Step four: Designing the curriculum

Once the needs of the learners have been determined, a plan must be developed to meet those needs. This step-by-step plan, or curriculum, sets goals for the project, breaks down the goals into learning objectives, outlines classroom activities to meet the objectives and summarizes this information in a series of detailed lesson plans.

Curriculum design is discussed in detail in the next chapter, since it is such an important part of the planning process. But before work begins on the curriculum, the literacy worker may want to enlist the help of one or two teachers, in addition to her counterpart. The curriculum could even be designed as part of the teacher training process described later in this chapter. Soliciting the insight of those who will actually be involved in implementing the curriculum can ensure that the design is both practical and appropriate.

Step five: Assembling materials

A close examination of the curriculum and lesson plans should indicate what teaching materials may be needed for the project. A structured curriculum such as that used in the Laubach method may require pre-designed materials and these must often be obtained from a source outside the community. A very simple curriculum may require only materials that can be found close at hand.

The many kinds of materials that are available to support literacy activities are described in detail in Chapter Seven. Suffice it to say here that any materials required for the project must be obtained well ahead of time. It cannot be assumed for example, that sufficient supplies of paper or chalk are available in the community or that learners can provide their own lanterns for night classes. And acquiring Laubach charts or reading materials from organizations in the capital can take longer than anticipated.

Many literacy strategies require the development of a list of common words to be used to teach letters, sounds, syllables and concepts. This task should also be done during the planning and preparation period, perhaps with the help of teachers in the project or the learners themselves. Other literacy programs operating incountry may have already developed word lists that could be adapted for use in the project.

The list should be drawn from the oral vocabulary (and experience) of the learners and should be related to any functional or specific focus the project may have. The list should be prepared in three sections: one of 15-20 words which includes all the letters and sounds of the language; a second section of 100 - 150 words which includes the words in the first section plus others which will allow learners to accomplish one or more functional goals of the project (such as writing simple sentences or reading a primer on fertilizer use); a third section of perhaps 1000-1500 words which are necessary for the learners to meet all the goals of the project including the words from the first two sections.

In larger projects the word list and any other materials may be used first in the teacher training sessions that take place before the project starts. These sessions provide an opportunity to test and adapt the materials to the needs of this particular project

Step six: Selecting and involving teachers

If the literacy project is small, it might have only one teacher, the literacy worker or a counterpart whose motivation to teach is strong. If this is the case, there are few decisions to be made about selecting and involving teachers. If the project is larger, there are three mayor issues the literacy worker will have to consider' selection of teachers, compensation for teachers and training for teachers.

Selection

In some instances the project may have a limited pool of teachers from which to pick or there may be a group of teachers who have already been selected. If selections must be made, however, establishing standard criteria may be helpful. The needs of the learners, the availability of people who can serve as teachers, end project size and scope must all be considered in developing these criteria.

For example, as the learners will be adults, they may object to being taught by younger teachers. Learners of one sex may object to being taught by a member of the opposite sex or individuals from higher castes may object to being taught by those from lower castes. Early resolution of these objections can save valuable project time and energy. If these situations cannot be avoided, the literacy worker should discuss the problem with both teachers and learners.

Teachers can be selected from among people with many different backgrounds. Formal school teachers have the advantage of training and experience in educational methods and can make excellent literacy instructors. But some teachers may never have had the opportunity to adapt their skills to the different requirements of adult teaching and may have to work harder to "Identify" with the learners. Other literate members of the learners' community who are like the learners in most ways but have some additional education, often make the best teachers, even though they lack formal training.

If the project is related to general literacy, the skills required of the teachers will be different from those required for a functional literacy project related to agriculture. Similarly a long-term functional literacy project will demand a greater commitment in time and energy from the teachers than a short-term, specific literacy project will.

Compensation

Most literacy projects try to function with volunteer teachers as a way to control costs. This approach has proven to work best with projects of short duration. Most people are willing to give up a little of their time for a few months to teach. Compensation becomes an issue in longer projects. In many cases the teachers work hard as volunteers for the first few months of the project, but feel they must have some form of compensation to continue as the project is extended.

Compensation is not usually an issue in national literacy campaigns in which the formal school system may be shut down for a period of time so that all teachers and students can participate. In these campaigns, teachers are still paid by the school system, but the students often work for free.

Community literacy workers cannot make these kinds of national decisions. Yet mobilizing a small community in a similar way might be possible. If an entire community makes a commitment to make all members literate, that group action can provide motivation and recognition for the teachers in place of payment.

If this kind of community campaign is not possible, some form of compensation for the teachers should be considered to help secure the success of the project. If there is no other source of funds, the learners themselves may have to provide the teacher with compensation. If the learners are unable to pay cash, they might consider making in-kind payments of goods or services. Providing garden produce, helping to repair the teacher's house or arranging to provide help that will offset some expense the teacher may have to incur are all possible alternatives to cash compensation. The literacy worker should discuss the range of ways through which compensation can be arranged and decide on the most appropriate way.

Training

Teacher training need not be done through a long or formal series of sessions. Teachers who are volunteers may not have a lot of time to spend in training. Yet, a certain amount of orientation is essential so that the teachers are familiar with the needs of the learners and the strategy that has been developed to meet those needs.

Preservice training sessions should cover the information that has been gathered in the needs assessment, the curriculum that has been designed to meet learners needs, the methods and materials

that will be used in the classes and any special conditions or potential problems that may exist. In longer training programs teachers could be asked to prepare short lesson plans or outlines for the course they are to teach. If time is short, the course curriculum could be prepared in a lesson plan format so that teachers' preparation time is minimized. Teachers should have the opportunity to practice using the lesson plans, methods and materials with guidance from the teacher trainer.

The literacy worker and her counterpart should also plan to hold at least one inservice training session in addition to regular meetings with the teachers during the course of the project. In that session, suggestions can be made for improving the classes based on direct observations of the teachers in action.

In general teacher training should follow the basic principles of adult learning that are outlined elsewhere in this manual, tailoring activities to the needs of the group and involving the group actively in the learning process. The following outline of a possible teacher training program provides examples of specific activities that could be used to prepare teachers to participate in a literacy project. The sessions described could be designed for longer or shorter time periods and/or adapted to fit the culture in which they would be used.

SESSION ONE OPENING

No matter how informal a teacher training program is, teachers are often nervous about how well they will do. The opening session should help them relax and focus on the matter at hand. A number of "Ice breaking" exercises have been developed for this. A simple one is "dyed introduction." In this exercise, the training group is broken into groups of two. Each individual interviews the other person in the "dyed" to learn more about her. The interviewer seeks to find out her partner's name, age, place of birth, family background and so forth. (These questions would be based on whatever is commonly asked

In meeting a new person within that culture.) The interviewer should also ask a direct question about the training, such as, "What do you expect to get out of this?" She may also be instructed to ask a final humorous question, such as, "What is your favorite food?" or "What is the funniest thing you have ever done?" After each individual has been interviewed in the dyed, the group comes together again and each person introduces her new acquaintance. This helps the trainees to interact and breaks down some of the barriers between instructor and trainee. The humor that usually develops also relaxes everyone.

SESSION TWO OVERVIEW

This brief session presents an overview of the literacy program, states the objectives of the teacher training program and explains the methods to be used. At the end of this session, the trainees should know what they are going to learn during the training and how it will be presented to them.

SESSION THREE DEMONSTRATION OF FIRST LESSON

The teacher trainers present a demonstration of the first lesson of the literacy program. After the demonstration, the group is broken into several smaller groups of three or four and asked to discuss what they observed and make a list of any questions they might have. The larger group then comes back together so that questions can be asked and responded to. One person from each group is appointed spokesperson to ask the questions and share the comments from that group. In this way teachers have a chance to become involved as active participants in the training and begin to experience what literacy teaching is like.

SESSION FOUR ADULT LEARNING THEORY

In this session, teachers gain a more thorough exposure to adult learning theory. Teachers go back into their small groups with their task this time being that of describing how teaching children, and their own experience of when they were children in school, may be different from adult learning and their own learning in this training program.

The teacher trainer should introduce this task in a way that allows the teachers to see some of the differences immediately. For example, she could refer to some of the questions and answers that took place in the previous session or ask the teachers to think about how they learn things while on the job. She could provide examples of how children learn on a regular schedule in school and adults learn while they are carrying out their work or home responsibilities.

After the small groups have had time to compile their lists of the differences between adult and child learning, they come together again as one group and report out on what they discovered. The teacher trainer summarizes the discoveries, and then proceeds with a short presentation on adult learning theory as it was covered in Chapter One of this manual.

SESSION FIVE EXPLORATION OF THE CURRICULUM

The teachers are given a presentation on the full curriculum which they are expected to follow. After the presentation they break up into small groups again to look at the written version of the curriculum and discuss it among themselves. One person in each group is asked to keep a list of questions and concerns which arise during the small group discussions. When the large group reconvenes, the spokesperson from each group directs questions that came up in the discussion to the teacher trainer.

SESSION SIX EXPLORATION OF THE MATERIALS

Specific instructional materials are presented and discussed in the same way as the curriculum. All materials should be demonstrated. Teachers should try playing any learning games that will be used and should practice using the other materials with each other. This can be done in small groups much more efficiently than in the large group. A question and answer session follows in the large group which allows for an adequate explanation and discuss Ton of issues or problems encountered in experimenting with the materials.

SESSION SEVEN METHODS OF INSTRUCTION

Instructional methods are presented in the same way as the materials, using the approach suggested for the fifth and sixth sessions.

SESSION EIGHT EVALUATING PROGRESS

The teacher trainer presents a method for evaluating learner progress. Small group discussion follows the presentation. Teachers might also use the suggested evaluation format to evaluate their own progress in the teacher training program.

SESSION NINE MOTIVATION TO LEARN

An important part of the curriculum will address learner motivation. The teacher trainer makes a brief presentation on methods for fostering motivation and diminishing the effects of negative forces on learners. In small groups again, the trainees develop a plan for enhancing positive motivation and decreasing negative motivation. After the small groups have reported out, the teachers could produce a written summary of all plans suggested by the small groups so that each teacher can take it with her after the training.

SESSION TEN PLANNING LESSONS

The teachers are asked to take what they have learned and prepare lesson plans for the first five classes. They are encouraged to add as much detail as they can to the prepared curriculum. After the lessons are planned, each teacher should have a chance to practice teach one lesson. If there are no students to teach, the teachers can play the role of learners for each other. After each practice session the teacher, "learners" and teacher trainer critique the session and give advice to the teacher. After all teachers have practiced teaching, they are given some time to rewrite their lesson plans with individual attention from the teacher trainer.

FOLLOW-UP SESSIONS

The teachers get together with the trainer or among themselves after the first literacy class to review and learn from their lesson plans and teaching experience. They meet again after the first five lessons that they prepared in training are completed. At that time, they prepare lesson plans for future classes.

This model plan could be expanded or compressed depending on curriculum design and resources and time available. If a prepared curriculum, methods and materials do not exist, then sessions will have to include time for teachers to develop these and time for them to be trained in their use. If more time is available, it can be spent on practice teaching and inservice training. If possible, the teachers should come together on a regular basis after they begin teaching so that they can discuss their problems and successes and receive additional inservice training,

Step seven: Begin

Whatever the culture in which the literacy program is operating, there is usually some kind of ceremony associated with the beginning of new efforts. This may take the form of speeches, religious rites or a party. The literacy worker should try to begin the project with some sort of ceremony. This will make the learners feel that the effort is an important one, and it will focus the attention of the community on the effort. This often helps increase community support as well as learner motivation.

Chapter 5: Curriculum

Central to any educational program is the process of curriculum development, that is, the process of translating educational objectives into course content and educational strategies. The curriculum sets out what is going to be learned and how, detailing the sequence of course content to be presented and methods to be used. Detailed plans for each session of instruction - the lesson plans - are later drawn up based on the curriculum design.

As was mentioned earlier, much work has already been done in developing curricula for literacy by Laubach Literacy International, UNESCO, national governments and other groups. A literacy worker should first consider the feasibility of using or adapting an existing curriculum before embarking on the development of a full curriculum. If the literacy worker is considering a "specific literacy" project that teaches only a limited set of skills identified during the needs assessment, he may have to design a tailor-made curriculum. Even so, existing curricula can provide valuable resources for a specific literacy project as there is much carryover of generic components.

Curriculum design for any type of project involves a five-step process: setting goals; setting objectives to meet those goals; placing learning activities which support the objectives in sequence; identifying resources; and writing lessons plans.

Step one: Goals

A goal describes what the curriculum is trying to achieve overall. In education programs, the first step in instructional decision-making is determining what goals are appropriate based on the needs assessment and other elements of the program plan. The closer curriculum goals are to the expressed desires of the learners, the greater are the chances for success in the project.

In a large national literacy program, goals will reflect the development aims of the government. The most commonly stated goal for national programs is for learners to achieve the skill of a primary school graduate in reading and writing; often simple math is included. In another kind of general literacy program, the goal might be to be able to read and write simple letters to relatives or to be able to read a newspaper published for new literates.

Other programs have more limited, specific goals. In Ecuador a University of Massachusetts/USAID nonformal education project taught only reading to one group of learners. Project staff found that the motor skills of writing presented an obstacle that caused learners to drop out of the classes. When reading was the only skill being taught, the attrition rates were lower. The same project had separate classes that taught only simple numeracy skills and others that taught only market math, both skills that gave the learners an added advantage in the marketplace. (Examples of materials from the Ecuador program are presented in Chapter Seven.)

In the Senegal case study described in Chapter Ten, the goal was for participants to be able to read information on bags of fertilizer. In specific literacy projects like this, goals are very limited. In Making Literacy Work Anzalone and McLaughlin describe other such specific literacy goals based on the requirements of a number of occupations in The Gambia. An analysis of these Job requirements was an important part of the needs assessment upon which the curriculum was built. For example, the authors found:

- that a tailor must be able to read a measuring tape, write measurements on paper, and calculate quantities of material needed for multiple items based on one set of dimensions.
- that a radio repair-person must be able to read numbers and letters to identify electrical components, read numbers on an electrical tester and read and write names and numbers of spare parts.
- that a self-employed wayside mechanic must be able to read and write names and numbers of spare parts or vehicle model numbers and read numbers on measurement instruments.
- that a carpenter must be able to read a measuring tape, calculate the amount of board-feet of lumber needed for a particular job, and read a blueprint or cross-sectional diagram.

These requirements were then translated into goal statements for the curriculum design.

The key to writing curriculum goals is to keep in mind that the statement must reflect an observable action. The action described must be one that the learner will be able to accomplish at the end of the program. The language used to describe the action should be specific and the action should be something that can be measured.

For example, a project goal could be written, "Learners will be able to read and write a simple letter to relatives explaining mayor events of the last month." The required action is described specifically and is measurable. In this goal statement, the learner and the trainer have a clear idea of what must happen for the program to be Judged successful.

Step two: Objectives

Objectives describe what has to be done to achieve each of the curriculum goals. Like the goals, objectives are written in terms of specific, observable behaviors or actions. These objectives are operational, time-bound and quantifiable.

Objectives define learning that must take place in each of three areas - skills, knowledge and attitudes. (In some instructional literature these three areas of learning are called the psychomotor domain, the cognitive domain and the affective domain.) in an effective literacy program, the objectives meet the demands of all three of these areas. The learner must be able to demonstrate the literacy skills of writing and pronouncing words (the psychomotor domain). The learner must also master certain concepts in order to demonstrate a knowledge of reading, word recognition, vocabulary and sentence structure (the cognitive domain). No progress in either of these areas will take place, however, unless attitudes are also considered (the affective domain). The learner must demonstrate a positive motivation to learn, an understanding of the value of literacy for his life and a level of comfort in his role as an adult learner.

Literacy skills can usually be learned through practice, and their acquisition is easy to evaluate. Knowledge acquisition falls in the middle range of difficulty with regard to teaching and measurement. Objectives

which relate to changing and development of attitudes are the most difficult to plan for and to measure. Nonetheless they are quite often the most important part of an educational program.

To write objectives, each goal must be broken down into its component parts reflecting all the skills, knowledge and attitudes that a person would have to have to meet the goal. Then, each of those component parts is put into clear action-oriented language. Each objective statement should describe a behavior that could be accomplished only by someone who had acquired that particular skill, knowledge or attitude.

For example, an objective could not be written: "The learner will know all the letters of the alphabet." Rather, it should be written: "The learner will be able to write each letter of the alphabet after hearing its name pronounced." The second statement describes a behavior that can be easily observed.

To complete the process of defining objectives, a measure of the level of proficiency to be reached and the time limit for achieving that level should be added. If the learner must accomplish 100 percent of the objectives, then that is the level of proficiency needed, but usually a lesser goal is acceptable. The curriculum designer may decide that scoring 75 percent on a test of the content included in the objectives is a satisfactory goal.

The curriculum should also set a reasonable time-frame for accomplishing each objective. This time frame is important even though each learner may progress at a different pace, since it ensures that the group continues to move toward the project goals. The actual time required to achieve each objective will vary depending on the skills of the learners and the teacher, the material to be learned and the planned duration of the program.

The following sample objectives for a general literacy program provide a further illustration of how objectives are written.

Example

Skills. These objectives describe the physical actions that demonstrate mastery of the skills in question. These are the easiest objectives to write, since the actions they describe are easily observed and measured. For example:

- The learner will be able to write all the letters of the alphabet, both uppercase and lowercase.
- The learner will be able to write words using the letters of the alphabet.
- The learner will be able to write his own name.
- The learner will be able to write all of the numbers.
- The learner will be able to pronounce each letter of the alphabet.

Knowledge. These objectives describe behaviors that suggest a learner is familiar with certain concepts and can remember and use that knowledge. The curriculum designer must look for behaviors that only a person who has acquired that knowledge will be able to exhibit. For example:

- The learner will be able to say the name of each letter when he sees it in print and in cursive, in capitals and in lower case.
- The learner will be able to say the name of each number when he sees it in print and in cursive.
- The learner will be able to say the sound of each letter as a single letter and in combination with other letters.
- The learner will be able to state whether a letter is a vowel or a consonant.
- The learner will be able to combine vowels and consonants to make syllables.
- The learner will be able to combine letters to make words.
- Given a list of 250 common words in his language, the learner will be able to say each word and state what it means.
- Given a longer list of 2000 common words in his language, the learner will be able to say each word and state what it means.

- The learner will be able to read simple sentences using a list of 250 common words and explain in his own words what the sentences mean.
- The learner will be able to read simple sentences using the list of 2000 common words and explain in his own words what the sentences mean.
- Given a simple topic, the learner will be able to write ten sentences on that topic.

Attitudes. These objectives describe behaviors that suggest particular attitudes have been acquired by the learner. Objectives for attitudes are difficult to write because there is no easy way to know how people feel. The curriculum designer must look for observable behaviors that a person with the desired attitude might exhibit. For a general literacy course these might be:

- The learner will be able to explain how his acquisition of literacy will benefit his nation, his community and his family.
- The learner will be able to describe several ways in which he can use his literacy skills to benefit himself, his family and his community.
- The learner will be able to describe the negative feelings he has about being an adult learner, why he feels that way and how he is managing to overcome those feelings.

The value of these objectives is that they identify the topics that must be covered in order to reach the curriculum goals. For each of these objectives, the literacy worker must develop learning activities, methods and materials. The objectives and the learning activities to support them must then be put into a logical sequence to make up a coherent learning program.

Step three: Sequence of learning activities

From the list of objectives, a sequence of learning activities can be designed to form a coherent program. Each objective may have several activities that must be completed before the objective is met. These activities placed in logical sequence will provide the basis of specific lesson plans to be developed later. The sequence should follow a logical progression of introducing new material which builds on what has been learned before and allows for practice of material already presented. The sequence should begin with content already known by the learners and move to related unknown material. The sequence should move from the simple to the complex and from the concrete to the abstract.

For example, a sequence of learning activities might move from recognition of objects to recognition of words which represent those objects, then on to simple sentences composed of those words. Another sequence might lead learners from an association of varying numbers of objects with written numbers, to use of numbers to perform simple calculations.

The proper sequence of learning activities might not always be so obvious, however. For example, recognition of letters might appear to be simple compared to recognition of a word, but many programs have found the introduction of full words before letters to work best. In this case, the word that represents an object may actually be simpler and more concrete than the entire system of letters which represent the sounds of the language.

Step four: Resources

In addition to entire curricula, there may be books, magazines, student practice materials or games available from other sources that the literacy worker can adapt to his program. The availability of these resources may lead the literacy worker to modify his curriculum in a way that will allow him to take advantage of existing materials.

The literacy worker should identify all outside resources which will be needed during the course and make sure they will be available to all teachers. This list of materials should be prepared, in writing, and listed as a part of each sequence. Charts, equipment, and demonstration materials are all examples of things which would be necessary.

The literacy worker should also consider the teaching resources available to him for the program. The curriculum should be designed with the teachers or facilitators in mind. If he wants to add functional content but has no one available to teach it, he may have to leave that content out of the program. If the program has a dedicated cadre of teachers, then innovative and complicated curriculum elements are possible. If the teachers are volunteers with limited time or experience, the curriculum elements should be simple so that teacher training can be accomplished quickly and easily.

Step five: Lesson plans

Once the sequence of learning activities has been decided, the literacy worker must consider what methods and materials will be used to support each activity. These are listed, along with the content to be taught, in a set of lesson plans that divide learning activities into standard time periods. If learners have agreed to spend one two-hour period per week on literacy, for example, lesson plans should be designed to fit the two-hour periods.

The next step is to write a lesson plan for each class time period in the course. In the lesson plan, the teacher outlines the content (learning activities), and the methods and the materials to be used. For each day the teacher makes notes on how to present the content and manage the class session. As mentioned earlier, a single objective, like learning to recognize letters, may involve several learning activities that must be completed before the objective is met. These activities could take place over several class sessions and be written up in several lesson plans.

There are some simple guidelines that a literacy worker can follow for making a lesson plan for a single class session. There should be time at the beginning of the session for the teacher to explain to the learners what they will be learning that day. This helps the learners get ready to learn. Each class should have at least one time segment for reviewing material that was most recently learned, especially the last session or the last few sessions. New material should be limited to what can be easily learned in one half of the time allotted to the class session. There should be time where new material is integrated with that which has been learned before. At the end of the session, there should be a few minutes where learners can ask questions about the day's material or any other material.

The following page contains a sample lesson plan:

ACTIVITY	TIME	MATERIALS	DESCRIPTION
1. Opening	5 mins.	"T" and "M" charts	Give greetings and use charts to explain day's activities.
2. Review	10 mins.	"T" chart	Review what was learned last week - syllables ta, to, ti, tu. Point to the elements on the chart and ask each learner to identify some of them. Ask if anyone can make a word from these syllables.
3. New Material	30 mins.	"M" chart	Introduce new material for the week, syllables ma, mo, mi, mu. For each syllable, pronounce the sound while pointing to it on the chart. Have the class repeat the sound with you and then each student should make the sound alone. Lead discussion of issue presented on "m" chart and explain the syllables.
4. Practice	10 mins.	Syllable blocks	Use blocks to practice all the syllables learned so far. Split group into two teams and ask them to use the blocks to make as many words as possible in 10 minutes.
5. Closing	5 mins.	None	Answer questions and close.

The teacher should refer to the plan before class, arrange for the materials that will be needed, and decide on what methods to use for each activity. The indication of time is for planning only. If one of the activities is going well, it might be given more time. If one is not going well or if the learners already know that material, that activity might be given less time.

The teacher- might even choose to have a session that is only review on occasion. Or, if one piece of new material is very difficult, the teacher might choose to have one session only on that material. But as a rule, the sessions should mix activities.

Sample curriculum one

This sample curriculum is an example from a general literacy project. The literacy worker has done a needs assessment and found that some illiterate women want to learn how to read and write simple letters. They all live in a village far from the villages of their families, and they would like a way to keep in better contact. The letters can be sent using the postal system or through contacts in a local market town who travel to their villages.

Goal: The learner will be able to read and write a simple letter to or from relatives that explains all the events of the past month.

Objective 1: The learner will be able to look at any of the following list of 18 words and link it to a picture that represents that word. (A list of 18 words would follow.)

Materials: Eighteen charts each with one word and a picture of what that word represents. These 18 words contain all the letters and sounds of the language, and the words are known to all the learners. For this example, the first chart would show a group of children with the word "children" under it.

Activities: The learners sit in a circle with the teacher as part of the circle. The teacher holds up the picture with the word and asks the learners what is represented here. The teacher then leads the learners through a discussion of what that word means in their lives and how they feel about the concept or object represented there. At the end of the discussion, the teacher asks some of the learners to summarize what has been said, and then moves on to explain the word, its syllables and letters. In this example, the women would talk about the fun and the problems of having children, how many children are too many and how many are too few and any other topics that relate to their experience of children. The teacher would then show the word:

In its syllables;
chil dren,

In sound clusters;
ch il dr en,

and in letters;
c h i l d r e n.

Objective 2: The learner will be able to say the sound of each letter and know the name of each letter.

Materials: Eighteen picture/word charts and a wall chart of the alphabet that includes pictures of objects that begin with that letter and the name of that object written out.

Activities: After the discussion of the meaning of the picture/word chart, the teacher will show how the word is made of letters and explain what each letter is called and what its sound is. Then the teacher will use the wall chart to reenforce that information.

Objective 3: The learner will be able to write each letter of the alphabet.

Materials: Paper, pencils, a blackboard and chalk.

Activities: The teacher will use the blackboard to show how each letter is made. Then the learners will practice with paper and pencils.

Objective 4: The learner will be able to put letters together to make words.

Materials: Paper, pencils, a blackboard, chalk and a set of letter blocks.

Activities: The teacher will write a word on the board and ask one of the learners to use the letter blocks to put together that same word. Then the learner will say the name of each letter and sound out the word. All the learners will then write the word down on paper. After the learners are doing this well, the teacher will just say a word and not write it down. In the beginning, all learners can work as a team, but after some practice each should do the task alone.

Objective 5: The learner will be able to read, write and understand the meaning of the following list of 1250 words. (A list of words would be attached here.)

Materials: Paper, pencils, a black board, chalk and a set of letter blocks.

Activities: The teacher would use the same activities as for Objective 4.

Objective 6: The learner will be able to read, write and understand a 200-word letter to a relative using only simple sentences that explain all the major events in her life during the last month.

Materials: Paper, pencils, a blackboard, chalk and a set of word blocks.

Activities: The teacher writes a sentence on the board and asks the class to use the word blocks to make the same sentence. Then each learner does this alone. Then the learners make a sentence orally and follow by putting it together using word blocks. Each time a sentence is made, the learners write it down on paper. All the sentences should be things they would want to say in a letter. Next the same process is repeated but without the letter blocks. This time the learners write the sentences on paper only. Once all of the sentences have been written, the teacher helps the learners see how they can be put together into a letter.

Sample curriculum two

This is an example from a specific literacy project with a limited and focused goal. The literacy worker has done a needs assessment with members of a rural agricultural cooperative. Many of the members of the cooperative are illiterate, and the records of the cooperative are kept in writing by a literate elected secretary. The learners are only interested in the skills needed to read the general ledger of the cooperative so that they will be able to understand the record of produce they have put into the cooperative, the income the cooperative has gained from the sale of that produce, the expenses of the cooperative and the resultant profit for each member. The learners will only learn how to read the ledger, not how to write on it. The math needed to do the calculations is not taught since the learners already know how to do these calculations orally.

Goal: The learners will be able to read the record of the transactions so that each member can be sure that proof exists of his stake in the cooperative.

Objective 1: The learners will be able to recognize all of the words that explain each row or column of the general ledger. The words are: (Here, a list of all of the words used on the general ledger would be listed - credit, debit, sale of produce, storage charge, transportation charge, for example.)

Materials: A copy of the ledger and a chart with all the words listed next to a picture of the action or object they represent.

Activities: The teacher uses both materials to teach the meaning of each word and show where it is located in the ledger. The teacher organizes a game where each learner must look at the word on the chart and then find it on the ledger and explain what it means. These activities are done during a set class period, but the materials are available for the learners to practice with alone or in groups when they have free time.

Objective 2: The learners will be able to recognize and state the name of each member of the cooperative when they see that name written on the general ledger. (Here a list of names would be attached.)

Materials: A copy of the ledger and a chart with all the names on it with small photos of each individual next to the name.

Activities: Same as for Objective 1.

Objective 3: The learners will be able to recognize all of the numbers used to fill the ledger.

Materials: Cards with single digits on each card.

Activities: The teacher uses rote memory to help the learners learn to recognize each single digit. He then explains how they fit together to make larger numbers and uses the cards in a game to help the learners increase their ability to read the numbers.

Developing a curriculum

These curricula are just two samples, and the work involved in helping a group of illiterate learners to reach all of the objectives in either will be great. The literacy worker can use these examples to build a curriculum for his program, following the steps described in this chapter:

- Prepare a set of goals and objectives.
- Look at all available resources and decide what materials will best meet the objectives
- Design a set of learning activities to meet the objectives and place them in a logical sequence for learning.
- Design lesson plans for each class period following the learning sequence.

As he begins the literacy class, he will undoubtedly find that some things will work and some will not. The literacy worker should be open to changing the curriculum as he learns from experience.

Chapter 6: Implementing and evaluating instruction

Some literacy programs depend on the traditional methods of instruction used in the formal school system. But as we have seen, those methods which are designed for teaching children are not always the most appropriate methods to use with adults.

In adult literacy programs the most effective methods of teaching and evaluating learner progress are those which are learner-centered. The project must begin with a diagnosis of the abilities and weaknesses of each learner and must first prepare learners to begin learning. The project should then employ a variety of instructional techniques to promote self-directed learning and self-assessment among the participants.

Diagnosis

For a program to be effective, it must take into account the physiological and psychological factors that affect each learner's ability to learn and base instruction on the skill level of each learner. Since the learner's level of skills and some of the constraints she may be under may become evident only after observation, this diagnosis should continue as the program progresses. The following discussion, taken from Collie Verner's "Basic Factors in Learning to Read and Write," examines some of the constraining factors affecting the adult learning process.

Physiological Factors

Physiological factors involve sight, hearing and manual dexterity. To acquire literacy skills, a measure of visual acuity is essential. Research on aging and adult learning has shown that as adults age, the ability to perceive fine details decreases. Adults may need more light and larger letters in order to facilitate learning, or they may have vision so impaired that they cannot learn to read without glasses. Glasses may not be available or may be too expensive, and in this situation there is little that can be done. The teacher must assess the visual acuity of her learners before putting them in a situation where they can only fail.

Hearing is a lesser problem, but severe hearing impairment is a constraint on learning literacy skills. Adults with hearing impairments learn compensating behaviors that make it difficult for a teacher to judge their ability to understand spoken language. Nonetheless the teacher must be sure that when she speaks the learners understand what is said.

As many illiterate adults may have been involved only in manual labor that requires the use of large muscular systems, they may find it difficult to perform the delicate and controlled movements of the hand involved in writing. The teaching of writing begins with letters that are larger than normal to allow for this difficulty.

Psychological Factors

Psychological factors that can constrain a learner's performance are attention, abstraction and motivation. As adults mature they develop defenses that shield them from many of the stimuli that crowd their environment. These defenses can be a barrier to learning. An illiterate adult may find it difficult to maintain sustained learning and to differentiate the elements of the learning stimuli that are crucial. The teacher must help the learners to attend to the learning by providing an environment that is free from distraction. At the same time, she must provide a learning stimulus that has a strong appeal to the learner. As the learning progresses, the teacher must monitor this possible problem and alter both the environment and the learning stimuli to meet learners' needs.

Adult illiterates live in the "real world" and are rarely called upon to express or perceive reality using abstract symbols. Written language involves abstract symbols - letters and words that represent reality, and thus may not be immediately meaningful to adult learners. The teacher should diagnose the ability of her learners to grasp the relationship between visual symbols and reality. She can then build her lessons on the abstracting skills the learners already possess. For example, some learners are already very familiar with the visual representations found in drawings or photographs. Instruction for literacy can be based in this case on matching letters and words with pictures. This method would not be as effective with learners who have had little experience using pictures to represent reality. (See Chapter Seven for a complete discussion of visual literacy.)

A teacher cannot assume that all learners will be equally motivated to become literate or that those who are motivated at the outset will stay that way. An illiterate adult is usually not motivated to learn in order to meet society's expectations, but, rather, learns in order to meet internally felt expectations of immediate or long-term personal benefit. The teacher should attempt to learn what motivates each learner so that those factors can be reinforced throughout the learning process through discussion and dialogue.

Literacy Skills

Most illiterates have some literacy skill, and the teacher should make an effort to identify those skills prior to beginning the learning program. (Information on the learner's skill level should be available from the needs assessment conducted earlier.) Learners should be given a chance to demonstrate their ability, and demonstrated abilities should provide the skill level on which learning activities are based. Information should be gathered during the needs assessment described in Chapter Four.

Pre-reading exercises

Getting new readers ready to read is an important step in the learning process. Sarah Gudchinsky, who pioneered work with the Summer institute of Linguistics on pre-reading exercises for illiterates, believes

that many learners fall because they are not ready to begin reading. She notes that most literacy programs do not have pre-reading exercises as a part of planned literacy activities.

Gudchinsky summarized her findings on pre-reading skills in "Introduction to Literacy: Pre-Reading" under the categories of psychological set, oral skills, visual skills, manual skills and reading pictures.

Psychological Set

The psychological set indicates whether a learner knows what reading and writing are all about. In the learner's environment, the learner may never have seen anyone read or write or heard anyone read aloud. The teacher should involve the learners in activities that lead them to an understanding of what can be achieved with literacy skills. Gudchinsky suggests that the teacher read aloud to the learners. The teacher can also write stories from the learner's dictation and then read them back several times over a long time period. The learners should see examples of real communication through written language. The teacher can read fables on common products, share letters from friends, and help the learners carry on a correspondence with someone through letters. Gudchinsky also includes motivation in the psychological set.

Oral Skills

There are two oral skills important to pre-reading: fluency in the language of instruction and the ability to focus on the phonemes (sounds) and morphemes (root words, prefixes and suffixes) of that language. If the literacy campaign is to go on in a national language, the learners must have developed a high degree of oral fluency in that language before they attempt to develop literacy skills in it. An important pre-reading exercise can be the teaching of oral language skills in the national language before literacy training begins.

Even if a learner is fluent in the language of instruction, she may not be aware of the phonemes that make up each word. Or, she may not be aware of the functional elements of the language like prefixes and suffixes. Gudchinsky offers the following example of a pre-reading exercise to focus on these elements.

"Exercises for this purpose may include the oral production of words which begin with the same sound. The teacher says, for example: 'Some and sand sound alike. Can we think of another word that begins with the same sound?' The pupils then produce words such as silly or soup. A variant of this exercise is to call for words which rhyme, as for example, sand and land."

Visual Skills

The visual skills that a learner must develop are those that allow her to distinguish between letters that are different and to note letters that are the same. Gudchinsky states that learning should begin with letters that have obvious differences like "A" and "L"; then should focus on letters that look similar like "m" and "n", or "O" and "C"; and should end with letters that are the same shape but in different spacial relationships like "b", "d", "p" and "q", or "M" and "W".

Another visual skill is developing the habit of reading from left to right, right to left or top down. Each language has a reading direction and all pre-reading exercises should conform to the established direction.

Manual Skills

The manual skills needed to write letters and words should be fully developed before a learner begins to write. Early in the literacy lessons, the learners should begin to practice the fine details of writing letters or parts of letters. Gudchinsky suggests that this should not be an act of copying, but an act of reproducing visual forms from memory. The learners could begin by looking at a series of lines and circles on a blackboard. Those would then be erased and the learners asked to reproduce them from memory. When

these shapes are mastered, letters can be substituted, and when the learners are ready, the letters assembled into words.

Reading Pictures

As mentioned earlier, reading pictures may be difficult for some groups of learners. If there are difficulties with visual literacy, the teacher must address these in the pre-reading exercises. As the next chapter contains a section on visual literacy, that information will not be reproduced here. The literacy worker should remember, though, that visual literacy should be a concern in diagnosing the learners' readiness to begin.

Making arrangements

Arrangements for the classes, such as a place and a time to meet, should be kept simple. Since most adults have to work, arrangements need to be made to accommodate their schedules; this may mean meeting at night or early in the morning. The class could meet at different places and at different times in an attempt to accommodate everyone, but then learners would have to keep track of when and where each class was being held. A set schedule and place can make it easier for learners to attend class regularly. If there are reasons to change the time or place on occasion these changes can easily be accommodated.

The learning environment should give learners some privacy. The place should be comfortable and not overly formal. Having students sit around a table, in a circle in chairs or on the floor works well because this arrangement is more like other adult gatherings and places the teacher in an equal position with the learners. If the class can meet in someone's house, this, too, will be more like an adult gathering. If a school room or other public room is to be used, thought should be given to changing the arrangement of the chairs. The chairs must also be adult-sized, and the place needs sufficient light and quiet.

In the beginning, the class should be timed in consideration of the fact that the learning activity is new for the participants. Forty-five minutes to an hour will, most likely, be sufficient. Adults will be more likely to continue class if it does not take too much of their time. Once they have encountered some success in learning, they may decide to spend more time, but that should be their decision.

Figure



Unlike the formal education system where the student arranges her schedule to accommodate the educational activity, literacy activities must change to accommodate the schedule of adult learners. Seasonal work and underemployment have to be taken into account in planning for a literacy project. Where the learners are farmers, for example, the start of the rains may signal the need to concentrate on work in the fields and classes may end until the season is over. Even if that means there are only two months during the dry season when farmers have enough time to participate, the project must be scheduled accordingly. Each dry season the farmers may come together and study four or five nights each week, but their limited availability will govern the amount which can be taught in one season. During the ten months of hard farm work, they may only be able to get together twice a month to review. When the dry season comes again, however, the instructional cycle can resume and they can continue their active participation in the literacy class.

When the literacy worker begins to design the program, she might be tempted to look at what would be ideal for her, instead, the planner must look to the participants to identify time and scheduling constraints on the plan. The literacy worker should keep in mind that the learner is central to the planning of a project.

Learner participation

The more active and involved learners are in the classroom, the more they will learn. To foster this participation, the teacher must use methods that allow and encourage it. The teacher can use a number of simple techniques to foster learner participation:

- Ask the learners questions and use activities that encourage them to talk with each other.
- Keep an informal account of which learners are participating the least and make an effort to encourage their participation.
- Keep an informal account of the amount of time she herself is the active person in the class and reduce that amount of time as much as possible.
- When there is a difference in skill levels among learners encourage those who are more advanced to work with those who need additional help as peer teachers.

- Ask the learners from time to time how they feel about the classes and use this feedback to make improvements.

These techniques are meant to increase the amount of time learners are active in the class to decrease the amount of time the teacher is active to encourage interaction among participants and to provide the teacher with a feedback system to help tailor the literacy learning activities to the needs and desires of the learners.

The community resource people that were identified earlier should not be forgotten. Once classes begin the literacy worker may tend to focus on the people in the class to the exclusion of the rest of the community. There are people outside the classes who are important to the program; the literacy worker should continue to seek their advice and active involvement on a regular basis.

Group dynamics

People act differently in a group than they do in a one-on-one situation or alone. There is a good deal of research into the use of group dynamics in informal and non-formal learning situations. Two aspects of these research findings are of particular interest to classroom work with adults: overcoming initial reservations over participation and learning and breaking habits which may become ingrained in adult learners.

When adults come together in a learning group, there is an initial shyness that hinders their participation. Although this is a larger constraint at the beginning of a literacy program there are some elements of this reserve which can linger after the course has been going on for some time, particularly at the start of each class session. The teacher can design activities for the beginning of each class session which break down these barriers and help people to interact as a group.

One way to do this is to pass an object around the class and ask each person to comment about it. This object could be a picture that each learner is asked to describe using a word which begins with a certain letter or sound. Or, a block with a letter on it could be handed around and each student asked to say a word that starts with that letter. As the goal of the activity is to get everyone to contribute something from the very beginning, the exercise would continue until the object had been passed around to all participants.

Groups get into habits. Certain people may dominate the activities of the class, and certain people may never participate. Changing the seating or the teaching style can help break these habits or perhaps keep them from forming. For example, participants may sit in a circle for most of the classes, but on occasion they could sit on two sides of the room to compete as teams.

People will act differently if they are close or far away from the teacher, and the teacher should change her seat from class to class or activity to activity. Or, to change pace in the middle of the class time, the teacher could stop and ask everyone to stand up. This not only stops the class, but also breaks up any patterns that may have developed. Standing up also provides recreation and relaxation.

Creating a good climate for learning

The adult learning theories that were presented earlier in the manual can help the literacy worker create a climate in which the learners can be successful. In addition there are four basic "environmental" conditions that are essential for effective adult learning.

- The learning atmosphere must be warm, friendly and free from threats to the learner. Learners should not feel rejected or sense that their actions or comments are met with cold appraisal, creating undue anxieties. Such anxieties diminish the enthusiasm and energy learners will have for the other problems of learning.

- Teachers should encourage new ways of self-expression among the learners. Each learner should have opportunities for experimentation. Teachers should see that all learners are free from ridicule when they make mistakes during these periods of experimentation.
- Learners should gradually become independent of the teacher's learning supports. A delicate balance must be sought which nurtures independence without contributing unnecessarily to undue pressures for performance. The relationship should be one which is both continuous and interdependent between teacher and adult learners.
- Effective three-way communication is essential - from teacher to learner, from learner to teacher, and from learner to learner.

To foster the development of a positive learning climate, teachers will first need to encourage learners to share ideas and feelings among themselves. Learners' demands outside the classroom, the teacher's agenda, and the learners' goals all need to be discussed openly. Then, and only then, can common learning goals emerge. Stimulating open discussion is a skill the teacher must seek to develop early on.

The teacher needs to develop two additional skills. One is that of establishing clear "rules of behavior" for the group, the teacher included. These standards should be developed and agreed upon by the teacher and learners together. Another skill is that of fostering the process of learner self-evaluation. In order to best learn from their own experiences, adult learners must constantly assess their own efforts and build toward shared goals.

Grouping learners

In format ton gathered during the needs assessment and the diagnosis of constraints on learning can be used to group learners. There are several basic advantages to grouping adult learners. First, adults learn at different rates. Pairing or grouping individuals with similar levels of skill and ability gives those learners an opportunity to progress together.

Second, people learn differently. Some learners whose reading comprehension is high learn best from concentrated attention to printed material, while others will be helped most through the presentation of visual concepts. Grouping will provide an opportunity for the teacher to develop techniques targeted to several small groups with differentiated learning abilities.

Third, through grouping, a teacher can give individual attention more effectively. She may only have to develop approaches for each of four groups rather than different approaches for each of 20 individuals. Then, too, the individuals in the groups learn from each other. Small groups allow for more interaction between learners.

Classroom activities

General principles of adult learning provide a context in which to place specific activities for the classroom. A classroom activity can have one or more of the following objectives:

- To learn new material;
- To practice learned material;
- To motivate the students to continue to learn.

Activities which address all three objectives should be included in each class session. The teacher might begin by reviewing what she did in the last session, then teach something new, briefly review everything learned so far, and then conduct an activity that makes the students feel good about what they are doing. The following sample activities are ones which could be tried and adapted. As their experience grows, teachers will also want to design new activities to suit the particular needs of their classes.

Traditional Methods

This manual has emphasized the fact that adults differ from children in the ways they learn. This does not mean that all traditional teaching methods are of no value to adults. There are times when it is appropriate for the teacher to stand in front of a class and explain new material, when the class can use drills to learn or review material or when learners should read aloud from a book or pamphlet.

In some ways, these methods are easier for a teacher to use, and students quite often expect them because the formal school model is their only educational experience. The literacy worker should not be afraid to use these methods, but she should be aware that there are other activities that can be used in combination with traditional methods to make the class more interesting to adults.

When a time comes for a teacher to stand in the front of a class and explain new material, the learners should be seated in an informal circle, not in rows of chairs. The presentation should be modeled on the explanation the learner might get if she had asked a question of a friend in the regular course of the day.

For example, the teacher can present a new letter by showing it around the class to see if anyone already knows it. If someone does, then that person can read it. If not, the teacher can explain the letter in a normal tone of voice giving the name of the letter, its sound and several words that use it. A card with the letter on it can be passed around the room along with a list of words that use that letter.

When drilling is needed, adults should not be made to sound like a group of school children reciting their lessons. Instead the group can be broken up into pairs to practice, and that makes the room sound like a group of adults talking. The same procedure can be used for reading aloud.

"Real" Activities

As soon as possible, the class should be doing real activities, that is, practicing skills that they can put to use. For example, after they have learned to write the alphabet, they can learn to write their names. In this way, they will feel that the time they are investing in this effort is of real value to them.

Learners should be able to participate in simple reading and writing activities that are culturally relevant, that are of value to them and that motivate them to continue learning. For example, the recording of births, marriages and deaths in the family might be important. The teacher could design a standard format to keep this record using a few simple words and numbers. Reading a calendar to learn the date and know when major festivals are to occur might serve this purpose, too.

Blackboards and Visual Materials

The next chapter is focused on instructional materials, including the preparation and use of visual materials. These materials deserve mention here, also, since so many classroom activities can be built around them.

In addition to large-format visual aids, like flipcharts, some materials should be small enough that they can be passed around the room or held by learners while the teacher presents information.

Putting display materials in the hands of the learners helps to involve them as active learners. If the teacher always uses the front of the room for display, the learners become inactive listeners. If the teacher must use a single blackboard at the front of the room, the learners should be asked to come to the board at different times in order to break down the concept that the teacher is "in charge".

To learn how to write, students must practice. Blackboards and other large surfaces are good for demonstrating how to write, but for practice, the learners need paper or a slate. The small muscle movements needed for writing on a piece of paper are different from those needed to write on a large surface, thus the need for practice on paper. Although there may be a substitute that can be used, like wood, slates or large dry leaves, a sufficient supply of some form of paper is usually necessary for a literacy project. The literacy worker may find that paper is a scarce commodity in her environment, and she may have to take initiative to find a source of scrap paper.

Games

Games are particularly effective in helping people acquire skills that require a lot of practice, like learning to recognize letters. The next chapter will give some examples of games that can be used with literacy. Games which are popular or traditional in the culture can also be adapted for use in literacy work.

Peer Teaching

Peer teaching, the use of learners themselves as teachers, is a particularly good way to introduce new material. For example, each person in the class can be asked to introduce part of a lesson. This gives learners added motivation to learn their part and to listen to the presentations of others.

Peer teaching can also be carried out in pairs or small groups. The teacher can divide the class into groups of two and have them practice with each other. This will allow the teacher to go from group to group and work with each learner individually while the rest of the class is working.

Writing Practice

Learners must spend considerable time practicing the motor skills involved in writing. In the beginning, the teacher should demonstrate, one letter at a time, the basic strokes or movements involved in writing a letter. She could then ask learners to trace the letter with their fingers. After sufficient preliminary practice, she should write a letter on the top of a piece of paper and ask learners to copy it several times. As learners practice writing, the teacher should go around the room to watch each of them and to give individual advice where necessary. Some writing practice can be done in the class, but as it is time-consuming the teacher may want to suggest that most practice take place outside the class.

Class Story

Eventually, the students will be able to write more than letters and single words. At that point they can begin to write whole sentences, following the teacher's lead. Later, as the physical act of writing becomes less of a burden, the class can create its own stories to write. The teacher can facilitate this by asking a question about an event everyone knows about, a recent marriage celebration, for example. Each of the learners can say one thing she knows about this event and all the learners can write the sentences down.

As the class becomes more skilled the teacher can suggest a subject and ask each student to write down one sentence. Then, all of the sentences can be put together into a story.

Motivational Discussion

Motivation to learn is crucial to success of a project. Although a learner's motivation may be high at the beginning of a program, she may lose interest as the class progresses. A group discussion among all the learners allows participants to voice the feelings that are undermining positive motivation. Issues that have led to negative motivation can be resolved in these discussions and relief and renewed energy can result. To initiate a productive discussion, the following techniques can be helpful.

- As described earlier, discussing issues in small groups and reporting these discussions to the full group can be an effective means of encouraging maximum participation. The flow of ideas easily increases as learners stimulate each other's thinking, each participant can make a contribution, and group unity increases. This method gives each individual a chance to express her feelings and generates a list of suggested improvements to be made in the program.
- Roundtable discussion is a reliable way to involve learners in a more directive way. In this technique, individuals with differing viewpoints present their opinions while a segment of the class listens in and then follows up with questions. There is an element of suspense in using the technique, since the posing of the questions is unrehearsed and depends largely on the level of learner interest and participation in the discussion.

In organizing a roundtable discussion for the first time the teacher should work with learners on the panel to help them develop the content of their short presentations. Each should present what she views as the major issues that are causing the program to fall to reach its objectives. Then, during the panel presentations, all members of the group should be urged to think of comments they want to make. After the presentations have been made by panel members, someone from the group should lead the discussion to make sure that all those who want to comment have the opportunity to do so.

- Role playing is also a productive way of learning, allowing participants to step out of their normal roles and into roles which they may never otherwise be able to assume. In short, role playing teaches the important skill of putting yourself into someone else's shoes for a brief period of time. In literacy classes, learners can put themselves in the role of a teacher or in the role of a learner who has greater skills than they do. Teachers can put themselves in the role of participants to better understand the forces acting on the motivation of the learners.

To organize this activity the teacher first selects a particular point or attitude to illustrate. Then she describes the characters learners are to play. The class can then select participants rather than having the teacher assign the parts. Participants are given 10 to 15 minutes to prepare themselves for the role play. At the same time, those observing the role play are asked to focus on one or two specific issues. The role play then continues until interest is at its peak (5 to 20 minutes). The role play is then stopped and observers and participants discuss the issues it has raised.

- Special measures may be needed if irregular attendance, poor quality of preparation, erratic attention in class or other signs of apathy appear. The teacher must be prepared to analyze the situation to determine both her own part and that of the learners in the difficulty. Sometimes this analysis can take place in a group session. At other times, it will require a personal conversation with individual learners. A few techniques may help to minimize or resolve these motivational problems:

- Periodic class surveys to determine how well the class is meeting learners' needs.
- Personal interviews through which the teacher lets the learner know of her concern and her interest in the learner and her work.
- Guidance counseling sessions in which an outsider may be called upon to assess the situation.
- Private tutoring in one-on-one sessions with the learner after class.
- Variations in teaching designs to accommodate differences in individual learning styles and individual responses to teaching stimuli.

Numeracy

The base of numeracy instruction should be the oral math skills of the learners. These should be measured in the early diagnosis to provide a beginning point for numeracy activities

For example, the learners may be able to add and subtract using money; they may be able to divide using an amount of food and a number of people, and they may be able to multiply by five acres the number of hours needed to plow one acre. They may be able to do these calculations orally, but not with numbers on paper.

First, the learners should be given an opportunity to practice these oral skills using situations they are familiar with. The teacher can then introduce activities to help them apply those oral skills to new situations. Once this skill level is established, the teacher can present similar situations using illustrations or real objects along with the written numbers that represent those calculations. At the same time, the teacher should be sure to teach all the numbers and signs of the different mathematical operations.

The next step is to present real situations and ask the learners to calculate the answers using numbers. Finally, the learners should be asked to calculate answers using only numbers with no analogy to a real situation.

All of this work will have been done in relation to the mathematical skills the learners had when they began the course. When these oral skills have been translated into calculations with written numbers the

literacy teacher can move on to new math skills that may be useful to the learners. Unit pricing for judging value in the marketplace, simple accounting for small business activities, calculations important to family planning, nutrition or child health are possible examples.

Sample numeracy games are presented in the next chapter that can help learners practice these skills and learn new skills they can be of use in their daily lives.

Testing and evaluation

All development projects should include some form of evaluation and a literacy project is no exception. The success of a literacy project depends to a great extent on the progress learners make toward the goals and objectives set out in the curriculum design. The literacy worker must develop methods of measuring the progress, keeping in mind the special needs of adults for respect and a sense of control over their own learning.

There are three types of evaluation that the literacy worker should consider for accomplishing this task: summative evaluation, formative evaluation and learner progress reports. Summative evaluation may be the best type for large projects that must justify their use of resources. This form of evaluation uses a number of techniques to provide a picture of the accomplishments and overall value of the project.

Formative evaluation is useful to any project, even the smallest. This type of evaluation provides specific feedback on the progress of learning activities and on ways that a project can be improved.

Learner progress reports help the participants themselves see clearly the progress they are making and can increase motivation to continue their efforts.

Summative, Evaluation. Summative evaluation is the most difficult and time-consuming of the three, and most literacy workers will not be called upon to design and implement an elaborate summative study. However, a literacy worker may be involved in a summative evaluation as a data collector, and the results of a summative evaluation can be of help in improving a project. For these reasons and because the methods that are used can be helpful in understanding and carrying out the other two types of evaluation, a brief description of some of the techniques used in summative evaluation is presented here.

A summative evaluation looks first at the goals and objectives of the project and then designs tests to show how much progress has been made in achieving the objectives. In addition, a summative evaluation often makes a determination of the costs and benefits of the project to see if the resources expended on the project have been worth the effort. A summative evaluation may also focus on the cost-effectiveness of the project in comparison to other ways of achieving the same goal, or it may focus on specific aspects of the project such as access to learning by women.

For our discussion, only the achievement of the stated objectives of a project will be covered in detail as that is the major concern of most literacy workers. Even so, literacy workers should have a basic knowledge of the other summative techniques so they will understand them if they are applied to their projects.

A cost-benefit analysis first looks at what would happen if no program were to take place. In the case of an adult literacy program, it is assumed that the literacy rate will continue in its historic pattern (which might be either up or down); the benefit of the literacy program is thought to be that the literacy rate will increase more rapidly.

Next, a set of formulas are used to figure the monetary value of the benefit of higher literacy rates for society as a whole. In the case of literacy, monetary value is usually computed by looking at the increased income of a literate person over that of an illiterate person. An assumption is made that this increase in income represents the value the marketplace has put on literacy.

The monetary value of the benefit is compared to the cost of operating the project in a cost-benefit ratio. The ratio gives project planners an indication of the overall value of the project. Although this kind of

evaluation overlooks many of the non-economic benefits of literacy, cost-benefit analysts provides a tool for helping a nation look at how it will allocate scarce resources.

Cost-effectiveness is the comparison of one means of reaching a goal with another. For literacy programs, this is usually calculated as the cost of making adults literate versus the cost of expanding the school system to make more children literate. The effect upon the overall literacy rate is then calculated for both to see which means has the greatest effect on the literacy rate for the same amount of money.

Summative evaluations also examine the efficiency of an educational program. This data, too, can be of value to a literacy worker in Judging and improving project performance. To better understand the efficiency of a program, learner progress must be measured through testing.

To test for learner progress, the evaluator must go back to the instructional objectives. Many evaluations make the mistake of looking only at the goal of the project. This by itself provides a poor measure of performance. Measuring the attainment of instructional objectives gives a clearer picture.

For example, the goal of a project may be for learners to reach a primary school grade four reading level, yet only a small percentage of learners may reach that goal. Many learners may have learned all the letters of the alphabet or hundreds of words, and some may also have acquired some ability in writing. Although all the learners have not achieved the goal of the project they have completed several of the objectives. Within each of the objectives, too, the learners may have developed some or all of the requisite skills, and a breakdown of skill level gives a better picture of the progress of the learners.

Testing procedures should thus be designed around the specific learning objectives of the project if, for example, learners are expected to be able to recognize each letter of the alphabet, a simple test would require them to circle selected letters out of a series of different letters. If the objective is that learners be able to write the letters of the alphabet, the teacher might test this ability by calling out the letters for the learners to write. Similar tests would be developed to measure learner progress in achieving all the objectives of the project

Figure



The scores on these tests measure each learner's performance in relation to the objectives of the program on a scale of zero to 100 percent; they also show the level of attainment for the class for each objective. This information can pinpoint areas where the teaching may be weak, as, for example, in the transition from letters to words or from the recognition of letters and words to comprehension of meaning. In addition, planners can use test results to illuminate changes in project design that can lead to a better program.

Formative Evaluation Formative evaluation allows for a constant process of feedback and assessment throughout the program While the goal of a summative evaluation is to determine whether a project as a whole is working or whether it is cost-effective, the goal of a formative evaluation is to provide information for the immediate improvement of the program. The sources of formative evaluation data are tests, learners, teachers and project staff as well as outside observers.

The test examples presented in the discussion of summative evaluation could also be used as a model for a testing in a formative evaluation. But for a formative evaluation the overall score is of less value than the correlations between high scores or low scores and various project design factors. If some teachers are using materials or methods different from others and their learners are getting higher scores, then those methods and materials should be tried out in other classes. If scores show an inverse relationship between the age of the teacher and success of learners, thought might be given to recruiting younger teachers.

Learners, teachers, other project staff and outside observers all have valuable observations to make that could improve the project design, but they may be reluctant to offer criticism. The feedback model presented in the section on teacher training in Chapter Four is a good way to encourage them to share their observations while ensuring that the positive elements of the project design are not forgotten.

The evaluator should conduct regular sessions with each of these groups to ascertain their views on successful project elements and how best to improve the project. The project staff should review any suggestions and make changes if possible. Then, the evaluator should be sure to apprise the sources of that data of any action taken. If no action can be taken on a particular suggestion, an explanation should be given. By showing those involved how their suggestions are being used, the project will continue to get good feedback. Learners, teachers and staff will feel that they are actively involved in the project and have some control over project design issues.

Learner Progress Reports. Adults may object to the use of formal, objective tests to Judge their progress. Too much pressure to perform well on tests can undermine their motivation to continue with the classes. It can, however, be a source of satisfaction to learners to see the progress they have made through some form of evaluative process.

A learner progress report provides this feedback without the possible negative effects of a formal test. To do this, the same kinds of test formats that were presented in the section on summative evaluation could be suggested as a way for learners to test themselves. The learners should not be required to share the results of the test with anyone else and should also have the option to forgo the test altogether. It should be made clear that the test is meant to measure the progress of each individual learner and not her standing against the rest of the class.

A graphic representation may be useful in allowing the learner to see her progress. A chart that marks each learner's progress toward the goals of the course will help demonstrate how much they have already learned. For example, the teacher can make a simple bar chart with increments for each letter and for each word on the word list. The student can watch her bar extend as she learns each new letter and word.

Figure



Chapter 7: Instructional materials

Literacy teaching materials, like teaching methods, must be geared to the expressed needs and aspirations of the learners since these instructional materials help to support classroom activities. They should also be designed to complement the methods used in the literacy project. In many cases this will require the teacher to adapt materials from other sources or develop new ones which are tailored to the needs of the particular group.

Visual literacy

Any discussion of teaching materials, which often rely on visual images, must begin with the concept of visual literacy. The term can be defined as the ability to understand the visual language of pictures and drawings.

Throughout this manual, illustrations are used to make the text more interesting and more easily understandable. Their inclusion assumes that readers are experienced in communicating with and learning from illustrations. Such a presumption, however, cannot be universally made of all learners. Like reading, visual literacy involves the ability to look at abstract images and translate them into a real object, feeling or action. When a person reads the word "run," he associates it with the action of running. When he sees a drawing of a boy running, he also associates it with the action. Although the drawing is more representative of the action, it is still an abstraction and not the "real thing."

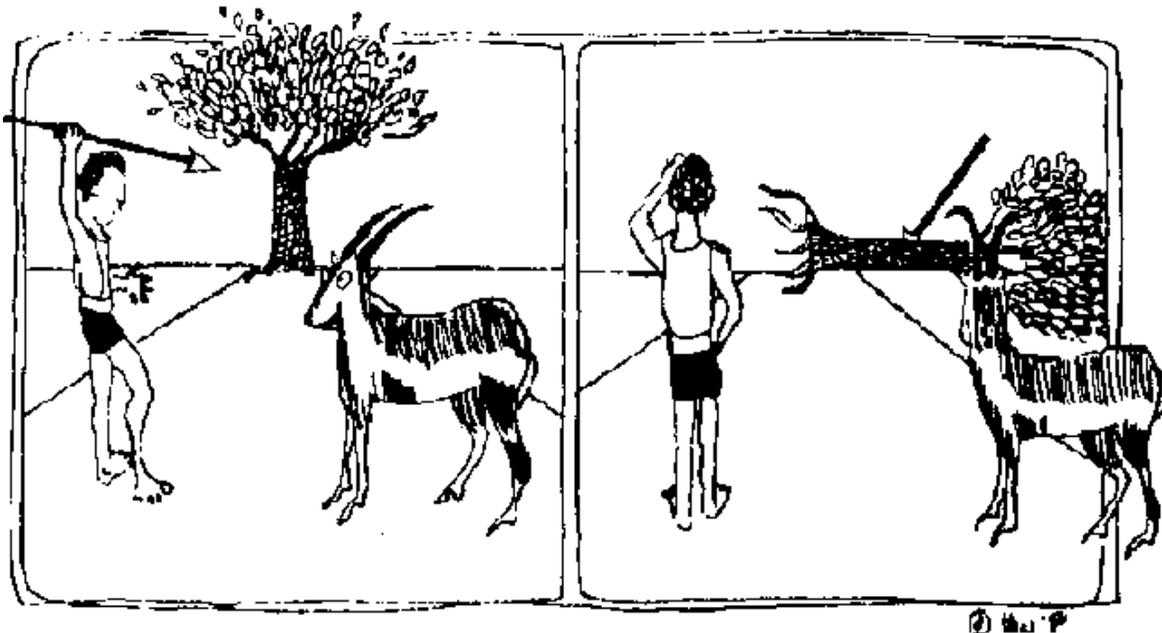
For individuals who grow up seeing images on paper, on TV and in film, visual literacy is a finely developed skill that comes as second nature. People brought up in an environment where pictures and other visual media are nonexistent or rare sometimes misinterpret pictures and drawings. Research has shown that even photographs and realistic drawings can be misinterpreted by people from cultures that make use of few graphic or printed illustrations.

A number of factors contribute to misinterpretation of visual images:

- Cultural factors affect the use of visual symbols. For example, when an American sees the stylized drawing of an eye that is the logo for a major television network, he knows what it means. If someone from the island of Java were to see the same logo, he would not know it represents the network nor realize that it is a stylized representation of an eye. On the other hand, if the American were to see a Javanese shadow puppet from the Wayang, he most likely would not understand what it represents. The Javanese, though, would know the name of the god or person which that puppet represents and would be able to explain the story and the personality of the character.
- Size can cause misunderstanding. A fly that is drawn the size of a piece of paper may be misinterpreted because real flies are very small. If the observer has poorly developed visual literacy skills, he may have difficulty making the transference from the drawing to reality.
- Perspective can be misinterpreted. Background details can confuse viewers who are not familiar with the visual concept of perspective. For example, a drawing of a man ready to throw a spear at an antelope in the foreground with a tree in the background can be seriously misinterpreted if the tree happens to be placed between hunter and animal. Or, a picture of the heads of two people talking can look like two balls or two coconuts. The viewer, of course, has never seen heads that were not attached to bodies.
- Color can cause confusion. For reasons of economy, literacy materials are usually reproduced in black and white. With some objects, color is important for identification. In India, a woman shown a picture taken of her six months before said it could not be her because the woman in the picture was wearing a red sari. She did not have on a red sari at that moment, though she had been wearing one six months earlier.

These problems can be avoided in several ways. First, existing images that everyone in the culture already understands can be used. Second, illustrations that have been shown by research to be more easily understood can also be used. Third, the literacy worker- should pretest all of the illustrations to be sure they are understood by the learners. And fourth, the teacher can 1 each learners how to read illustrations - to become visually literate. Using all of these methods in combination will help to ensure that the illustrations used to support literacy efforts are understood by all of the learners.

Figure



Using existing images

To be certain that the image is understood, the teacher should begin by using real objects. There are limits to this approach, however. Although using a rock, an apple or a tree to represent itself is a good way to introduce these words, some concepts like power, freedom, respect and dignity, are difficult to visualize. Other concepts may be ambiguous, like mother or father. A picture of a woman with a child could mean mother; it could mean woman or birth. Even pointing to someone in the room who is a mother may not be clear since she is also a woman and has name

Each culture has an iconography of its own. An iconography is a culture's art of representation by illustrations pictures, figures and images. This iconography may be used in masks for dancing, in drawings on the walls of houses, in religious objects, in costumes for theater, in puppet shows or in designs in cloth. The ways that culture represents concepts, people and stories may be useful as instructional aids. Others, like religious objects, may not be appropriate.

In almost any community in the world it is possible to find someone who can draw and usually that person is used to drawing in ways that will be understood by others. In India, for example, women who draw scenes from religious stories on the sides of their homes might be asked to help in illustrating instructional materials. The illustrations would be easily understood by the people from that area, even if they might be difficult for the literacy worker to understand.

Easily understood images

There are several styles of drawings and photographs that can be used for illustrations The following examples have been tested for ease of understanding.

Figures 1, 2 and 3 are the most abstract and the simplest to draw. There is very little detail in the subject, foreground and background. This level of illustration may suffice, depending on the learners' abilities to abstract, the teacher's ability to communicate and other visual aids being used to complement these drawing styles.

Figure 1

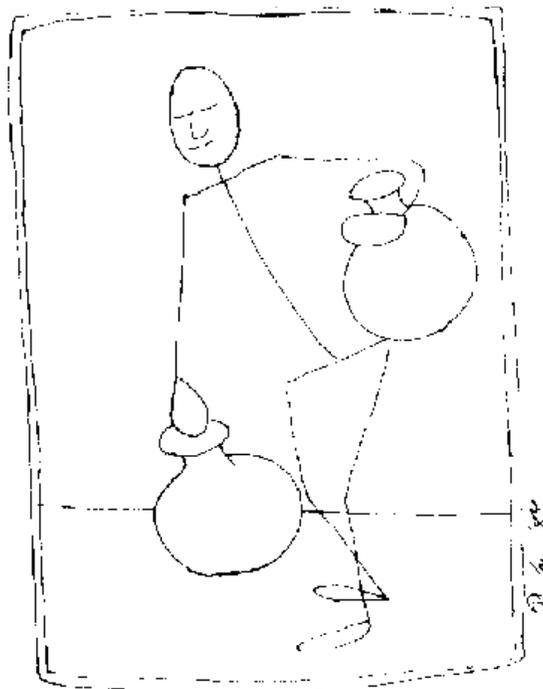


Figure 2

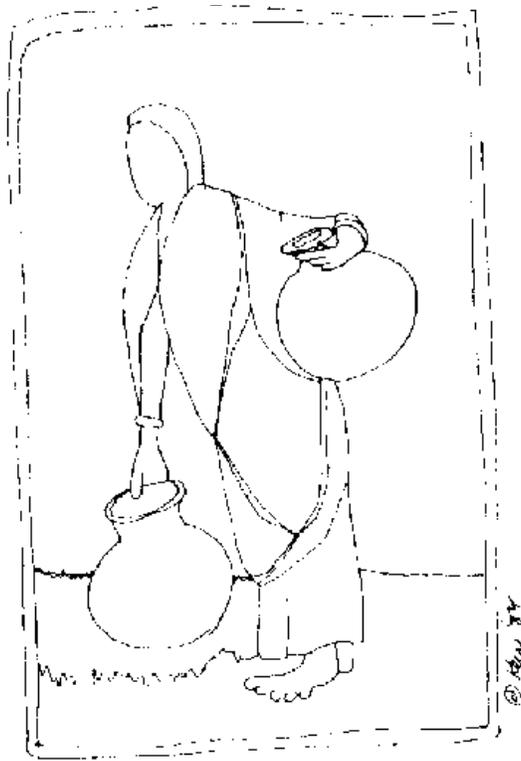
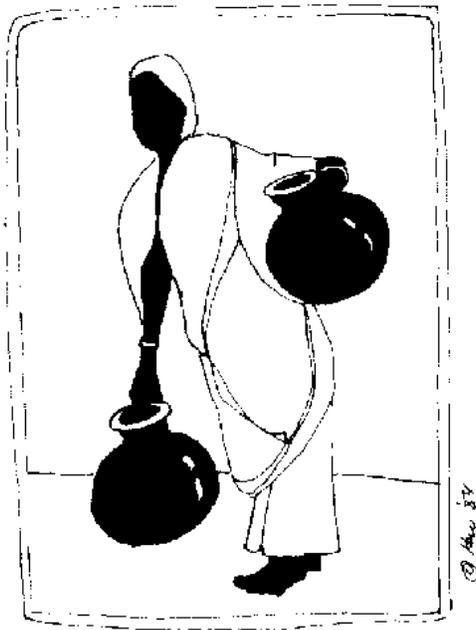


Figure 3



Figures 4 and 5 below are more realistic line drawings and are the most difficult to draw. Although both styles depict the subject and the foreground in detail, only Figure 5 has a detailed background. Research has shown that too much detail can detract as much from understanding the picture as too little detail can.

Figure 4



Figure 5



Figures 6 and 7 are photographs. Figure 6 is heavily detailed, while Figure 7 has the foreground and background blocked out, leaving only, the subject.

Figure 6



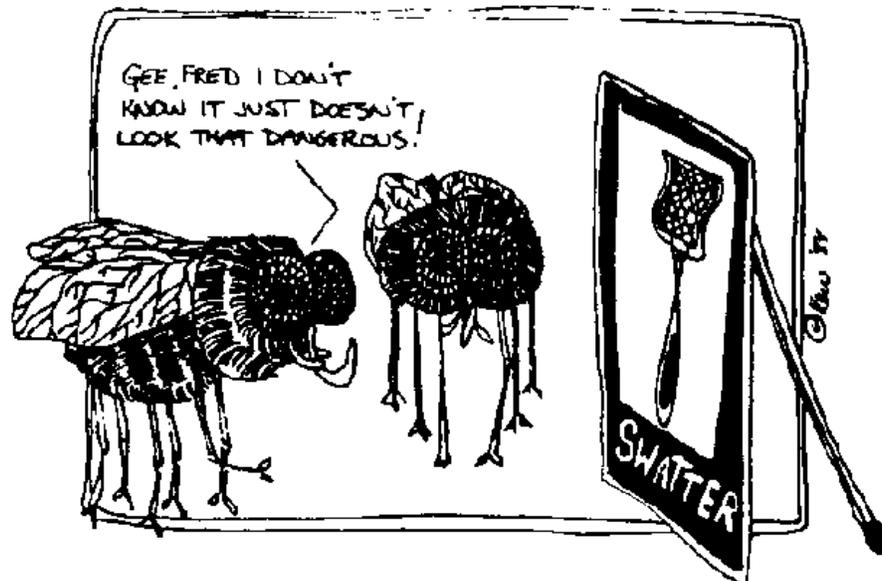
Figure 7



Current research indicates that illustrations like Figure 4 are most easily understood. Illustrations like Figures 5 and 7 have also been found to be effective in communicating with non-literates. Research findings on visual literacy for Nepal and Lesotho are available, and there may be research available on the country where the literacy worker is working. While this research may help to narrow design choices, the literacy worker should also use the illustration pretesting methods suggested in the next section to determine which of these styles works best in his own community.

Regardless of the style of illustration used, there are some common concerns with comprehension. The object itself may be unfamiliar to viewers, the image may be culturally inaccurate or the picture may simply be poorly drawn. Some "markers" which are part of the drawings may not be understood. Arrows do not necessarily indicate direction, nor do X's imply negation. Misleading use of scale, such as an oversized fly; excessive or sparse detail; improperly drawn perspective; and complicated spatial relationships contribute to the misunderstanding of pictures. A group of pictures that show a sequence must be clearly presented since non-literates are not used to following a usual left to right or right to left sequence when reading.

Figure



As the literacy worker begins planning illustrations, he should keep in mind available resources. The literacy worker may be called upon to produce the images himself and there may be no photographic facilities available. This may place constraints on the types of illustrations that can be used in a literacy program.

Pretesting

Even when instructional materials contain illustrations common to the learner's environment, they should be pretested for understanding. Pretesting ensures that the message the illustrations are supposed to convey is what the learners perceive. Through pretesting the materials developer gains valuable feedback that will help to improve illustrations before time and effort is invested in producing finished copies.

The pretest need not be elaborate. The literacy worker should decide what he is trying to convey with each picture; show the picture to prospective learners or people similar to the learners; and ask them what they see. If what they say they see and what the illustrations are trying to convey are the same, then the illustrations are accurate. If there is confusion about the meaning of the illustrations among some of the people who see them or if some people give an incorrect response, the testor should follow up by

asking what the picture represents. If the answer is still not correct, the illustration is not working. If the answer is correct at this point, the testor should probe further with questions about why the illustrations were confusing at first. This should yield information useful in improving the drawing.

When doing a pretest, the illustrations should be the same as they will appear in the instructional materials. They should be the same size and color as these factors are important to understanding. If the literacy project is small, the pretest can be done informally with a few of the potential learners. If the project is large, then a sample of the learners must be used.

The standard, scientific procedures for determining the size and composition of a test sample are complicated, but there are some general rules that can help ensure the usefulness of the test. The total population of learners should be divided into groups that are representative of the diversity of the learners. For example, there might be one group of men and one of women. If there are ethnic or tribal differences in the population, there should be a group of each. There should be groups for any other significant characteristics, rural vs urban, lowlands vs hills, inland vs seaside. The testor must use his judgement to be sure that each significant difference is separated into a group. Then, at least 25 people should be tested from each group. Time, money and other constraints may limit the total number of subjects that can be tested, but a few people from each group must be tested if there is to be any validity to the results.

Developing visual literacy skills

Industrialized and urban societies depend on written signs to make important communications: street signs, signs that mark exits and signs that name stores and offices. Visual images with or without words are also used: stop signs, one-way signs, poison signs. While some of these images may be important to the learners, they may not be able to read all of them. The teacher should consider the development of visual literacy skills as an important objective of a literacy project.

If the learners have low levels of visual literacy, the teacher may consider adding illustrations to the materials as a way to help them to become more visually literate. The teacher must make an extra effort to help learners identify objects or concepts presented through the illustrations while going over other aspects of the literacy program. Yet the other parts of the literacy program should not be dependent on understanding the illustrations.

The teacher can teach visual symbols in the same way he teaches letters and words; as learners become fluent with these images, instructional materials can use more illustrations. The pre-test of illustrations should provide data on which kinds of illustrations are understood and which are not. With that information the teacher can prepare a series of illustrations ranging from simple to complex.

The teacher should start the teaching by comparing illustrations with the real object they represent. For example, a picture of an apple and a real apple should be presented together. With some of the simple drawing styles, the teacher could demonstrate how they are made and encourage the learners to make their own. As learning visual literacy requires exposure to illustrations, the teacher will want to collect a large number of drawings and photographs to aid in this activity.

Preparing materials

Peace Corps' information Collection and Exchange (ICE) has information on how to prepare and duplicate simple materials with resources that should be available locally. As those publications are listed in Chapter Nine, detailed techniques for materials production are not presented here. The following general guidelines can be followed to help keep the materials development effort simple and effective.

The literacy worker should look first at what already exists. Although these materials may not be perfect, they can be adapted or changed. The literacy worker might be able to use the illustrations and insert a new text that is more useful. Or, the illustrations in the materials could be cut out, and the learners could decide on the words for a new text.

Local artists and writers are another source of materials. Learners themselves may be able to draw, cut pictures from magazines or take photographs for use in instructional materials. Local government offices may have duplicating machines, typewriters or other equipment that can also be used in preparing materials.

Multiple copies of some materials may be needed for class activities. Some of the publications available from ICE describe how to do this with silk screening and duplication. Both of these techniques can be more difficult than they first seem, however. If duplication becomes a problem, a larger format that the whole class can read, such as pictures and words in a wall mural, should be tried. The literacy worker could also produce numerous single copies of practice reading materials and circulate them among the learners.

Learner-produced materials

Perhaps the greatest resource for producing instructional materials is the learners themselves. With help, the learners can easily produce their own learning materials. This is especially true for producing simple reading materials for practice after participants have learned the basic elements of reading. Most of the simple reading materials that exist are made for children and thus are of little interest to adult learners. Learners need strong motivation to read in the beginning when their skills are minimal, and materials which they produce themselves may provide tints motivation. If there are several classes going on at the same time, each class could produce materials and share them.

Whatever the subject matter, literature for new readers must be based on their familiarity with the subject presented. One source of such subject matter is everyday conversation. Such conversation may include stories or traditional tales and events in people's lives. In her work in Nigeria, Van Dyken found that a key to learner-produced reading materials was the presentation of the information in a form which is easy to read and which the reader fully understands. If one is to use spoken speech as a source of reading materials, it should be written by someone within a given language community who can present authentic thought patterns and concepts in a natural way. These stories can be collected with a tape recorder and then transcribed.

If photography is possible using equipment easily available in the community, the literacy worker could have people act out the stories and produce a photonovel, a comic book which uses photographs instead of drawings. If photography is not possible, a local artist could draw the necessary pictures.

A second source of content for materials is information that people are interested in having as a permanent record. People may want to refer to a book for agricultural information, health information, vital statistics and genealogy, a calendar of festivals, or a schedule of water availability from an irrigation scheme. The literacy worker can produce a book that provides this information in a simple fashion and allows the class to help in keeping it current.

If learners are involved in making the materials, the teacher can be sure that they will be interested in reading them. They will probably also be interested in reading similar materials made by other classes and sharing the materials which they themselves have produced. This interest is a strong motivation to practice new reading skills and keeps learners actively involved in the literacy program.

Preparing instructional games

Instructional games are particularly good for teaching skills that must be practiced over and over again for participants to learn them well - for example, learning the alphabet or learning the spelling of words. Learners play the games because they are fun; learning is accomplished without the pain of rote memorization that is so often associated with it.

To make a game, the literacy worker should first look at what he is trying to teach. He should take one simple objective and break it down into separate parts. If for example, the required skill is addition, the learner must add two numbers and come up with a third number that is the sum of the two. This activity can be broken into three parts, the two numbers being added and the sum.

A game should encourage maximum learner involvement and should be designed to work with as little participation of the teacher as possible. In the example, the literacy worker might develop a set of cards that have equations, or numbers to be added, on them and another set with possible answers. The equations are given to one team and the answers to another. The first group holds up an equation while the other has to find the answer. As further practice, the second side holds up the answer and the first must find the equation.

In Games and Simulations in Literacy Training David Evans further describes the variables to be considered in game design:

- Learning objectives. The skill to be learned in the game must be clear, and most of the time of the players should be involved in using that skill. The game designer should start with that skill and make progress in the game dependent on successfully using the skill. In the simplest game, letter recognition might be taught, and identifying a letter correctly should move the player along in the game.
- Single or Multiple skills A game can be simple and involve only one skill or it can require several skills. For example, a game could require the matching of similar letters out of a pile of blocks, each with one letter on it. Or, a game could require the learner to pick out letters that spell a word that corresponds to a picture of an object. Some games, like letter dice, can be used for single and multiple skill levels.
- Chance Versus skill. The outcome of a game can be determined by the skill of the player, by luck or by a combination of the two. For learning games, skill is a better focus, but games of chance can add excitement to an activity.
- Cooperation and competition. Some societies put great value on individual competition and some do not. Games are, quite often, designed for individual competition, but the rules can be easily changed to allow for competition between groups or competition against an outside "force" like time or quality.
- Individual Versus Group Activity. A game can be designed to be played by an individual alone or by a group. Games that can be played by individuals are particularly useful for helping slower learners practice skills or for self-study after class.
- Showdown Versus strategy. Games can involve a strategy to win or can be winnable against a criterion. A showdown game pits the player or players against a criterion of success with little or no reference to other players. In a strategy game, the player must consider the moves of other players to win.

Games that are played in the community can often be adapted for literacy purposes. In a nonformal education project in Ecuador, the community was found to be a very rich source of both existing games and ideas for game adaptations and new games. The examples in the next section should provide the reader with a number of good ideas for producing literacy games.

Sample materials

This section contains descriptions of some simple instructional materials that can be used to teach literacy skills. The resources mentioned in Chapter Nine provide many additional suggestions. (Most of the games presented here were developed in a project in Ecuador implemented by the University of Massachusetts with USAID funding. The descriptions are taken from University of Massachusetts publications listed in Chapter Nine.)

Traditional Materials

Traditionally, literacy classes have depended on literacy primers and letter, syllable and word charts. Examples should be available from other literacy programs run in the country where the literacy worker is working.

Charts and primers should cover the same material so they can be used together. Their content should be based on project objectives.

Useful charts include those which have all of the letters presented in the traditional sequence for the language being taught and those which show all consonant and vowel combinations. These charts are used for teaching and also for reference by the learners during class. Another chart with words and pictures of objects they represent would also be useful.

A primer is more difficult to produce. Most primers start with a single word or simple sentence and a picture on one page. The pages which then follow present simple sentences which explain an action, for example, "the man is voting," with an illustration that represents that action. All of the words on the initial list of words in the instructional objectives should be in the primer, with a limited number of new words being introduced on each page.

The following examples of pages from functional literacy primers provide a visual explanation of the need for clear illustrations, the presentation of key words and concepts, ways to break key words into syllables and form new words, and writing exercises.

In the first example, from Indonesia, a drawing of a shirt is at the top of the page. Under it are the words in Bahasa Indonesia for "this is one shirts". Each word is broken into syllables and into letters. Then each is put back together into syllables and a word. Finally the full sentence is put together again. At the bottom of the page are the single letters and the number one. Subsequent pages follow the same pattern adding new words and numbers.

Words and numbers

1



ini satu baju

ini	satu	baju
i ni	sa tu	ba ju
i n i	s a t u	b a j u
i ni	sa tu	ba ju
ini	satu	baju

ini satu baju

i	s
a	t
u	b
	j
	n

satu

1

The next example is from a functional literacy project in Ecuador which focused on the introduction of improved agricultural practices, the key concept is "soil needs fertilizer." Key words (needs fertilizer) are repeated immediately below the lead sentence end syllables from those words - "ce" and "bo" - are highlighted for reading and repetition exercises. Then several agriculture related words are presented both in print and in cursive for reading practice.

Reading practice

Leción 8



El suelo necesita abono
 La tierra orgánica tiene abono

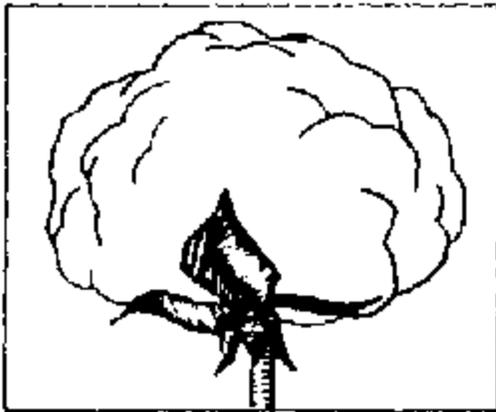
necesita abono

ce ci
ba be bi bo bu

abono *abono*
abonado *abonado*
barato *barato*
basura *basura*
cerro *cerro*
cebana *cebana*
parcela *parcela*
árbol *árbol*

In a Tanzanian example, two pictures are used with one word below each. After the pictures are discussed and the words are practiced, two simple sentences are presented. The two words are presented again for reinforcement prior to having adult learners practice printing the two words.

Somo 1 (First lesson)



Pamba (Cotton)



Pesa (Money)

Pamba ni mali (Cotton is wealth)
Pamba huleta pesa (Cotton brings money)

Pamba	pesa	pesa	pamba
-------	------	------	-------

Andika (Write):

Pamba _ pamba _ pamba _ pamba _ pamba

Pesa _ pesa _ pesa _ pesa _ pesa

Flash Cards

Flash cards are a set of cards with pictures and words that can be flashed before a class to tell a story or communicate an idea. The cards are usually made of stiff paper large enough to be seen by the class. There are numerous uses for flash cards in literacy programs, they are particularly good for practicing material that must be memorized: letters, syllables, words, numbers, punctuation marks and math tables.

The cards should contain only one piece of information per side, usually with a question on one side and an answer on the other. They can be easily made by hand using a marker, paint or charcoal.

In Curriculum Development for Functional Literacy and Nonformal Education Programs, Bhola describes six steps in designing a set of flash cards:

- The materials developer begins with a verbal statement of the teaching objectives of the message.
- The idea of communicating this message through a set of flash cards is discussed with clients.
- Questions about visual treatment are decided: should photographs be used? drawings? cartoons? The level of visual literacy of the learners will have to be considered in making these decisions.
- A story board is made: what cards will contain what visuals? in what sequence -to communicate the intended message?
- Rough illustrations are developed, words are added and the materials are pre-tested.
- Pictures and captions are finalized and discussion notes are developed for each card to help the teacher- in conducting the discussion.

Initially, the flash cards can be used to introduce new material by holding up the card and explaining what is represented on it. Once the class has been introduced to the information, the flash cards can be used for practice. The cards can also be used by a learner to teach the class or for individual practice between two learners. The teacher can also give a card to each learner and ask that he make a word from the letter or syllable on the card or make a sentence or a story using a word on the card.

EI Chulo

EI Chulo, which resembles a traditional Ecuadorian betting game, offers practice in matching words with pictures of animals. The materials involved are three dice, a set of cards and a game board. Each face of the three dice contains a picture of an animal. The game board consists of squares, each of which contains the written name of an animal and the number of points for the animal. Each card contains the written name of the animal.

To play, the cards are shuffled and dealt to the players. Players choose three of their cards and place them on the corresponding squares on the board. These represent their bets against a throw of the dice. If the animals on the dice match the animals in the bets, the player is awarded the point value of the square. Players must keep a point total representing the value of their winning bets. Since some of the animals have arbitrarily been given higher point values than others, learners will tend to favor certain animals in their betting. The frog is the most highly valued. When a player successfully bets on the frog, he automatically wins the game.

While playing "EI Chulo," learners must match the written word on the cards with the written word on the board (word recognition). When the dice are thrown, the learners must match a picture with the corresponding word (word meaning). To vary the game, and the content, a literacy worker could change the pictures and the words to expand the vocabulary (word recognition and word meaning) of the learners.

Concentration

Concentration aids in developing memorization skills using information and associations necessary for literacy. The game consists of sets of 15 pairs of cards. A pair can consist of identical or complementary letters, syllables, words, or pictures. A complementary pair can be a picture and its equivalent written word, first syllable and last syllable of a two-syllable word or two words beginning with the same letter.

To play, all the cards are shuffled and laid out face down in rows. The first player turns up one card and then a second one. He hopes for a match. All the players try to remember the location of the cards they have seen. The next player turns over one card and then another in search of a match. When a player successfully makes a pair, he takes the cards and places them in front of him. He then takes another turn. Play continues until all cards have been matched. The winner is the person with the most matched pairs.

Concentration teaches letter and word recognition as well as helping the learner to memorize the image of the letters and words. Any number of combinations of letters, syllables, words, and pictures can be designed.

Lottery

Lottery is intended to reinforce audiovisual association, letter and word recognition, and acquisition of vocabulary. The game needs a facilitator to aid the players. Six game boards are divided into twelve squares. On each square is a drawing of an object. Seventy-six small cards are needed, each with a written word that corresponds to an object on one of the six boards. The first letter of each word is written in a different color from the rest of the word in order to place emphasis on the specific letters of the alphabet. An attempt is made to have each letter of the alphabet appear at the start of at least one word.

Each player receives a game board. The small cards with the words written on them are placed in a bag, and the facilitator draws them out, one by one. He can read the word, or he can simply show it and encourage the players to read it. He delivers the card to the player who has the drawing which corresponds to the word on the card, and that player places the card on top of the square with the correct picture. The first player who covers all of his pictures is declared the winner.

With beginning learners, the facilitator can read the card he draws, emphasizing the first letter. Players could repeat the word and then scan their cards, pronounce the words represented in their pictures, and search for the picture corresponding to the word which had been read aloud. The player who identifies the correct picture would be given the card by the facilitator. With advanced learners, the facilitator could require that the learners write the word on the blackboard or write a phrase or statement using the word in order to receive the card with the word on it.

This is a game which allows the facilitator to reinforce both auditory and visual recognition of words and letters. The pictures can be replaced by words for word matching, letters for matching the first letter of a word, or syllables that complete two-syllable words.

Word Bingo

Word bingo offers practice in recognizing and reading words and provides learners with practice in writing words. Nine common words are arranged on each game board to form two diagonal lines. Below each word is a blank space, as shown here.

TIENDA				LECHE
	MADRE		ESTO	
		TODO		
	CASA		AQUI	
ALLA				CULPA

The group leader or facilitator has a stack of cards containing the same words.

To play, the facilitator chooses a card and holds it up for the learners to read. Learners read the word and search for it on their game boards. When the learner finds the word on his board, he either marks the corresponding blank with a bean or copies the word with a pencil, depending upon skill level. The first player to complete a diagonal line wins.

Letter Dice

Letter dice offers practice in recognizing letters and combinations of letters, assembling words from letters, and encoding sounds into sequences of letters. A set of wooden dice, approximately one to two inches on a side, are needed. Each face of the dice contains a letter. The frequency of occurrence of each letter should correspond to the frequency of that letter within the target language. For Ecuadorian Spanish, 11 dice were used with the following frequency:

1. ONRDLT
2. CSSIIH
3. UETY,RR,QU
4. NUSSAN
5. NTIBPU
6. OLOB, LL, CH
7. YRXWKZ
8. AAAEEE
9. AAAEEE
10. USIMRG
11. DCOMPO

Although this same frequency may be useful for Spanish in other countries and gives a rough indication of what is needed for English and French, the literacy worker must seek assistance in determining the frequency of occurrence of letters in the language of instruction. This information might be available from existing research, or the literacy worker can use the words in an existing literacy primer to determine an informal list. To do this, the literacy worker must tabulate the number of times each letter is used in the primer. Then the total number for each letter should be divided by 66 (11 dice times six sides on each die). This calculation gives the number of faces required for each letter.

Some judgment is needed at this point since the calculation will indicate that some of the letters need less than one face (these should be given one) and some of the letters need a whole number and a fraction (those should be rounded off). In general the vowels and consonants should be mixed on each die, but the most common vowels - A and E in English - may be combined onto one die.

One game that can be played with letter dice is "Finding a Word." Players try to make up words using the letters showing after the dice have been thrown. The first player to visualize a word declares the word and tries to create it from the letters showing. After group confirmation of the correctness of the word, play resumes as players try to find other words. Play continues until the time limit is reached. The player who has formed the longest word is declared winner.

"Building a Word" is another game option. The first player places a letter from one of the faces of a die in front of the group. The player to his right chooses another die from the pile of dice and places it next to the first letter. The object is to be the first player to complete a word. When a word is completed, the next player tries to add letters to form a longer word. One player may challenge the player who has just added a letter at any point in the game. If the latter is not able to demonstrate that he is building toward a legitimate word, he is out of the game.

Alternately, the game can be structured so that the player who completes a word has points scored against him. This is probably a more difficult version than the previous one. Both of these "Building a Word" versions are more difficult than the "Find a Word" version, as they require a more directed and active recall of specific words and their spelling.

Another variation is "Word Listing Competition." Players compete to form the largest possible number of words from one roll of the dice in a given amount of time. Learners can compete as individuals or as teams. In either case, participants alternate between two roles; onlookers who recognize and monitor words formed by others, and active composers of words.

Hangman

Hangman is a game many Americans have played as a child. The teacher writes several blanks on the blackboard, one for each letter in a word. Then the class has to guess what the letters are. Each time they guess right, that letter is entered in the appropriate blank. If they guess wrong, the teacher draws part of a man on a gallows. First -the head is drawn using a stick figure drawing, then the body, then the arms and finally the gallows and rope. The class tries to guess the correct word before all the parts of the drawing are completed.

Comic Books and Photonovels

Usually, first primers are very simply written, and as a result can be dull reading. Although these primers may work well when learners are first learning, they will want something more interesting after they have a better command of the language. Comic books and photonovels are interesting and easy to read and offer a greater range of subject matter to new readers. To make comic books, the literacy worker needs someone who can draw. For photonovels all that is needed is a simple camera and photographic reproduction facilities.

The story line can come from the learners themselves. The teacher then writes the story down using the word list that the learners have been studying. If there is an artist, he can draw in the action. If there is a camera, the learners can act out the parts and the literacy worker can take the photos. The photographs can then be pasted into place, and the words pasted above them.

If a camera or an artist is not available, pictures taken from magazines can be used. This may take a lot of creative story writing, but it can be done. The teacher cuts out the pictures and puts them onto paper. Then the learners are asked to think out the story. The teacher writes down the story and the product becomes reading material for use in the class.

Photo-Word Chart

If a simple camera and developing services, or an "instant" camera are available, the learners can anticipate in making their own photo-word chart. Each learner picks something or someone from his life that he considers to be most important to him and the teacher or one of the learners takes a picture of that person or thing. When the pictures are ready the teacher produces a word chart using the pictures and the words that represents them. Each learner then explains what his picture represents and the teacher shows and explains the word.

This chart could be used in the same way that Freire uses his generative themes. Although the words may not contain all the letters and syllables, the interest of the group will be strong as the themes are personal. The teacher could present one word each session for the first sessions with each learner having a chance to explain his picture. By the end of the first few sessions, learners will be able to recognize the words and will have acquired a number of related skills.

Number Bingo

Number bingo is a math fluency game in which players seek answers on their game boards to math problems read from problem cards by a facilitator. The game teaches addition and multiplication skills. The game uses individual game boards which include answers to problems and a set of problem cards. The problem cards can cover addition and multiplication tables, $1+1$, $12+12$, 2×4 , 7×3 , etc. The players also need a pile of rocks, seeds or some other sort of marker.

To play, the facilitator distributes the game boards, along with an ample supply of beans or other markers for each player. The facilitator then shuffles the deck of game cards and begins to present the math problem cards to the group. He first holds the problem card up, then reads it aloud once the learners have had a chance to try to decipher the problem for themselves. Players who have the answer on their game board cover that square with a marker. The first player to complete a horizontal, vertical, or diagonal line across the board wins. Alternately, play may continue until one player has covered his entire game board.

The problem cards can be changed so that this game can teach number recognition. In this version the facilitator calls out the number or shows -the number and the learners cover- that square on their game card. Another variation on the game idea is for the squares to represent letters with the objective being that of teaching letter recognition.

Burro

Burro is a fun way to drill learners in the arithmetic tables. The game, which is based on an indigenous Ecuadorian game, consists of cards containing either a problem or a solution to one of the problems and one card with "burro" written on it.

All the cards are dealt to the players. The player to the left of the dealer checks his hand for matching pairs of problems and answers. If he has any, he places them on the table in front of him. After the other players verify the correctness of the pair, the first player turns to the player to his left and holds up his cards with the faces of the cards out of the view of the other player. The second player takes a card from his hand. He then tries to match that card with a problem or answer in his cards. That player then turns to the player to his left who must choose a card from his hand. Play continues until one player has no more cards in his hand. The player with the "burro" at this point is the loser.

Number Dice

Number Dice can be used to practice a wide range of math skills. The game uses a set of six dice with the following format:

1	7	3	9	5	+
234	890	456	012	678	X-X
5	1	7	3	9	+
6	2	8	4	0	-

Among the various games that can be played with the dice are:

"Spending Money." One player draws a card from a deck with amounts of money represented on each card. The object of the game is to find ways to spend the amount indicated on the card. Each player throws from three to six dice and, using the numbers shown, tries to find an arithmetic combination which would give him the solution. He could tell a story such as: "bought three pounds of onions at six cents a pound, and in this way I spent the 18 cents. The first player to find a correct solution wins. Alternately, a point system could be used in which each player gets points for his correct solutions or other players are given a chance to better the first solution by using additional dice.

"Making an Equation." A single die is thrown as a desired answer. All players throw their dice, the number of dice used varying with skill, and try to make an equation equaling the desired solution. Special dice with addition, subtraction and multiplication signs rather than numbers can be thrown with the other dice or provided as an aid. Beginners may choose to use the function dice any way they wish, but players with more advanced skills might be required to stay with the throw of the dice.

"Drill Practice." Players roll dice and perform the mathematical operation specified. Rules should be set according to skill. A special die with addition, subtraction and multiplication signs may be used if practice in these skills is desired. Players may check each other's answers, or one player may have access to the answers and serve as "Judge".

"Buying a Product." A card or single die represents the cost per unit of a product. Players throw their dice to find out how much they have to spend, adding or perhaps multiplying the dice to get a total. The object of the game is to figure out how many products a player can buy with the amount shown on the dice. The player who buys the most, provided he's worked out the correct solution, is the winner. Another possibility is that scores could be kept for several rounds, prolonging the game. Players could also save the change left from play to play to use in a future round. The change could be represented by a card or a die.

"Approaching a Solution." In this game played like "21", any number is first decided on as the maximum number to try to attain. Each player rolls two dice. He adds the numbers that turn up and decides whether he wants to add still another number. Players who choose to add another number then roll a third die. The player who reaches the target number, or comes closest to the decided upon amount without going over, wins. Advanced players can use mathematical operations other than addition. An important aspect of this game is that there is not a single correct solution that a player is aiming for. The value of the game is in the process of figuring out a range of solutions.

In some cases, if dice can not be produced, simple cards can be used to play the same games.

Market Rummy

Market Rummy consists of two decks of cards, one deck representing money and the other deck representing commodities typically found in the market. The commodity cards contain the name of the commodity, a picture of that product, the unit price, and the number of units which the particular card is worth. For instance, one card might represent four cords of firewood at three sucres per cord. Another might represent one cord of firewood at three sucres per cord.

Each player is dealt two cards face up from each deck. The player to the right of the dealer begins by drawing a card from either the commodity deck or the money deck, which have both been placed in the middle of the group. If the player is able to match the total value of any combination of commodity cards in his hand with any combination of money cards in his hand, he does so, reciting the sums to the group. Thus, two units of corn at seven sucres each plus two cords of wood at three sucres equals a 20 sucre note.

After group confirmation of his calculation, the player places the cards used in the transaction face down in front of him and discards. If, on the other hand, he has not been able to match commodity and money cards, he simply discards one of the cards in his hand. The next player draws, attempts to match cards, and discards. Play continues until the decks are used up; the player with the most matches wins.

To be successful, players must multiply the unit price of each commodity card by its number of units to compute the value of each commodity card. They must add the product thus obtained in various combinations and test them against the sums on the money cards. The game can also be broken down into simpler parts. For example, the number of units can be ignored so that multiplication is no longer needed for successfully playing the game.

Chapter 8: Continuing the effort

Providing opportunities for new literates to continue their education and developing reading materials which foster their fuller integration into a literate society should also be a part of planning for a literacy project. Literacy skills are of no value if people can not apply those skills to dally tasks. If literacy skills are not used, they may be quickly lost. Yet efforts to provide post-literacy followup have been sporadic at best.

Some of the methods that have been developed for sustaining literacy efforts and ways of building literacy environments for learners after the classes are finished are described in this chapter. These post-literacy efforts help both new literates and other literate people in a community to use and maintain the skills they learned in school or in adult education classes.

The goal of post-literacy activities should be to provide materials that new literates can read with their limited skills, that are interesting to them so they will be motivated to continue to read, and that will help them improve their lives and their work. The following are A few examples of activities that can help create an environment which is supportive of literacy.

Libraries

The most common post-literacy project is a library. A library for new readers can be built up using free reading materials which may be available from a variety of sources. Government departments often produce free materials on health, family planning and agriculture. Many foreign embassies make materials about their countries and on many other subjects available free of charge. Newspapers and magazines may be willing to give free subscriptions. Missionary groups often have free materials. The UN and other international development institutions also provide free reading material on a variety of development topics and there are people in the community who may be willing to donate books and other materials that they no longer need.

A library project for new readers can take advantage of these sources of free reading material if someone takes the initiative to locate and request them. The literacy worker should take care to involve people from the community in the search for reading materials so there will be someone to take responsibility for this effort later.

A place will be needed to house the materials. A room in a school or other public building, or a small building built with community labor and donated materials should be sufficient. The preparation of the library should be as much of a community effort as possible, and someone should be appointed to look after the library and manage the loaning of the materials.

The reading materials need not be arranged in an elaborate way and the procedures for using the books should be simple. It is better to lose some books than to have people not use them. Community libraries quite often fall because of rules meant to control the loss of reading materials. On the other hand, a lack of rules can also lead to failure if all the useful materials are taken and never returned.

A combination of rules and practices can strike a balance between these extremes. Some of the reading material can be displayed in a public place (as mentioned later in the section on community bulletin boards); some can be restricted to reading in the library like current magazines and reference materials; some can be lent under a system that makes it easy to take books out. Some of the materials may be lost in this kind of system, but the library should always have sufficient materials.

Bicycle library

In Luknow, India, Literacy House has put part of their lending library onto a bicycle. The bicycle library goes from village to village on a regular schedule to drop off and pick up books and other reading material. Materials finished in one village are taken on to the next, and in this way the library makes its rounds.

A local development office may be willing to start this kind of a library service in conjunction with a small literacy project. The bicycle could carry practical literature and some entertainment literature as well. Villagers could even request information on a particular problem and have that information brought back to them the next time the bicycle library comes through.

Renting library

In cities and towns with high population densities, enterprising individuals have made money by renting out entertaining literature. In Indonesia this kind of library is very popular and most are stocked with comic book formatted traditional and modern stories. Literacy workers may be able to help someone start a small renting library as an income-generating project, or someone with an existing business like a food or tea shop may be able to add the library to their establishment and earn extra money.

Community newsletters

If there is a simple duplicating machine available, the literacy worker may be able to start a community newsletter. The newsletter could draw articles from national newspapers. Interviews could be carried out with people in the community and written down for the newsletter. It could contain news of special events, births, deaths and marriages. One of the local development offices - such as the agricultural extension or

health service - might be willing to help with a newsletter in order to help promote their programs. The literacy worker could arrange for local input into the newsletter, with the agriculture or health office adding their own articles and taking care of the production.

Blackboard newspapers

In The Philippines a community developed its own blackboard newspaper. A Catholic priest, Francisco Sliva, developed a newspaper that is written daily on a blackboard (32' by 10') in the central square of the town of Moalboal (pop. 18,000). There are also 24 smaller boards located throughout the town. The board carries five stories every day -one local, one regional and one national or international news story, an editorial and a feature story (usually about health, community development, etc.). The editorial board for the newspaper is made up of community members who also do the writing of the stories. The stories are then written on the blackboards by high school students.

Each evening the editorial board meets and decides on the stories for the main board. They use a national newspaper for the news and ask for input from development officers for the feature stories. One of the board members writes up the stories and these are ready for the students in the morning. Younger students take charge of the 24 smaller boards in local neighborhoods. When the students come into the school early to get the main stories in a summary format, they bring in information of local interest from their barrio - births, deaths, marriages and community events. Some of this local information is added to the large central board. The younger students take the summaries back to their neighborhoods and the small boards are then used to carry all the local news along with summary of the important stories from the larger board.

The whole community is involved and shares in this effort, and the supply and repair of the boards are covered by community contributions. Due to this high degree of community involvement, the boards are always in excellent condition.

Locally made materials

Locally produced materials can be created by and for literacy classes as a learning experience and then circulated through a community library. Along with the materials like those mentioned in Chapter Seven, the following suggestions might also be worth considering, as they can be easily produced.

If the community has a strong oral story-telling tradition, a literacy worker could write down some of the stories for people to read. The literacy worker might combine genealogical materials produced in literacy classes into a history of the community with the help of other community members. Local development offices might provide help in producing materials related to their programs. These could be photonovels, pamphlets or posters on health or agriculture using local people in the writing and as actors for the photography sessions. Traditional dramas, songs, or religious stories might be written down so community members can read these alone or out loud to others.

Community bulletin board

A public wall, like the side of a building in a market area, might serve as a place to have a community bulletin board. Initially the literacy worker could ask local development offices to use that space for putting up posters, official notices and pamphlets. Newspapers or magazines might donate two copies of each issue so that they could be pasted to the wall with all sides showing. Community people might want to put up notices of their own about things for sale or events that are about to happen, like a festival or a fair. There could be one section for vital statistics where anyone could write down the date of births, deaths and marriages. If enough interest is generated from the bulletin board, it might become a self-sustaining effort in which the people who use it also maintain it. Or a business, like a tea or food shop, might be willing to maintain the wall because it brings business to the store. A school or a government office may also be willing to maintain the wall.

Reading clubs

If the group of learners or the community is too small to sustain a community library or other post-literacy effort, the literacy worker might want to suggest a reading club. The club, made up of learners and other literate members of the community, could subscribe to a newspaper and magazines and exchange them among the members.

One effort similar to the reading club was the village newspaper reading room project in Thailand. Each community which participated built a reading room in a public area. The reading rooms were simple in construction and used only locally available construction materials. Easy-to-read newspapers and materials were provided by the central government on a regular basis. The key to the success of the project was mobilizing local initiative to nurture the idea of reading and the construction of the public reading room.

Writing for new literates

If the literacy project is part of a larger effort in the host country, the literacy worker might be able to start writing workshops in which a number of literate people come together to write specifically for new literates. The materials developed in this workshop can be mass-produced for circulation to community libraries, reading rooms or literacy projects.

When writing for new literates, the writer must keep in mind that the reading skills of the target audience are not well developed. She should use photographs and drawings (keeping in mind what was said in Chapter Seven about visual literacy) to help support the message communicated through the written material. The writer should limit the vocabulary to the word list used in the literacy class or a similar word list of the most common 1500 or 3000 words in the language. The materials should use large type and should be written in the language spoken by the new literates. The subject matter should be interesting and of some immediate use to the people who will be reading it. And as with instructional materials, all the materials should be tested with a group of new literates before they are mass-produced. This test should focus on whether the materials are easily understood and if they are of interest to new readers.

A survey of reading interests should be conducted before the materials design begins. One source of this data is the group of project participants. Questions about what they would like to read, what help they need in their daily lives and in their work, and what they like to do for entertainment will yield possible topics. The expertise of other development workers serving the community is another source of data. If there are literate people in the community already, they should be surveyed to ascertain what they read and what they would read if it was available. New readers can be expected to eventually develop similar tastes.

Bhola, in Curriculum Development for Functional Literacy and Nonformal Education Programs, stresses the need to answer two questions prior to designing books for new literates.

- Are reading materials for new literates needed at all?
- Are reading materials in a particular subject matter needed?

These are very basic questions that quite often are never asked. Materials may already be available. There may be no reason for new readers to have books since other kinds of literacy activities are more relevant. If books are relevant the proper focus must be found.

In post-literacy planning work in Zambia, participants in a workshop:

made a list of books already available in the country for new literates,

- analyzed the books in relation to readers' interests and needs,
- developed a list of new subject matter areas, and
- picked one topic which they would develop into a book for new literates.

Seven steps were involved in preparing the book. In the first step, a topic was chosen. The second step involved the process of content definition, deciding just what was to be discussed in the book.

In the third step, the topic was outlined and chapter headings selected. The fourth step involved decision making about the primary (and secondary) audience for the book. (This decision is important as it provides guidelines on vocabulary choice.)

A first draft is prepared as the fifth step in the process. Where there are several languages, a decision might be made to do the first draft in the official language of the country. This draft, which should use simple vocabulary and short sentences, could be used as the master draft for other language versions. If this approach is used, step six would involve the preparation of guidelines for translators.

In step seven, format issues are decided upon. If drawings are to be used, some of them could be prepared by adult learners. Or, if other resources are available, illustrators or photographers could be responsible for the illustrations.

Continuing the effort

If a literacy worker is concerned about continuing the literacy effort she has started, she must be sure that there are people in the community who will continue to do the work after she leaves. These individuals should be involved from the beginning, and they should feel that the literacy project has been their effort.

The literacy worker might begin a literacy project by devoting lots of her time and energy to it. But as the effort continues she should try to spend less and less time while the people she is working with take on more and more of the work and responsibility. Prior to her departure, local individuals should be doing everything without her help. Perhaps a last task for the literacy worker prior to leaving should be that of helping her coworkers plan for at least the next year and line up the resources to make the plan a reality.

There is no way to ensure that the effort will continue; but if the local literacy workers feel that the project is their responsibility, if they have been managing the entire effort on their own for some time, and if they have a plan for continuing the work, the literacy worker will have done as much as she can to make the project self-sustaining.

Chapter 9: Networking

Networking is a skill and must be consciously developed. Usually when a literacy worker decides to attempt a literacy project, he will look to only one source of help, perhaps another community worker, a Peace Corps staff member, a book or a local literacy project. Through networking, a conscious effort is made to look at all available resources which a literacy worker could bring into play in one project.

The following sections provide advice on where and how to look for resources and stress that the key to successful networking is having an open mind about looking for help. An initial flurry of letter-writing, meetings and discussions with people can produce much help for the project, but the literacy worker should keep looking after the project starts and continue to add resources to his effort. Local counterparts should be actively involved in creating this network. Their knowledge and contacts can be invaluable in getting the network started. If they are not involved, the link to resources might be broken when the literacy worker leaves the project.

Local and national resources

Networking should be started close to home. The community in which the literacy project is being organized can offer some valuable resources. The learners themselves are a resource. They can help by providing space for the classes and by producing instructional materials. The learners may be able to afford some compensation for a teacher, perhaps in money and if not, then in kind or with free services.

Other people in the community are also a valuable part of the network. Those who are literate can act as instructors, or they may be able to tutor learners or assist a master teacher. Schools and public

institutions may have space, reading materials or other facilities they can offer and local government officials may be willing to preside over opening ceremonies or present graduation certificates.

If the national government of the host country has a literacy effort, it may have instructional materials and other resources that may be useful. Some countries have radio programs that support literacy efforts. There are also private groups, usually religious, that have literacy programs that may be able to provide assistance to a literacy project.

If the literacy worker cannot find these resources by asking in his country, he can try one of the regional or international institutions mentioned in this chapter. Sometimes, even information that is difficult to find in the country where it was developed is available from these institutions.

International and regional resources

Many development agencies have literacy support activities. If the literacy worker writes and explains his plans, many organizations are willing to help. The literacy worker may find that literacy materials in the language that he is to work in are not available in his country. An international or regional institution may be able to supply them from their collections.

For example, in 1978 UNESCO's Regional Office for Education in Africa (BREDA, Dakar Senegal) compiled an inventory of low cost didactic materials locally produced in 15 African countries. The inventory, which was produced in both French and English, provides a description of the institutions and organizations producing didactic materials; an alphabetical listing of the materials identified; a detailed listing of materials by country; a listing of resource materials used in the production of the didactic materials; and annexes containing illustrations of some of the materials described. The document also contains an example of the technical identification forms used in the survey.

This inventory is available, but it was produced in limited quantities. If it becomes unavailable BREDA may be able to supply the name of a person or institution in the country of the literacy worker where a copy can be found.

The literacy worker should probe all of these resources to find out what is now available and what other resources the international or regional organization can suggest. Usually, international and regional organizations provide these resources free of charge. A partial list of names and addresses of organizations involved in literacy education follows below.

AFRICA:

African Association for Literacy and Adult
Education
P.O. Box 50768
Nairobi, Kenya

BREDA
B.P. 3311
Dakar, Senegal

Conseil Regional pour Education des Adultes et l'Alphabetisation en Afrique (CREAA)
Service National d'Alphabetisation
Ministere de la Sante Publique et des Affaires Sociales
B.P. 1247
Lome Togo

Institute of Adult Education
University of Dar es Salaam
Dar es Salaam,
Tanzania

ARAB STATES:

Arab Literacy and Adult Education Organization (ARLO)
P.O. Box 3217
113, Abu Nawas Street
Baghdad, Iraq

Regional Centre for Functional Literacy in Rural Areas for the Arab States (ASFEC/Unesco)
Mutuelleville Tunis, Tunisia

ASIA/OCEANIA:

Asian and South Pacific Bureau of Adult Education (ASPBAE) P.O. Box 1225
Canberra City, A.C.T. 2601
Australia

Literacy House
Lucknow, India

UNESCO Regional Office for Education in Asia
920 Sukhumvit Road
Bangkok, Thailand

LATIN AMERICA:

ALER
Asociacion Latinoamericana de Educacion Radiofonica
Corrientes 316 6° Piso Of. 655
1314 Buenos Aires
Argentina

ALFALIT Internacional
Apartado 292
Alajuela
Costa Rica

ACPO - Accion Cultural Popular
Calle 20, No. 9-45
7170 Bogota
Colombia

CREFAL - Centro Regional de Educacion Funcional en Americana Latina
Patzcuaro, MICH
Mexico

Federacion Interamericana de Educacion de Adultos (FIDEA)
Apartado Postal 20016
San Martin
Caracas 102,
Venezuela

PREDE - Program Regional de Desarrollo Educativo
Organizacion de Estados Americanos (OAS)
1889 F. St., N.W.
Washington DC 20006
USA

Oficina de Educacion Iberoamericana
Ciudad Universitaria
Madrid 3,
Spain

INTERNATIONAL:

International Council for Adult Education (ICAE)
29 Prince Arthur Avenue
Toronto,
Canada

German Adult Education Association (DVV)
Deutsche Volkshochschul-Verband
Fachstelle fur Internationale Zusammenarbeit
Rheinalle 1
D-5300 Bonn 2,
Federal Republic of Germany

German Foundation for International Development (DSE)
Education Section
1 Simrockstrasse
5300 Bonn,
Federal Republic of Germany

UNESCO
7, Place de Fontenoy
75700 Paris, France

Laubach Literacy International
P.O. Box 131
Syracuse, NY 13210
USA

Peace corps resources

Peace Corps' Information Collection and Exchange (ICE) office maintains a collection of technical information on a variety of development topics, including literacy. ICE can provide both technical publications and research on specific topics to support community literacy projects. Copies of many of the publications ICE provides and catalogs of ICE resources should be available in every Peace Corps office incountry, along with ordering information for both Volunteers and host country development workers.

Specific ICE manuals that may be useful to a literacy project are:

- (M4) [The photonovel: A tool for development](#)
- (20) [Teaching reading and creative writing](#)
- (P8) [Audio-visual / communication teaching aids](#)
- (M3) [Resources for development](#)
- (M18) [Agricultural extension](#)

In addition, ICE can supply some of the publications mentioned in the annotated bibliography to Volunteers.

The address for ICE is:

Information Collection and Exchange

Peace Corps
Room M - 701
806 Connecticut Avenue, NW
Washington, DC 20525
USA

Annotated bibliography

This annotated bibliography is restricted to publications that are easily available and is therefore not comprehensive. Many of the annotations are taken from Literacy at work: Linking literacy to business management skills edited by David W. Kahler and published by Creative Associates (3201 New Mexico Ave., NW -Washington, DC 20016).

UNESCO has published a "Bibliography of Research in adult literacy ," a "Directory of literacy journals and periodicals" and a "Directory of organizations offering literacy training courses" that can supplement this bibliography. These and other resources published by UNESCO can be purchased from the local UNIPUB dealer. The local UNESCO office can locate the UNIPUB dealer. In the United States UNESCO publications can be purchased from:

UNIPUB
205 East Forty-second Street
New York, NY 10017

Some of the materials listed below are available from the University of Massachusetts at the following address:

Publications
Center for International Education
Hills House South
University of Massachusetts
Amherst, MA 01003

Materials listed as published by IALM/Hulton can be purchased from UNESCO/UNIPUB dealers or from the following address:

Hulton Educational Publications Ltd.
Raans Road
Amersham
Bucks
England

Spanish editions are available from Ciudad Universitaria, Madrid. Arabic editions are available from ARLO, and French editions are available from CREEA (see previous listing for addresses).

Some large publishers will not fill a small retail order, and those books are listed under "available from bookstores". If those books are not available from a local bookstore, they can be ordered by mail from:

Cooperative Book Service of America, International Reading, MA 01867

In addition to the Creative Associates and UNESCO bibliographies, The German Foundation for International Development (DSE) has published an excellent bibliography focused on post-literacy. Compiled by Judith Schwefringhaus, "Continuing Education of Neo-Literates: An Annotated Bibliography on Post-Literacy Work" is available from DSE at no charge, but quantities are limited.

Most of the subjects covered in this handbook can be followed in resources listed in the annotated bibliography that follows. Teaching Reading and Writing to Adults: A Sourcebook contains articles on most subjects that are not covered in the rest of the bibliography. There are a few sources used in the

preparation of this handbook that the authors felt did not warrens inclusion in the annotated bibliography, but some readers may want to locate them. These are presented here as simple bibliographic entries.

Coombs, Philip. New Paths to Learning Essex, CT: International Council on Education and Development, 1973.

Fuglesang, Andreas. Applied Communication in Developing Countries. Uppsala, Sweden: The Dag Hammarskjold Foundation, 1973. This book is now available to PCVs from ICE as About Understanding.

Glattback, Jack. "Erasable print - Blackboard newspapers." Development communications report #21. Washington, DC: Clearinghouse on Development Communications, January, 1978.

Lewin, Kurt. "Group decision and social change." In T.M.Newcomb and E.L.Hartley (Eds). Readings in social psychology. New York: Holt, Rinehart and Winston, 1947.

Morss, Elliot R.; Hatch, John K.; Mickelwait, Donald R.; and Sweet, Charles F. Strategies for small farmer development: An empirical study of rural development projects, A report prepared for the agency for international development under contract AID/CM/ta-C-73-41, Vol. I. Washington. DC: Development alternatives, Inc., May, 1975

Shrinavasan, Lyra. Women at the turning point. New York: UNICEF, 1984

Rogers, Everett M., and Shoemaker, F. Floyd. Communication of innovations: A cross - cultural approach. New York, NY: Free Press, 1971.

UNESCO. Teaching Reading and Writing to Adults: A Sourcebook. Teheran, Iran, IIALM 1977. 646 pp. Free. Available from: local or regional UNESCO offices and may be available in the future again from IIALM.

This sourcebook, compiled by the international Institute for Adult Literacy Methods, contains significant articles dealing with the teaching of literacy skills. It covers a wide range of topics, including the context of literacy methods specifically developed for teaching adults to read and write and various aspects of the organization, content and techniques of literacy instruction. Certain articles were specially commissioned to fill the gaps in the existing literature or to provide a more concise description of particular techniques than have been previously available. The purpose of the book is to present a comprehensive selection of published material that constitutes the theoretical foundation of current literacy training and demonstrates its most important practical applications. The readers for whom this book is designed include students of literacy and adult education attending universities or professional training courses, teachers, teacher trainers, adult education workers and those involved in the development of materials for use in literacy classes. This sourcebook contains a good description of the Laubach method, functional literacy and the Freire method.

Knowles, Malcolm. Self-Directed Learning: A Guide for Learners and Teachers. New York: Cambridge Books, 1975. 144 pp. \$6.95. Available from: Bookstores.

Designed to be used by both learners and teachers, this guide helps individuals to define their roles in the learning process and determine strategies and resources. Part One for the learner addresses the following: Why Self-Directed Learning?; What is Self-Directed Learning?; What Competencies are Required for Self-Directed Learning?; and Designing a Learning Plan. Part Two for the teacher deals with: Setting a Climate; Defining a New Role; Developing Self-Directed Learners; and implementing the Role of Facilitator. The final part on resources includes a discussion of: climate setting and relationship building; diagnosing learning needs; formulating objectives; using learning strategies and resources; evaluation; and the learning contract. The guide offers a number of practical techniques and tools to facilitate self-directed learning.

Freire, Paulo. Education for Critical Consciousness. New York: Continuum, 1973. 180pp. \$5.95. Available from : Bookstores.

This book contains two essays written by Freire in 1966 and 1968 that grew out of his efforts in adult literacy work in Brazil prior to 1964. In the first essay, "Education as the Practice of Freedom," he presents the basic components of his literacy method: participant observation by educators to identify the vocabulary universe of program participants; the search for generative words at two levels - syllabic richness and meaning; a first codification of these words into visual images which stimulate people to emerge from their culture of silence as conscious makers of their own culture; the decodification process in the context of a cultural circle under the stimulus of a facilitator/coordinator; and a creative new codification, critical

In nature and aimed at action with the formerly illiterate no longer the objects of history but rather the subjects of their own destiny. In the second essay, "Extension or Communication," Friere analyzes how technicians and peasants can communicate in the process of develop tog a new agrarian society. The essay presents both an analysis of the educational task of the agronomist/extension agent and a synthesis of the role Freire attributes to education, that of humanizing people through their conscious action to transform the world.

Laubach, Frank C. and Laubach, Robert S. Towards World Literacy. Syracuse University Press, Syracuse, N.Y., 1967. 335 pp. Now out of print, but available in some libraries. Laubach International will supply information about the method.

Written in two parts: "Teaching illiterates" and "Writing for New Literates," this book is based on the technique, adapted to 274 languages, which consists of teaching with the help of pictures of objects, the first letter of which shows a resemblance to the picture concerned. Part I describes teaching materials, tells how to organize rural or urban campaigns and suggests trying programs for literacy workers based on the "each one teach one" method. Part II explains how to prepare interesting reading materials with many simple and clear examples of writing for new literates.

UNESCO. Practical guide to functional literacy: A method of training for development UNESCO: Paris, 1973. 170 pp. \$5.00. Available from UNIPUB.

This guide was prepared for adult education instructors, technicians in agriculture and industry and others charged with the training of illiterate laborers in functional literacy programs. The guide is directed as well to international specialists responsible for planning and implementing functional literacy programs conducted under the auspices of the Experimental World Literacy Programme (UNESCO). Part I of the guide deals with the determination of a pedagogical strategy adapted to the alms of a development program, while Part II considers the application of the pedagogical strategy to actual situations. Part I contains chapters on conducting a preliminary inventory of objectives and problems; on the nature of context (milieu) studies; on the development of a pedagogical strategy responsive to the milieu study; and on the role of the milieu at the different stages of the functional literacy operation. Part II chapters include discussions of the establishment of progressions (curriculum); the elaboration of pedagogical methods; and functional literacy in action. Part II also contains a number of useful examples of materials and methods developed in various functional literacy projects.

Gunter, Jock; Hoxeng, James; and Tasiguano, Enrique. Ashton-Warner Literacy method Technical Note No. 5. Amherst, MA: Center for International Education, UMASS, 1972. 14p. \$1.00. Available from: CIE. ICE can provide for PCVs.

This technical note describes the Ashton-Warner Literacy Method, an approach to literacy developed by Sylvia Ashton-Warner for teaching Maort children in New Zealand. This method allows the learner to approach written culture on his or her own terms. Rather than using a text, learners are taught the words important to their lives, and encouraged to write sentences and stories which are shared with the other learners. It is the role of the teacher to facilitate the process and to draw words, sentences and then stories from the students who are expressing their own inner world. Thus the learner's introduction to written culture proceeds from within, answering her own needs for self-expression. The author feels this approach yields completely different results from the more traditional methods of instruction where words, stories and materials are imposed from the outside.

Anzalone, Stephen and Mclaughlin, Stephen. Making Literacy Work: The Specific Literacy Approach. Center for International Education, UMASS, Amherst, 1983. 73pp. \$4.00. Available from : CIE. ICE can provide for PCVs.

This book presents an analysis of functional literacy and points out weaknesses that are addressed by a new methodology, specific literacy. The planning methodology is presented with examples from The Gambia. This reference is most useful to literacy workers who are planning work-oriented projects.

Singh, Sohan. Learning to Read and Reading to Learn: An Approach to a System of Literacy instruction. Hulton/IALM, 1976. 116pp. \$14.95. Available from: Houlton.

In this monograph the author suggests a comprehensive system of literacy instruction which provides a balance between the need to structure language - into sentences, words, syllables and alphabets - and the need to motivate learners with socially significant themes. During the first stage of instruction, emphasis is placed on learning to read. While there is concern that the theme of learning be of interest to the participants, the main thrust is on mastering the linguistic code. In the second stage, emphasis shifts to using reading to elicit information from written materials, while continuing to strengthen reading skills; once this occurs, the teaching of writing is emphasized. The two stages are integrated through a model of "teaching spirals."

Barndt, Deborah. Education and social changes: A photographic Study of Peru. Dubuque, Iowa: Kendall/Hunt Publishing Co., 1980, 392 pp. \$21.95. Available from: Bookstores.

In this study the author explores and chronicles an example of the "conscientization" process in Peru, the development of a critical social consciousness. "Conscientization," as developed by Paulo Freire, describes a method of teaching illiterate peasants to read and write and at the same time to begin to analyze their own socio-economic reality and to take action to change it. The book attempts to present how conscientization "looked," "acted," and "played out" within the constraints and possibilities of a women's project in Peru in 1976. Photographs are used to capture the visual "feeling" of the literacy process and explore the conscientization process in the macrocosm and microcosm.

UNESCO. The Experimental World Literacy Programme: A critical assessment. Paris: UNESCO, 1976, 176 pp. \$9.25. Available from: UNIPUB.

This volume is the finer report of the Experimental World Literacy Programme (EWLP) undertaken by UNESCO and UNDP. The EWLP, which began in 1966 and terminated in 1973, was a global effort to evolve an effective approach toward overcoming illiteracy. The approach used, functional literacy, was an attempt to examine the relationship between literacy and development by demonstrating the economic and social returns of literacy. This document provides an analysis and critique of activities across the 11 EWLP projects. The most significant issue considered in the report is the receptivity of established institutions to the practice of newly acquired skills, especially when this practice presupposes far-reaching change.

Bhola, H.S. Writing for New Readers: A Book on Follow-Up Books. Bonn: German Foundation for International Development, 1981, 190 pp. Available in limited quantities free of charge

Writing, illustrating, editing, publishing and distributing reading materials for new readers are the topics which are dealt with in this monograph. The author discusses both "why should reading materials be produced?"; and "how should the written materials be written, illustrated, edited, presented, produced and distributed?" He emphasizes the importance of writing for new readers who have acquired reading skills in both school and out-of-school settings arguing that because appropriate reading materials are not produced for these readers, reading skills often are lost.

Burke, Richard C. The Use of Radio in Adult literacy education. IALM/Hulton, 1976, 116 pp. \$14.95. Available from Hulton.

This monograph is addressed both to those middle-level fieldworkers who are already working with radio and to those who might work with it in the future. It looks at the use of radio in literacy from the vantage point of the practitioner and makes practical suggestions to allow field workers to proceed autonomously in stimulating people to listen to radio programs; in assuring that supplementary materials are distributed on time; in training volunteer monitors in integrating radio programs with supplementary materials; and in evaluating the effectiveness of radio programs. Chapters discuss the strengths of radio as a teach to tool; analysis of audience levels and needs; program development; production and distribution; effective use of radio; the maintenance and improvement of literacy skills; evaluation; and feedback.

Cain, Bonnie J. and Comings, John P. The participatory process: Producing photo-literature. Amherst, Massachusetts: Center for international Education, UMASS, 1977, 40 pp. \$4.00. Available from CIE.

This manual explores how to combine client-learner participation and the development of photographically integrated literature. The authors first consider the rationales for learner-produced materials. Next, they discuss the participatory process and focus on the relationship of the facilitator to the participants and how the facilitator can enhance or inhibit the process. Third, they answer the technical questions a facilitator may have regarding how to put a photonovel together (The technical aspects are about the same for all types of photoliterature.) Since participation is difficult to discuss and understand in a vacuum the authors have integrated "participatory process boxes" throughout the technical section to give specific suggestions on how to increase participation in the context of specific technical problems. In the fourth section, the authors discuss some considerations in summative evaluation; and in the fifth and final section they examine the pros and cons of various photo-literature formats.

Ecuador non-formal education project, technical notes 1-13. Center for international Education, UMASS, Amherst, 1972-1976. \$1.00 for each, some available in Spanish and French. Available from CIE.

Short descriptions of methods and techniques developed in the Ecuador NFE project. The individual numbers that may be of interest to a literacy worker are:

#1 The Ecuador Project: a general description of the project.

#2 Concientizacao and Simulations/Games: an instructional methodology of simulation and games based on Freire's concepts.

#4 Market Rummy: a game to train basic mathematical skills by simulating situations in a market.

#6 Letter Dice: a game to develop spelling fluency and to increase active and passive vocabulary.

#7 Number Bingo: a game which aims to promote skills with number symbols and arithmetical operations.

#8 Math Fluency Games: games designed to offer practice in the component skills necessary for performing arithmetical operations.

#9 Letter Fluency Games: a collection of letter games designed to develop basic skills for literacy.

#11 The Facilitator: a discussion of the role of non-professional teachers as agents of change and their impact on the rural communities in Ecuador.

#13 Fotonovela: a description of the conceptualization, design and use of fotonovelas to improve literacy awareness.

Thiagarajan, Sivasailam. Programmed instruction for literacy Workers. Hulton/IALM, 1976, 136 pp. \$14.95 Available from Hulton.

This guide for developing self-instructional materials and strategies for adult learners, literacy teachers and discussion leaders was developed to assist literacy workers in applying the process and products of programmed instruction. Chapters of the guide define programmed instruction; explain the programming process; suggest methods of analyzing learner needs, subject matter and literacy skills; and offer techniques for writing, evaluating, and revising programs as well as preparing programmed tutor materials and games.

Bhola, H. S. Evaluating Functional Literacy, Hulton/IALM, 1979., 164 pp. \$14.95. Available from Hulton.

This monograph deals with the evaluation of functional literacy projects and programs which both help adults play a more effective role in their socio-economic and political milieu and have a major social impact on individuals, groups, institutions and communities. The monograph is directed toward literacy workers who use a range of literacy approaches in widely differing ideological and cultural settings. It discusses evaluation models; means of operationalizing evaluation; ways of measuring change; methods for generating, analyzing and interpreting evaluation data; and approaches to increasing the validity of conclusions. A selected annotated bibliography is included.

Evans, David R. Games and Simulations in Literacy Training. IALM/Hulton, 1976, 133 pp. \$6.00. Available from: CIE.

This monograph contains chapters on why to use games and simulations, what they are, literacy skill-practice games, numeracy skill-practice games, simulation games and role playing, and using games for literacy. At the end of the monograph is a section on resources. This book fills in the gaps left by the literacy manual in the use of games, and provides theory as well as examples. With this book, a literacy worker should be able to develop her own games.

Chapter 10: Case studies

The following case studies of literacy work done by Peace Corps Volunteers illustrate some of the common problems literacy workers have in implementing their projects. Some of these problems are unique to PCVs, but most could happen to any literacy worker,

Nepal

Bob Loser was a Peace Corps Volunteer who taught high school math and science in Nepal in the early 1970's. He lived near the Indian border on the warm flatlands that stretch from the Nepali mountains down to the Ganges River. As a teacher he had to speak, read and write the national language and speak the local language of his area. Bob practiced his reading and writing in Nepali (which uses a different script from that used in English) with the help of his landlord and the landlord's son who had recently graduated from high school.

Thakawa, a 20-year-old servant in the house, who had never learned to read and write, always paid close attention during Bob's writing lessons. Soon, he began to ask Bob about writing, and eventually Bob began teaching Thakawa what he had learned about reading and writing Nepali in the 18 months that he had been a Volunteer.

Neither Bob nor Thakawa had planned to begin a literacy class, but one of the other servants, a 13-year-old boy, began to sit in when Bob was teaching Thakawa. These lessons were usually held on the big open porch of the house and at first the landlord was happy about this. It showed the village that he was a progressive man who was having his servants taught to read and write. But after some time he began to feel that Bob could make better use of his time by teaching English to his son who had graduated from school, but had never passed the national school-leaving test.

The classes were forced to move from the porch to Bob's room and then to Thakawa's small house, where his wife, his ten-year-old brother-in-law, a 25-year-old neighbor and another 15-year-old boy joined the class.

These sessions were not organized like a formal school class. Bob worked individually with each student while the others practiced alone. Sometimes literate villagers (teachers and students from Bob's school and college students back in the village during vacation) would stop by to help. Thakawa eventually gained enough skill himself to begin teaching others.

Bob might never have begun this literacy program if it had been organized as a formal program. The whole thing happened spontaneously. There was never a time when he thought about the development implications of his efforts, and, in fact, Thakawa was never clear about his reasons for wanting to become literate. There was not a lot to read in the community, and Thakawa did not need to read for his job. But Thakawa wanted to learn to read and Bob was able to teach him.

Bob and Thakawa encountered a number of problems in their sessions. Bob spoke the local language they were learning to read and write, but he was far from fluent. Sometimes the learners could not understand Bob's pronunciation, so they were unsure of the sound that went with the letter being taught. After the class had learned to recognize the letters, the sounds of the letters and how to put them together into words, they still sometimes did not understand what they had read.

Bob stayed on as a Peace Corps Volunteer for a total of four years. For the last two-and-one-half years he taught the small class on an irregular basis. Thakawa and one other learner achieved a high level of literacy, and the others gained some skill. Ten years after leaving Nepal, Bob still hears from Thakawa. Thakawa writes him a letter regularly.

This case study points up some of the issues involved in small literacy projects. The class began with the strong felt need of one learner. That motivation was strong enough to carry his work towards a high level of literacy skill, even though the other learners did not have such strong motivation. Thakawa helped to generate the participation of his fellow learners and this one strong leader among the learners was enough to keep the classes going.

Bob thought that his landlord supported the effort, but for some reason, that support failed. A continuing dialogue with the landlord might have ensured continued support. The support of other literate adults proved to be easy to come by, but it was on a sporadic basis. Two people, in this case the teacher and the strongest learner, were really the ones who kept the project going. This was sufficient support for a small project and the community was not involved.

Although the teacher put in a great deal of time and effort, only one learner gained a high level of skill. Several others gained some skill. This modest level of success is not unusual with literacy projects.

Honduras

Bonnie Cain was sent to Tegucigalpa, Honduras to work in math/science and adult education. Bonnie met Dona Luz, the supervisor of the cooks at the hospital in Tegucigalpa, shortly after she arrived in Honduras. From Dona Luz, Bonnie learned that a new hospital was being built and that the staff was to move there when it was completed. The management of the hospital wanted to make literacy skills a prerequisite for working at the new facility, but none of Dona Luz's staff could read and write.

Bonnie and Dona Luz talked with the hospital staff about starting a class. The women who worked in the kitchen were enthusiastic and with the help of their union they got the hospital to agree that they could use one half hour of work time for literacy classes every day if they would also put in one half hour of their own time. The hospital provided a room, and the staff carpenters, who usually built coffins, built desks and chairs for the class.

Bonnie produced a book of readings and exercises for the class that focused on hygiene, germ theory and nutrition. For teaching literacy skills, she depended on materials produced by ALFALIT, a literacy organization in Costa Rica.

Bonnie began by teaching syllables and words from the ALFALIT materials, leading classroom instruction and then asking the women to work in teams of two, one reading to the other. This method allowed her to give special attention to each team individually. She also helped the learners do experiments that proved some of the scientific concepts they were learning along with literacy and she asked one of the senior hospital staff to give lectures on nutrition.

There were 27 women in the class, and they learned enough to write their names and read the menus prepared by the nutritionist at the hospital. Although Bonnie had to leave her work in literacy to help with relief work after a major hurricane hit Honduras, the classes continued with local teachers after she left. Bonnie still has a box that was given to her by her learners that contains each of their 27 signatures.

In this case, participants in the literacy class were motivated by a need to have literacy skills in order to continue working. This strong motivation was key to having the women join the class and later exert the effort needed to learn how to read.

Unlike the Nepal case study, the important members of the power structure supported the project. The project was started by one of the hospital staff, and she felt a personal commitment to it. That commitment was enough to secure resources for the project, incentives for the learners and time for the women to learn while they were being paid.

Bonnie combined a standard curriculum from a regional literacy program with specific materials she made herself. This allowed her to focus her curriculum and materials development efforts on the functional part of the project. She felt uncomfortable with the traditional role of the teacher standing in the front of the room lecturing to the students and realized it would not be effective. By breaking the large group of learners into pairs, she was able to give individual attention while sustaining the learning process for the whole group.

She, too, had to be satisfied with a modest level of achievement among the learners. But in her case, all the learners reached their goal, a goal which was limited in scope. This is a pattern of accomplishment that indicates a successful project.

Senegal

David Kahler went to Senegal to work in community development as a Peace Corps Volunteer in 1964. Senegal had recently gained its freedom from France and the new government wanted to make a larger part of its population literate. But the government underestimated the difficulty of making everyone literate in French while most people spoke one of many local languages and knew little French.

The government program used methods and materials in French developed along the lines of those used by Laubach literacy organizations. The program was formally organized and implemented through the existing school system. Teachers and upper level students taught rural adults for periods of six weeks.

David taught in these classes, but he found them very difficult. The people in his area of the country spoke Mandinka and Little French. There was a government directive to implement the program without changes, and David's efforts to make the teaching more relevant to the needs and experience of the learners produced no results. About 80 percent of the students dropped out of the classes, while those that stayed learned very little.

As part of David's community development work he was helping the local agriculture extension department teach farmers how to use differing applications of chemical fertilizer on various crops. Many farmers found this difficult because they could not read the information on application rates on the fertilizer bags. David helped the extension department develop an informal course for the farmers that first familiarized them with the information in Mandinka, then taught them how to read the same

information in French. This very specific form of literacy was easy for the farmers to learn and provided them with skills they could use immediately.

The first government-sponsored project was not successful because the program did not address either the motivation or the pre-literacy (French) skills of the learners. The methods that worked for Loser in Nepal could not work here in an environment where the motivation of the learners and their oral skills were both very low.

The second project was a specific literacy effort that had preliteracy skills built into it for the accomplishment of this limited goal. The motivation came from the learners themselves who had expressed a need to learn the specific literacy skills. With tints case, the pattern of accomplishment is becoming clear. A large number of learners can acquire literacy skills, especially when those skills are ones they need and can use. In cases like the Nepal example, there are learners who feel a strong need to gain a high level of skill. In most cases, though, the skill needs are specific to a small set of objectives. Within that set of objectives a large population can be served.

The Gambia

Paul Jurmo was a Volunteer in The Gambia from 1976 to 1979, and worked as a functional literacy advisor. Though Paul had just completed an MA in Social Education and had taught reading on a volunteer basis, he was not an expert in literacy. But when he arrived in The Gambia, he found that the government really had no organized literacy program. He began his service by talking with Gambians and expatriates who knew something about literacy and finally agreed with the government- to try a year-long pilot project in a small village about 100 miles upriver- from the capitol, Banjul.

The people in the village only spoke the local language, and Paul spoke very little of that. The government had a few materials in the local language, but there was no real literature. Nonetheless Paul felt it was important to develop literacy in the learners own language as a first step. He arranged for some local school teachers to act as volunteer teachers and began literacy classes for about 40 young men.

Many of the learners dropped out when they found how long it would take before they would be literate in their own language and ready to begin studies in English. It was really English, the official national language, that they wanted to learn. At the end of the first month, 50 percent had dropped out. Only ten stayed for the full four months of the course.

The course would have gone on longer, but when the May rains began, the men had to quit their studies to concentrate on their farm work. The ten who finished the course learned the letters and syllables of the language and could read the words in the simple materials that were used for the course. But there were no followup materials for them to read.

This experience discouraged Paul a bit, but in his second year as a Volunteer, the government founded the National Literacy Advisory Committee (NLAC). The committee consisted of government officials from the departments that were concerned with rural development - agriculture, education, cooperatives and community development. This committee designed a national literacy strategy and tested it as a pilot project with Paul's help.

The project began in six villages and used educated but unemployed young men in the villages as unpaid teachers. The project used improved materials in the local languages which included some traditional stories that had been transcribed for reading. Although the materials had no functional content, they were better for teaching literacy skills than the materials Paul's earlier project had used. This project went on for the second and third year of Paul's tour and eventually operated in 15 villages. There was a lot of enthusiasm for the project; both the strategy and the materials were good. But, as there was no money to pay the teachers, they eventually lost interest as the project progressed. While still struggling with that problem, the program has continued and expanded, developing more materials in three focal languages.

Paul's experience in The Gambia convinced him that numerary skills were perhaps more important to learners than reading and writing skills. As English was too difficult and literacy in the local language was

of little value until the government made a mayor commitment to produce reading materials in that language, Paul began to see that math was the best skill to teach.

Two years later he had a chance to try that idea out when he returned to The Gambia on a project supported by the Cooperative League of the USA (CLUSA). He found that the literacy program in which he had worked had evolved into a net tonal nonformal education center with considerable potential. Paul implemented kits math project in cooperatives set up by the government and that project, he feels, was a success.

Paul was in on the initial stages of building a literacy organization, an experience that can be difficult at times. Materials and methods did not exist, and there was no real institution to continue the work. But the work has continued and now the institution exists as do materials and teaching methods.