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Chiappetta, Michael; Burke, R. C.

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Final Report

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CHARACTERISTICS OF ILLITERATES AND PROGRAM HYPOTHESES

Submitted by:

**Richard Burke
Michael Chiappetta**

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Purpose

The original purpose of this research project on the characteristics of illiterate learners was to test (1) whether adult illiterates must become literate in the process of acquiring desired modernization attitudes or behaviors, (2) whether literate and illiterate adults are sufficiently different in learning patterns and behavioral processes so as to necessitate different educational program design, and (3) to see if existing programs aimed at illiterate populations, in which literacy was not a project goal, revealed any characteristics which might serve as guidelines to further action and project development.

In reviewing the literature on literacy, adult education, social psychology, anthropology and communications theory, we found that relatively little has been written about programs or projects that attempt to reach illiterate audiences with specific, useful information on health, nutrition, agriculture or child development, without making literacy a requisite first step to further learning.

Moreover, we were largely unsuccessful in our attempts to gain field information about U.S.A.I.D. projects in non-formal education and rural development. We asked A.I.D. officers in at least thirty countries for their assistance in identifying projects that are aiming to reach illiterate audiences without making literacy a required first step in the learning process. With few exceptions, the officers that we contacted told us either (1) there was no recent or on-going project in their country that would be of interest for our research purposes or (2) our investigations would not be welcomed, as they saw no need to engage in any research along the lines that we were proposing.

In presenting our findings in this research report, the reader must bear in mind then that (1) there is very little solid evidence about the characteristics of illiterate adult learners, (2) there is very little descriptive information about projects that attempt to reach illiterate audiences by temporarily by-passing literacy (3) our field research was severely limited by the extremely small number of projects that fit our criteria and (4) AID officers overseas were generally uncooperative in furnishing us with information about their activities in the field, and most were unwilling to allow us to visit the projects that may have been worth investigating in their country.

In spite of the difficulties encountered in conducting field-based research, we were able to gather some useful information about programs designed for illiterate adults, and we are able to come to some tentative conclusions with regard to future directions that the Agency should take in the next few years.

Initial Assumptions

Based on our review of the literature on literacy, adult education, social psychology, anthropology and communications we made the following assumptions about the nature of the research problem:

1. Many educators and government officials throughout the world are still committed to achieving universal literacy in their countries. International organizations devoted to the education and well-being of people in Asia, Africa, Latin America and the Middle East have no intention of abandoning literacy. This raises a serious political and ethical question with regard to a government, a ministry, or an international organization which is trying to "by-pass" literacy in educating rural, illiterate people. The argument that literacy programs have by and large been disastrous failures simply is not convincing to many educators and government officials. In looking for ways to reach illiterate audiences with useful educational experiences, no one should be suggesting that illiteracy is just as good as literacy. If we could reach everyone in the world with a well-designed literacy program, that would be a most desirable thing to do. The evidence from a large number of studies, unfortunately, tells us that literacy programs have not been very effective, including the so-called "work-oriented" literacy programs sponsored by UNESCO in the last ten years.

Reaching illiterate people with useful, well-packaged information in health, nutrition, agriculture, and family planning could very well be the first step in a literacy, or basic adult education program. It is simply reversing the traditional approach by introducing useful concepts before the learner has acquired the requisite literacy skills.

2. Although there is ample evidence to support the argument that the ideal information and education system would provide a variety of learning resources including mass media, discussion groups, demonstration agents, field workers, mobile vans, professional and para-professional teachers, and trained specialists in health, nutrition and agriculture, it is unrealistic to think that such a comprehensive network of information and education will ever reach large numbers of rural people living in isolated rural areas.

We agree however with the point of view that is succinctly expressed in the rationale for the radio software project at the University of Massachusetts:

Recently USAID has made serving the rural masses one of its top priorities. Nonformal education has been identified as one promising vehicle for doing this. Radio is the most feasible way of reaching large numbers of widely scattered, illiterate people.

If any mass medium can be said to be the medium for nonformal education, it is radio.

Unquestionably there have been instances in many countries of illiterate people having learned specific skills by means of direct instruction in small groups. These experiences should be catalogued and examined for future planning. In this project, however, we assumed that AID is more interested right now in expanding the current knowledge we have about ways of reaching large numbers of rural and marginal urban illiterates with useful information in health, nutrition, family planning, and agriculture.

3. The personal characteristics of illiterate people may be less important than institutional or situational factors in determining behavioral change.

- a. Hornik, Mayo and McAnany in "Mass Media in Rural Education" Education and Rural Development, observe that:

Up until recently, literacy was regarded as the fundamental human skill without which modern knowledge could not spread; without literacy it was feared, rural communities would remain isolated and underdeveloped. Literacy is still considered a vital factor in building self-esteem and in motivating rural people to adopt other "modern" behaviors and attitudes, but most development experts seem to agree that substantial progress can be made by rural people even if they remain illiterate.

- b. DAP comment regarding Central America assistance efforts:

A vital ingredient, however, is the willingness and ability of the farmer to make use of these resources--credit, improved varieties,

fertilizer, etc. The gap is in large part one of communications. The farmer is illiterate, yet this is not necessarily relevant to the problem nor an overwhelming obstacle to its solution. While literacy is convenient since it affords access to proven means of communication, it cannot be relied upon to transmit the necessary skills and knowledge to rural peoples, nor is the traditional school system the answer.

4. Cooperative social action at the village level may be a more important factor than literacy in determining individual modernization. In discussing the Comilla cooperative movement in Bangladesh, Alex Inkeles notes that the evidence from the Comilla cooperative experiment indicates that even in quite isolated villages, new forms of social organization can be highly effective in making men modern without the aid of machinery or electronic communication. The means for bringing about greater individual modernization are, therefore, potentially within the reach of even the least advantaged nations and communities.
5. Since there do not seem to be any "universal" characteristics of illiterate adults, it is unlikely that there is a single version of a successful project design. As there are many kinds of illiterate audiences, so too will there be many kinds of project designs.

It might be profitable to work out a series of profiles on a much smaller scale than illiterate-illiterate. For instance, we might try to determine some of the learning characteristics of an illiterate adult in a series of distinct contexts:

- a. an illiterate adult in a rural society that is largely illiterate
- b. an illiterate adult in a rural society that is largely literate
- c. an illiterate adult in an urban environment that is largely illiterate
- d. an illiterate adult in an urban environment that is largely literate.

We suspect that the interests of AID are in reaching the illiterate adult in a rural environment, so we might concentrate our attention on the first two profiles with emphasis on the first.

In summary we were not seeking a substitute for literacy, nor were we suggesting that "by-passing" literacy is a desirable social goal. It is our contention that if you provide illiterate people with useful facts and concepts at the outset of a development program, they may see the need for literacy as a means of opening up additional channels of information. If people do not go on to become literate, at least they have received information that has helped them to improve their health and nutrition practices, and to increase their agricultural output.

Therefore, in the absence of ideal learning conditions in most rural areas of the world, we focused our inquiry on finding effective methods of reaching large numbers of widely scattered illiterate people in rural areas.

THE CHARACTERISTICS OF ILLITERATE LEARNERS

A central question in our research was: are there any characteristics that distinguish the illiterate from the literate member of a given society? The literature dealing with cognitive characteristics of illiterate learners is fragmented, poorly organized and certainly inconclusive. Much of what has been written about "illiterates" is anecdotal, unscientific, and in many cases pure nonsense. We tend, after examining the literature that is available, to agree with John Clammer, the British social scientist who notes in his monograph Literacy, Language and Cognition:

...All attempts by psychologists to distinguish fundamental cognitive differences (as opposed to purely local ones as a result of factors such as culture, age, sex or natural language) between literates and non-literates have so far failed or been ambiguous if literacy (as opposed to all other possible modifying factors) is taken as the operative factor.

Procedures

We ran several searches through the ERIC computerized retrieval system using descriptors such as "developmental programs," "developing nations," "illiterate adults," "illiteracy," "non-formal education," "educational technology," "mass media," "cognitive processes," "cognitive styles" matched with forty or fifty countries chosen on a geographic distribution basis, with emphasis on those countries which were most likely to have need for large scale educational programs for illiterate audiences.

We directed several graduate assistants through Psychological Abstracts, Education Index, CIE (Current Index to Journals in Education) index, and most of the other guides to social science and education literature. There tends to be a certain casualness about using the words "education" and "literacy" or "educated" and "literate" as if they were synonymous. In the literature of anthropology, we find a similar problem with regard to terminology. There is a tendency to use the terms "non-literate," "pre-literate," and "illiterate" indiscriminately, and there is also an occasional lapse into the imprecise use of "primitive" as in the "primitive" mind, and "primitive" mentality.

The Literature

Studies in Cognitive Growth by Jerome Bruner, Rose Olver and Patricia Greenfield marked the beginning of a serious and sensitive reconsideration of cross-cultural studies in cognitive development. The "field of inquiry" having to do with the development of knowledge about human learning patterns falls somewhere between psychology and anthropology, and the pioneering works in this field have been Cross-Cultural Studies, Selected Readings, D.R. Price-Williams (1969); Perception and Cognition: A Cross Cultural Perspective, B. Lloyd (1972); Culture and Thought: A Psychological Introduction, Cole and Scribner (1974); and Culture and Cognition: Readings in Cross Cultural Psychology, Berry and Dasen (1974).

In the realm of cross-cultural research and experimentation in cognitive development, the work of Michael Cole, Sylvia Scribner and John Gay merits very careful consideration. They continually remind us in a series of articles and books that there are enormous inherent difficulties involved in cross-cultural investigation into learning, cognitive development and the effects of literacy. They note for instance in Culture and Thought: A Psychological Introduction, that many anthropologists have speculated that literacy is a crucial factor in changing the way people think.

But, except in rare cases, literacy co-occurs with other cultural features such as the presence of formal education, increased industrialization and urbanization. When we find, as many have, that educated and uneducated rural Africans differ in their performance of some cognitive task, how are we to say what features of their cultures caused the difference? Furthermore, simply showing a relation between some aspect of culture and some aspect of individual performance does not tell us anything about the nature of the connection between them; yet that is precisely the psychologist's interest.

In their discussion on the meaning of culture, they note the difficulty in completely covering the "facts" about culture and cognition. They note that investigators have not pursued any single line of work long enough to bring the issues at stake to a clear resolution. "Consequently, it is necessary to patch together evidence from an often-bewildering array of cultures and techniques in order to illuminate any specific culture-cognition relation (as, for example, the relation between literacy and memory)."

In the area of culture, perception and visual literacy the research questions most actively pursued include the following:

- A. Are there experiences that influence the perception of artificial visual representations (like photographs and drawings)?
- B. Do different experiences lead to alternative ways of organizing ambiguous or deceptive stimuli?
- C. Does growing up in a particular cultural environment predispose a person to select specific features of his environment for special attention so that they are seen more clearly or quickly than others?

As suggested by Hudson, Derogowski, and other social scientists who have conducted research in the area of cultural influence upon perception, the findings are inconclusive, and it would be inappropriate to make any generalizations about the capacity of illiterate people to interpret artificial visual representations. There may in fact be very little relationship between literacy, as the ability to read and write, and "visual literacy" the ability to interpret visual representation. Most of the research in this area suggests that "formal schooling in the normal course is not the principal determinant in pictorial perception. Informal instruction in the home and habitual exposure to pictures play a much larger role."

In discussing the studies conducted by D.R. Price-Williams, Cole and Scribner note that we cannot speak of abstract and concrete thinking in general. Not only the familiarity and form of physical representation of the things classified, but the specific domains from which the items are drawn, appear to influence the abstractness of the responses given.

In summarizing the experimental evidence on culture and conceptual processes, Cole and Scribner make this observation:

When we moved on from grand theory to a review of studies on classification processes among traditional people, we found that the terms frequently used in the psychological literature to classify thought processes are somewhat deficient. Abstract and concrete have been used in a rather loose manner to designate a number of different operations, which do not always co-vary: the particular attribute the individual selects as the basis for grouping; whether he uses this attribute consistently to form all groups in an experimental task; whether he switches from one basis of classification to another; and how he describes and explains the classes he makes. With these many meanings of the term in mind, it is clear that experimental findings do not allow the conclusion that in general the thinking of any group of people is, or is not, abstract... Finally, the one unambiguous finding in the studies to date is that schooling (and only schooling) contributes to the way in which people describe and explain their own mental operations. This last fact suggests an important distinction that should be made in future research--that is, a differentiation between what people do and what people say they do.

In commenting on a wide range of studies in free recall Cole and Scribner note the tendency for American children to use one type of clustering device, compared to the different devices used by Kpelle children in Liberia, noting further that the American children seemed to perform better in the free recall testing:

How are we to interpret these results? Taken at face value, they tell us that we should seriously question reports of fabulous memory power among traditional nonliterate peoples. Not only were the performances of our Kpelle groups poor when compared with American groups of similar ages, but educated children tended to perform better than their nonliterate age-mates. This result is just the opposite of what we would expect if lack of literacy fostered memory.

Had the experimental series stopped at this point, our conclusions would have had to be that in a laboratory experimental situation, which makes arbitrary demands on memory, African memory (as measured by free-recall performance among the Kpelle) is worse than American memory, and that literacy improves recall rather than the other way around... As we remarked at the outset of this chapter, the study of memory and culture began from a different set of premises from those that

motivated the study of culture and other cognitive processes; memory was the one cognitive process said to be more highly developed in nonliterate than literate peoples.

Yet when we turn to the experimental evidence, we see no hint of a general superiority on the part of nonliterate peoples, nor do we encounter qualitatively different modes of remembering such as the rote recapitulation method suggested by Bartlett.

Conclusion

From our review of the work of Cole, Scribner, Gay, Clammer, Hudson, Deregowski, Price-Williams and several others, we draw the following conclusion about illiterates: we can assume nothing with regard to the learning characteristics of illiterate people. Most of the things that we have tended to associate with illiterates are described by Michael Cole as "anthropological folklore." We are not sure what aspects of culture, education, experience, rural/urban living and type of work cause differences among people in performance levels with regard to specific learning tasks, but we are reasonably certain that there are no fundamental cognitive differences between literates and illiterates if literacy is taken as the operative factor.

FIELD INVESTIGATION

In reviewing AID development assistance papers, TAICH documents, the AID program assistance papers on health, nutrition, family planning and agriculture, annual reports of UNESCO, WHO, and the sector papers of the World Bank, we tried to choose a list of proposed sites that would provide as much diversity as possible. We insisted in our selection process that the sites have projects in which some attempt is being made (or has recently been made) to change behavior, in specified ways, of rural people, through a combination of motivation, communication, education, and provision of essential services. We also tried to get a representative sample of projects based on geographic location, level of economic development, type of political structure, and variety of emphasis in subject matter, i.e., health, nutrition, agriculture, and family planning.

Guidelines for field site evaluation

The field investigator interviewed field workers, and client populations, as well as project designers and administrators in Ecuador and Honduras according to the following guidelines:

Background of the Project

To be drawn from the project papers and other AID documents.

1. Project Origin and Justification
2. Program Objectives
3. Anticipated Benefits
4. Project Evaluation Techniques
5. Sample Program, Materials, and Evaluation Reports

Project Design

1. Nature of pre-post project audience research
2. Degree of client participation in project design and implementation
3. Clarity of program objectives (clients and program personnel)
4. Selection of program strategies suited to population

(For example, if radio broadcasting is a primary means of communication, is the format appropriate, creative, innovative, etc.)
5. Is the content and the level of information/education pedagogically related to the choice of media and channels?
6. Is a clear reward and incentive system incorporated into the project design?

Project Outcomes

1. Are the outcomes of the project expressed in terms of information, skills, attitudes, behaviors, products, or some combination of these?
2. What change, if any, in social organization has taken place as a result of this project?
3. How are the outcomes measured?

1. ECUADOR: The Guayas Basin Improved Rural Life Project.

Background

The Ministry of Agriculture, through its office of rural development, is assisting small farmer cooperatives in providing expanded member services. The cooperatives have been active in such areas as rural housing, building of access roads, nutrition education, improved storage and marketing conditions and lending support to small scale artisan projects. Key targets for this project are the development of cooperative marketing systems, improved agricultural production techniques and crop diversification. To implement the project goals, the Ministry has provided leader courses for 1700 cooperative members. The courses emphasize the philosophy of cooperatives, leadership techniques, fiscal management and accounting, and new techniques to increase agricultural production.

The Carlos Julio Arosemena Rice Cooperative - A Case Study

The cooperative members, built a two room wooden structure which serves as a community center, office for the cooperative, school, and commissary. Before the building was constructed, very few children went to school since the closest schools were at least ten kilometers from this village. Now, there are 28 students in two grades under the supervision of a qualified teacher from the Ministry of Education. Village leaders hope to expand the school to three grades in the very near future, and support from the provincial Ministry of Education in Guayaquil has been promised for a new school offering six grades and another teacher.

The commissary is open to all families, cooperative members as well as non-members, and since it is the only store in the village it appears to be prospering under effective cooperative management. The building is used for occasional dances and meetings, and it is apparent that the building serves a very useful function as an informal community meeting place.

Perceptions of literacy in the village

Many members of the cooperative are illiterate. Some would like to learn how to read and write, but they feel they are too old. Furthermore, they do not view literacy as related to their short-term needs and aspirations. They hope that construction of the school will allow their children to become literate, and they are anxiously awaiting the promised expansion of school services. Villagers do not view the cooperative project as educational in nature; education

is the function of the formal school system, or the division of adult education and literacy of the Ministry of Education.

While they and their colleagues make most of the cooperative policy and operational decisions, they have no elaborate, long-range scheme for their development. Individual projects are undertaken one, or two, at a time. Projects have no apparent time constraints. The successful completion of the project's first program or effort leads to other needed efforts. Projects are developed on the basis of a simple idea. They are permanent in nature, and they as well as their benefits appear self-sustaining. The overall project seems aimed toward practical, productivity-oriented activities: raising more crops per hectare, better storage and marketing conditions, acquisition of new techniques for planting, fertilizing, etc. and at improving the quality of life in the immediate area. It is not seen as a change-oriented process; residents expressed no wish to nor fear of accepting new ideas and adjusting to change. Nor do they appear to view the project as a culturally-oriented or continuing education experience. The only fact lamented by all was there hasn't been enough rain the last two years, which has limited them to one rice crop a year instead of two!

The Rio Ruidoso Cooperative

Entrance to Rio Ruidoso is by a one-kilometer long dirt road built by the cooperative members and other residents. The co-op was founded four years ago with 54 members, though it now has 44 members. Twice-monthly meetings are held; 27-32 members usually attend, including two or three women. Members until recently paid 10 sucres (40¢) monthly dues, though this has been suspended on instructions of the Banco Nacional de Fomento (BNF), which says it must first review the co-op's general fund. Co-op members do not respect the BNF highly, and they feel BNF agents are unreliable and somewhat untrustworthy.

The co-op building is a concrete block structure perhaps 80 feet by 20 feet. USAID helped to buy the materials for the building and the large cement floor outside for drying rice; co-op members provided some funds and all the labor. Co-op members have high regard for USAID; the USAID Director and various USAID officials were special guests at the party and lavish meal when the building was inaugurated recently. The inaugural ceremony and a history of the Rio Ruidoso co-op were filmed and shown nationwide on television. A co-op member and his family live in one section of the building to provide protection and to make its facilities available when members arrive.

A Catholic priest who visits the area gave the co-op \$2,300 to buy a rice mill and other assorted equipment. The co-op's rice processing production has increased greatly

because of the mill (and increased the price the co-op can obtain for marketing its rice), though occasional delays occur when a piece of equipment falters and a replacement part must be sought and paid for.

Because of organized pressure from the co-op, the Ministry of Education built a four-room, 3-grade concrete block school (some 150 meters from the co-op) in the village. On the suggestion of some co-op members, the MINED teacher offered night classes for adults, mainly literacy and first to third grade equivalency classes. Thirty-four adults, many of whom were co-op members, attended with regularity and much interest. To the adults' regret, the classes abruptly stopped after several months when the teacher discovered the MINED wasn't paying him for this extra effort.

Rio Ruidoso co-op members were better dressed, appeared slightly more eloquent and talked more freely, and seemed more sophisticated (more traveled, more self-educated, etc.) than the residents visited at the "Carlos Julio Arosemena" cooperative. Co-op members themselves had pressured the provincial government into loaning the equipment to build the access road that had been desired actively by the community for ten years.

Irrigation is necessary to increase rice production, and it will perhaps be Rio Ruidoso's next program aspect. Like the members of the "Arosemena" co-op, they do not have well-formulated, long-range sequenced plans for development. The aspects of their development work seem to occur by group consensus, on a short-range basis as need arises. These aspects could very well account for some of their apparent success to date. Unlike "Arosemena," the Rio Ruidoso co-op and its members place slightly more emphasis on literacy and formal education, for themselves and their non-member neighbors.

The Director and Assistant Director of the MAG Rural Development Office, both stated that the teaching of literacy is not a program means nor is literacy a project goal. Their office, and the project, are more interested in such aspects as teaching credit practices, proper land cultivation techniques, and group organization. Campesino organizations are usually formed after a specific feasible development project is well underway or finished.

The fact that most campesino leaders and rank-and-file members are illiterate is a problem for extension agents training leaders and working directly with co-op members. Since almost no pamphlets, bulletins or newspapers can be utilized, agents make heavy use of lectures, field visits, demonstration workshops, and movies.

The two officials of the MAG said that their office has no written materials, studies or statistics on the project or project audiences. Almost no socioeconomic data of any kind exist on the campesino population to be assisted. There are no project evaluation reports, pre-project audience research, measures of degree of client participation in project design and implementation, no training materials available, and no data revealing what changes, if any, in attitude and social organization have occurred as a result of the projects. The two officials admitted these data are needed, but the office lacks the expertise, manpower and funds to collect and analyze them.

The Director of the Agrarian Reform Institute asserted that the great majority of campesinos are illiterate; thus, there is very little use of the printed word via bulletins, pamphlets and newspapers in IERAC. He stated, "Though school facilities and literacy for children are very important, we usually don't have time for literacy but must concentrate on such aspects as seeds, water, fertilizer and credit."

2. HONDURAS--ASHONPLAFA

1) ASHONPLAFA

The Honduran Family Planning Association (ASHONPLAFA) conducts many projects involving illiterate audiences including: clinical services, training seminars, conferences and lectures, radio programs and production and distribution of didactic materials for its family education programs.

ASHONPLAFA operates a pilot family planning clinic in the Maternal-Infant Hospital in Tegucigalpa. Founded in late 1963, the clinic has provided 13 years of continuous service in birth control and family planning. There are 8,000 births a year in the Hospital. After every birth, at least one clinic employee visits the mother to exchange information and speak on family planning techniques. Films are shown three times a week, to new and prospective mothers. There are talks and lectures daily. The number of women who voluntarily come to the clinic has risen each year; the total is now 6,000 yearly. The services are free, but women can contribute something if they wish. Women average 27 years of age and have had 4 to 5 children on the average. There are some 4,000 other patients who are treated yearly in a community-based distribution program operating out of four Government family planning clinics in Tegucigalpa's low-income neighborhoods. This is an ambulatory program, with 20 women (some of them illiterate) who have been in the Hospital's clinic who talk and distribute materials from door to door and wherever community residents, especially women gather. These 20 women are each paid a small monthly salary (\$30) by ASHONPLAFA.

Verbal, person-to-person communication is the main means of propaganda. The clinic also uses a limited number of radio commercials and announcements. The women usually have considerably less formal education than their husbands or boy friends. Illiterate women are more hesitant about the IUD; they prefer shots (good for three months) or the pill. The clinic's staff can detect no significant psychological, cognitive or affective differences between literate and illiterate women who use the clinic.

The clinic's staff maintains fairly complete statistical records and the Director issues an annual report. In 1975, 5,943 new patients visited the clinic; there were 19,198 visits by women who had previously utilized the clinic's services. On clinical referrals, the statistics reveal that none of the nearly 6,000 patients were referred by a means requiring literacy. Friends and relatives comprised the majority of referral sources (nearly 78%), 6.78% came on their own initiative, 10.77% were referred by hospitals and pre-natal clinics, 1.53% by (previous) clinic patients, 1.06% by radio, and so on. More than 85% of the patients were engaged in domestic work; nearly 4.5% were professional women. None of the educational methods the clinic uses requires literacy. Each of the 5,943 new patients was interviewed upon visiting the clinic. Clinic staff members gave 1,284 group educational talks attended by 16,889 persons; 579 persons attended films; and there were 972 home visits.

Continued operation of the clinic and its planned expansion of activities depends heavily upon assistance from international organizations. The London-based International Planned Parenthood Association, of which Honduras is one of the 104 member countries, gave between \$100,000 and \$120,000 last year, mainly for propaganda and some materials. The clinic through ASHONPLAFA received \$90,000 this year from Pathfinder to make the program nationwide.

The Pespire Valley Project

The Pespire Valley project involves 20,000 low-income persons spread among ten village clusters. One principal aim is to create a process of integrated rural development by establishment of self-sustaining sorghum financing and marketing cooperatives and the diversification of income-producing activities. Another primary program objective is to broaden the base of local decision making so as to include all segments of the population. Central to the program implementation is the creation of a community council in each village cluster. These councils are responsible for helping each community identify its needs, determine its development priorities, and generate local support for the realization of the projects it has selected. Each nine-member council meets at least once a month, generally with the Field Coordinator present.

The project has conducted some baseline studies which are helping guide program actions. One, for example, shows that only 56 out of 100 heads of families can sign their own name, and only 15 have attended more than three years of school. Although a larger percentage of their children have received schooling, 260 out of 484 of these school age children, or 54%, are not now attending school. Only 29 out of 100 households reported that members of the family could perform trades other than farming. Area residents have many health problems and only 8.5% of the births in the area are attended by any medically trained person.

The Operation Program Grant Funds will enable the cooperative to expand at a steady rate, about 300 members per year, without neglecting other needs. By the time it reaches a projected membership of 1,300 in 1979, it will have sufficient capital and volume of business to provide services to its members without further need of assistance from any source.

The principal aspects of the project are building and storage facilities, crop diversification, credit, terracing and land improvement, school building, health training, potable water systems, and other infrastructural development.

Results in this project have been encouraging, especially since it is just a year and a half old and the first grant funds began flowing less than six months ago. In its first year, co-op membership has grown from 300 to 585. Each member has invested \$5 in the first year (to be done every year) in his co-op. Two months ago, even considering the rapid growth of the organization and the need for initial capital and after paying both purchase and operating costs, each co-op member received a cash dividend of 9 lempiros (\$4.50).

Due to co-op constructed storage facilities and improved marketing information, co-op members are receiving more for their sorghum and corn crops. Previously, nearly all Pespire farmers sold their sorghum before the crop was harvested, as "futures" to itinerant grain speculators who usually paid no more than \$25-\$30/ton, about half the price it brings at harvest time. Cooperative leaders have now realized sorghum and corn have reliable outside markets when there's a surplus in Pespire. They have begun to investigate and travel to these prospective export markets.

Six storage facilities, most of them ground silos, have been built and others are planned. At this rate, Pespire's villages will exceed the originally planned storage facilities for 500 tons of grain in 10 sites by 1979. It is interesting to note that a silo is usually the first project a cooperative undertakes. A piece of land in the middle of the village is given or sold to the co-op as the silo site. Highly visible, it becomes a symbol of co-op and village development and

esprit d' corps. It helps attract new members and is in a location to guard against grain theft. Since so many of Pespire's farmers raise sorghum, the crop specificity of the program undoubtedly accounts for much of its success.

There are many undertakings in crop diversification and cottage industries. Five co-ops have built fish ponds, stocked with fast-growing high protein Tilapia fingerlings. Many more fish ponds are planned. Since fish is almost never available in the Pespire Valley, demand is expected to remain in excess of supply. Experimental programs with raising hemp and soybeans have begun. Cashew and coconut trees have been planted by co-op members as prospective new cash crops. New mango and avocado varieties are planned. The foremost beekeeper in the country has initiated his agreement to provide instruction to two persons a year. CDF has begun feasibility studies for three cottage industries: mango jelly, hemp processing, and concentrated animal foods.

The Pespire Valley project appears to be meeting its commitment on opening up the participation and decision making processes to previously underrepresented groups. Women make up about 50% of the community council members. Council members represent various ethnic and religious groups, and many young and older community residents comprise council membership along with middle-aged adults. Several women have already begun to be trained as mid-wives; the program goal is for 50% of the village women to have instruction in health, nutrition and child care.

TEGUCIGALPA--Education for Women

A Peace Corps Volunteer nurse supervises two projects, one in first aid and the other in nutrition, among low-income, largely illiterate women in a neighborhood on the outskirts of Tegucigalpa. An average of 20 women attend the once-a-week classes. Each project lasts 10 weeks, a period decided upon after the first aid project began.

There was little initial interest in the first aid project. Women found it difficult to decide upon a meeting time, evidently in part because they didn't want to admit they could be "free" from their homes. A Wednesday evening meeting time was finally decided upon. Women saw little need for training in first aid, until the son of one and the husband of another suffered minor but potentially serious injuries. To spark motivation and social interaction, the Volunteer began teaching the women how to make paper maché flowers and stuffed animals ("puloches"); this continued as a regular part of each class. Information on family planning was also included. The nutrition class followed during a subsequent 10-week period, with many of the same women attending. Emphasis was given to

additional sources of protein and vitamins, such as rice, beans and other combinations to compensate for the meat shortage, and the use of vegetable tops (carrots, beets, turnips, etc.). Family planning information and practical work in handicrafts continued to be project ingredients.

The two projects were apparently successful, although no empirical data exists on them. About half the women are still making "puloches," and considerably raising their family incomes by selling the stuffed animals to more affluent residents of Tegucigalpa, to occasional tourists, and to several small commercial outlets. The Peace Corps member believes they gained useful concepts and information in first aid, nutrition, and family planning. Several women visited a family planning clinic during and after the courses. For each course, the women insisted upon and took much effort and pride in electing officers and holding a formal graduation ceremony.

The few women who were literate tended to talk more during the initial first aid class sessions, but this subsided later, perhaps due to group pressure. They continued to request that certain words and phrases be written on the blackboard. The Volunteer noted no resentment or discrimination between literate women and those who could not read and write. Examinations were regularly given on an oral and/or picture basis. Illiterate women scored--and one assumes learned--about the same as literate ones (no exact data exists). The Peace Corps nurse did not make up the entire course outline beforehand; rather it consisted of lesson plans made up for each week's class, with inputs from the women and knowledgeable Hondurans to augment her own education and experience.

Comparing Projects in Ecuador and Honduras

Most of the comments on the IRL project in Ecuador also apply to the Pespire Valley project in Honduras. Very few co-op members are effectively literate, but as far as the project is concerned there is no need for literacy. Literacy is not even mentioned; it is implied as the Ministry of Education's responsibility. Teachers who give organizational, financial management and other training courses do utilize one written document; the document included advice "fed in" by co-op members, many of them illiterate. Often only the teacher has the manual, though those who are literate may request copies. Some community council presidents and many of the more effective co-op members cannot read or write.

Although the project has assistance from CDF and its Honduran subsidiary, all major and minor policy making and operational decisions appear to rest at the local level.

The nearness of these individual programs to their point of use seems a healthy contribution to local development. Unbound by a weighty administrative apparatus, goals are set and rearranged as needs arise. Unlike the IRL in Ecuador, projects can be undertaken individually, such as a fish pond or a beehive, or collectively. The program is simultaneously a large regional effort and a many faceted series of individual projects. Each segment reinforces the other. Thus, it appears the so-called "demonstration effect" operates in Pespire. A successful project in one location often provides understanding, the import of knowledge, and skill promotion and acquisition in another. A sense of esprit d' corps is also established.

There is no external compulsion to participate in the Pespire project. There is apparently little or no use of mass media and educational technology. Knowledge is given and skills promoted by means of talks, discussion meetings, visits to low-income farmers, field demonstration sessions, and generally by verbal communication among rural residents. The project and its various aspects are not at all viewed by the target population as "school," or even educational course. They are seen as promoting agricultural productivity and income and improving health, domestic economy and labor reduction. As with the IRL project in Ecuador, there are participant fees and contributions in kind. Despite some baseline studies, there exist few data on the target population and what is happening to them. Project managers and participants would probably reply that they are presently too busy to worry about the collection and analysis of cognitive, psychological and affective information.

Findings and Conclusions

1. Most of the projects observed in Ecuador and Honduras appeared unbound by a cumbersome administrative apparatus. There is no superordinate board or authority which tends to overly complicate organizational structure and be resented by the target population.
2. In all the projects studied, low-income, principally rural populations were receiving useful concepts, information and techniques; in several projects this was being proven by quantitative measures.
3. Most of the target population were illiterate persons. None of the projects utilize literacy training as a program means nor literacy attainment as a project goal. Participants and Project managers evidently feel literacy is not directly related to the participants' short-term needs and desires. Literacy and formal education, though, appear to be long-range desires (for their children and grandchildren) in some cases. This is true with some persons in the two Ecuadorean

co-operatives visited and in some communities of the Pespire Valley project in Honduras. The foregoing suggests that the degree of individual modernization has little relationship to the degree of literacy.

4. There is no external compulsion--from the national, regional or community levels--for persons to participate in the projects. All entailed voluntary participation. All projects utilize participant fees and contributions in kind from the targeted populations, with the partial exception of ASHONPLAFA's family planning clinic in Tegucigalpa (participant donations are sometimes given, but not required).
5. The projects are productivity-oriented and quality-of-life oriented. The former includes such aspects as raising more crops per hectare, introducing new seed and plant varieties, interest in irrigation, fertilizer application, fish ponds, and the introduction of cottage industries. Those activities which import knowledge, promote understanding and aid skill acquisition and use could be called quality-of-life oriented.
6. The projects are not viewed by participants or project managers as out-of-school projects. "School" as such, is not mentioned except as a place some of the targeted population would like their children and grandchildren to spend some time. The projects make almost no physical use of (formal) school facilities even when they are available. Project designers and especially the targeted populations do not seem to regard their projects as educational. They are not in the mold of school.
7. The formality or non-formality of the projects is not discussed or evidently viewed as relevant. Yet, with all projects there is a sense of project sequence. This is rarely written down for project participants, most of whom couldn't read it anyway. Project goals and means appear to be set informally, by consensus of the lower-income persons involved, and are not steadfast. Many of them can be altered, on short notice if need be, by changing physical, financial and group dynamic conditions. Some programs receiving assistance from international organizations, like the Pespire Valley project, have a complex, inter-woven, multi-project scheme and a rough time scheme or schedule.

But these procedures, time frames and the sequencing of projects are suggestive and by no means rigidly adhered to. The aspects of a project are optional, interchangeable and not restrictive. All the

aforementioned suggests that insisting on staged sequence is a failure in planning development projects. The targeting is likely to be too specific. Goal setting may have to be non-linear and not uni-directional.

8. Little use is made of mass media and electronic technology in the projects studies. This does not seem to be a constraint on projects or a complaint of project designers or the targeted population. The main methods used to convey information and promote skills are lectures, discussion groups, field visits by program advisors to low-income persons, field demonstration sessions, and generally by verbal communication among low-income residents.
9. From the projects observed, the successful completion of the project's first program/effort has led to tackling other needed projects. Thus, there appears to be an increase or a "snowballing" effect in self-help capabilities. The projects concentrate on a specific program first; keep initial expectations within bounds while keeping cohesion within and enthusiasm among group members high. Successful completion of the first program will socialize the group, acclimatize it to the self-help development process and the desire and impetus to embark on other needed programs will frequently follow.
10. The projects studied are by and large permanent and more or less self-sustaining. This is not true in all financial aspects, such as in ASHONPLAFA family planning clinic in Tegucigalpa. (Yet the clinic seems assured of considerable financial assistance from international donor groups for many years to come.) Hence, the projects and their benefits tend to be permanent, not temporary. The projects do not have any time constraint imposed by assistance groups. The degree of urgency and the selection and sequencing of project activities are largely left for project participants to decide.
11. Most projects were developed on the basis of a simple idea, which sometimes becomes a series of simple ideas. Furthermore, some projects are a series of individual (sometimes both group and personal) projects, and a larger regional effort comprised of many similar individual programs. Each reinforces the other. Each provides certain project necessities--greater legal authority and purchasing power, for example, with the regional program, and the heightened grass-roots participation, for instance, the individual projects enjoy.

12. Much of the policy-making decisions and most of the operational decisions appear to be made "in the field," by the low-income persons involved in the projects and who supposedly benefit from them. It would seem that programs of this nature, near to the points of use, promise a healthy contribution to local development.

Suggestions for Continued Research and Action

From the review and analysis of the literature and from the investigations we conducted in Ecuador and Honduras we offer the following suggestions for continued research and action on the part of the Agency for International Development:

1. In dealing with rural populations, the distinction between literates and illiterates is relatively unimportant, and there is little point in continuing the investigation into the "characteristics of illiterates."
2. Illiteracy co-occurs with other characteristics of populations and their context. Project design might more profitably attend to those characteristics related to participation; perception of goals, access to resources, etc., rather than to the condition of illiteracy.
3. People are responsive to many kinds of project activities, especially if they can see short-term economic benefits for themselves and their families.
4. Productive economic activities may foster a need for literacy, but it is not always demonstrable that literacy will foster productive economic activities.
5. Donor agencies, ministries, and other urban-based administrative organizations must make a considerable effort to include rural people in the design, management and implementation of their own project activities.
6. The concept of "non-formal education" as a project descriptor needs to be seriously reconsidered. The evidence from Honduras and Ecuador suggests that people do not see much need for being "non-formally educated." They are however, responsive to specific projects in such areas as crop production, marketing, family planning and cooperative management.

7. Even though the field research during the project was extremely limited, we are convinced that large-scale, bureaucratically controlled, highly organized projects are not promising sites to discover secrets of programming. We recommend, therefore, that further research and evaluation of on-going official, governmental activities be discouraged. On the other hand, there seems to be encouragement to examine projects carried out by volunteer groups, cooperatives, unions, churches, or private enterprises especially when the projects are "ad hoc," production-oriented, locally based, and autonomously operated and controlled. Our inquiries have produced intimations of successes in training illiterates in cooperatives, farmers' unions, family-planning clinics, textile mills, factories and mines. We strongly recommend an extension of this contract, using existing funds, until 31 May 1978 for purposes of verifying the existence of successful adult education programs connected with voluntary and private entities, and to evaluate them along the same lines established under this contract.
8. We suggest, finally, that AID assist a contractor (1) to select a small number of projects, or sites for possible projects, (2) to support those projects in order to test the program hypotheses generated above, and (3) to demonstrate the generalizability of some prototypical projects thus validated.

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