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# NON-FORMAL EDUCATION: A NEW APPROACH IN ECUADOR

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In the seventies, teacher training institutions are taking a new look at kinds of roles which teachers will be playing in the schools and communities of the world. There is an increasing awareness of the need for teachers to be more than classroom instructors and an accompanying realization that the educational needs of many communities cannot be met solely inside the classroom. In short, there is a movement toward increasing the permeability of the school walls, toward a mixing of community and school needs, resources, and learning opportunities.

Parallel to this reassessment of the teachers' role, is another movement variously labelled as out-of-school education, adult education, or non-formal education. This movement draws on the philosophy of radical critics of schooling like Illich and Freire and combines their ideas with a variety of pragmatic techniques drawn from community development and adult education. The resultant non-formal educational approach is characterized by flexibility in time, place and content of learning. Often it utilizes para-professionals, emphasizes learner oriented methods, and provides information and skills directly relevant to the learner's life situation.

The case study presented in this paper grows out of an attempt to create a new approach to non-formal education which is appropriate for the situations found in rural Ecuador. The techniques which have evolved there over the past several years have attracted considerable interest and may well be relevant to other parts of the world where similar educational needs are to be found. Many of the techniques may also be useful in more formal school settings, or in school-based community programs. Teacher training institutions may need to become more directly involved in such non-formal approaches as the role of the teacher continues to change.

## *Basic Philosophy and Rationale of the Project\**

The need for alternative sources of education is particularly critical in rural areas of Ecuador. The majority of the population (61 percent) lives in rural settings and survives either by subsistence farming or by working on large *haciendas*. Included in the rural population are almost all of the Indians, who represent about 40 percent of the total population of Ecuador. Nearly half the population is under 15 years of age, and the overall population is growing at a rate of 3.4 percent per year. The education facilities available to serve the rural population are severely limited. Overall, 20 percent of the 6-12 age group is not in school. In rural areas the percentage not attending is often much higher. Very large proportions of those who do attend repeat grades and subsequently drop out well before the end of primary school. Only 13 percent of the children who begin first grade in the rural areas finish sixth grade, while nationally—taking urban and rural groups together—nearly half those who enter first grade fail to complete even two full grades. In spite of this, over 70 percent of the population of Ecuador is reported to be literate, although the definition of literacy is vague and often means little more than the ability to sign one's name.

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\*The philosophy and the techniques of the project have evolved over a period of several years, and it is now difficult to separate out specifically who is responsible for which aspects of the project. In this paper, the authors have attempted to accurately describe and summarize the project which is necessarily the result of the efforts of many different people.

Those who do attend school find a traditional academic curriculum, teachers with limited training and often little knowledge of the local culture and language, a scarcity of books and other learning aids and buildings of poor quality. What learning resources there are seldom relate to the life and experiences of the rural children. Books depict urban scenes, activities and clothing styles unknown to most of the children.

The prospects for significant improvement and, more importantly, substantial expansion in the size of Ecuador's formal education system are very limited. Ecuador now spends 4 percent of its GNP or about 25 percent of its national budget on education. Even the most optimistic estimates of rates of economic development indicate the impossibility of significant increases in the number of people served by the formal educational system. When combined with the inability of the schools to provide content and skills which are functionally useful to rural peoples, the need for serious experimentation with other approaches to rural education becomes very evident.

In this context the project set out to explore the possibilities for rural education at the opposite end of the spectrum from the relatively expensive formal system of education. A number of basic principles guided our early decisions about what we would try to do and the methods we chose to experiment with. These are set out briefly below.

- (1) *Emphasis on functional education:* Our major educational goals were the learning skills and knowledge by rural people which would be directly useful to them in their lives and villages. Emphasis was therefore placed on such things as the numeracy required for market settings and on awareness of problems in one's environment and the options available for their solution. A major goal was the development of a sense of self-worth and a belief on the part of the participants that they could learn and that they could have an influence on their own life situations. Literacy was included in our goals, but only as it related to the villagers' needs, and not as an end in itself. The extent of emphasis on literacy or any other skill depends on the situation. The emphasis changes over time in any particular setting as the people become more aware of their potential and identify new needs.
- (2) *The use of non-professional manpower:* The project started with the assumption that any educational mechanism which required a fully-trained and paid professional in each village would be impractical. Even if such people were not professionals and had only low levels of formal education, their cost would strain the available resources severely. Use of non-professionals also emphasizes the basic philosophical viewpoint that people can learn from each other and that education doesn't necessarily require someone labeled "teacher."
- (3) *The use of attractive and self-instructional materials:* Having opted out of the formal schooling model, one gives up compulsory attendance, authorization relationships between teacher and pupils and the option of relying on an external set of motivators. As a result, non-formal materials must be attractive, self-motivating and suitable with relatively little outside input. The materials must require only the level of numeracy or literary skills which users are likely to have. Topics must be related to the lives and experiences of rural villagers and must be perceived as useful and entertaining. The goal is to provide a series of materials which rapidly lead people to create further materials of their own and to take an active part in structuring their own learning. Finally, materials need to be cheap, easily reproducible and readily available.
- (4) *Use of a wide variety of distribution systems:* Taking heed of Ivan Illich's recommendation about learning networks, the project sought to promote a wide range of methods of distribution and use of materials. A conscious decision not

to build a centralized bureaucratic model of non-formal education was made. Instead, the project was to function as a resource center for ideas and for pilot development of materials. The project would work with any institution which showed an interest in the materials and would agree to use them in current or future programs. The goal was to make a set of new materials and processes available to government, private and local organizations of many kinds.

While the project also cooperates with the formal school system, its primary target during the initial stage is that part of the rural population which is now largely untouched by the schools. However, the project has been working directly with the adult education program of the Ministry of Education, precisely because it is reaching some of the populations not included in the schools. In addition, the project is seeking to create a private sector where commercial firms make use of the existing network of local markets to demonstrate and sell a variety of low cost educational devices.

- (5) *Materials to be created and developed by Ecuadorians:* Although an initial set of twenty basic ideas was created at the University of Massachusetts by the project staff, much of the subsequent adaptation and creation of new materials is taking place in the field. To facilitate this process, the ideas created outside were presented in partially completed form with sample materials purposely produced in an unfinished way. Rules for games were often not shared in their entirety with groups testing the materials. As a result, substantial modification of pilot ideas took place from the start. After the first six months, most of the new techniques were developed in the field.

### *Materials Development*

From the beginning the staff felt that the type of materials developed for the project would be a crucial factor in determining who used them and how they would be used. A set of guidelines for materials was developed which set out criteria for judging their appropriateness for rural non-school education. A brief discussion of these criteria will help the reader understand more clearly some of the implications of the principles discussed in the previous section.

One of our primary criteria was that the materials be *cheap and easily reproducible* from locally available materials. Ideally, many of the devices could be constructed by the villagers themselves once they were exposed to a model. Thus things like wooden dice, simple playing cards and games like ring toss or simple roulette could be easily constructed by local carpenters. For board games requiring more complex printing, we are experimenting with making the facing available for villagers to put onto a board which they provide. Devices which are produced outside the village should be durable, attractive and above all cheap—well within the budget of typical families. This means there is an effective limit on the cost of reproduction of most materials of \$1.00 U.S. or less.

Another important aspect of the materials is their *motivating* ability. Above all they must be fun to use and must spark interest and participation on the part of the users. The goal is active involvement so that users gain confidence in using the concepts of skills taught by the materials. Since there is nothing compulsory about the use of the materials and since external rewards are largely non-existent, the materials must carry the full motivation ability within themselves. Full use is made of local cultural traditions of entertainment. Gambling, competition, prizes or whatever seems to generate enthusiasm and participation is used whenever appropriate. Flexibility in the components and processes used in games is often a motivator. The more villages can change the materials to make them fit local circumstances, the more they will participate.

Materials should have *immediate relevance* to the users' situation and where possible should relate to *popular culture*. Materials need to appeal to villagers with little or no formal schooling, people who haven't been taught that learning occurs as separate subjects like math or history, people who will naturally relate the materials to the substance of their daily lives. Even reading and writing and simple math can be readily related to a discussion of community problems and issues. Such an integrated approach to self-development can often be facilitated by making use of aspects of popular culture. Local games can be modified to include practice of numerical skills, competition can be expanded to include new knowledge, and so forth. A number of the project's current materials are direct modifications of locally popular games. For instance, instead of prescribing in the rules of a game the way in which disputes are to be resolved, the process is left to be devised by those playing the game, according to their own customs.

Use of the materials should be possible with only minimal input from trained outsiders. In most cases it is intended that local non-professionals with short intensive training will be able to make use of the more complex materials. The simpler devices should be *self-explanatory* and require little more than a group of individuals interested in using them. Most of the devices should require little in the way of literacy skills. Even the more complex simulation games can be transmitted verbally as long as someone in the village knows how to play. For example, the *hacienda* game, instead of having written rules, incorporates the role of a lawyer who knows the rules. Players must negotiate with him as they go to discover what they can or cannot do. Under such circumstances, rules are very flexible, and each village or group tends to develop its own version of the game.

Finally, materials should be conceived of as part of a *self-generating* curriculum, rather than a finished product. Various conscious techniques should be used to provide learners with a framework upon which they can build content and procedures which are valuable to them. Avoiding written rules, using unfinished versions of games, keeping materials simple and unimpressive to avoid intimidating users; all these are techniques which help the materials to serve as input to a process rather than as endpoints. The overall purpose of non-formal education is to release local resources and to develop in people an awareness of their ability to learn from already available materials and people.

The materials developed during the first year of the project meet these criteria to varying degrees. As further usage occurs in the field, a better understanding is emerging as to the relative importance of different criteria in various settings. Future development should contribute substantially to the process of evaluating these criteria for judging materials.

The devices which have been developed can be grouped into three general categories for convenience. They are: (a) simulation games—often board games which deal with complex social reality. They are intended to clarify social issues and promote group discussion of problems. Often the games provide a means for exploring and testing possible behaviors in real life situations; (b) fluency games—these deal with simple numeracy and literacy skills by creating entertaining and involving processes which provide practice and increase the confidence of the players in their abilities; and, (c) expressive techniques—this is something of a residual category which includes a variety of devices designed to make it easy for villagers to create stories, write things and generally express themselves. Included in this category are things like the *fotonovelas* featuring photographs of real *campesinos* and Indians and portraying a realistic struggle in their lives.

In this paper we will not present a detailed discussion of each method or technique used. Only brief mention will be made here of a few examples to indicate the type of materials included in each category. The simulation games which currently exist deal with

a variety of situations. *Hacienda* simulates the setting of a rural Andean village and deals with issues of land ownership, improved farming and the role of various local authorities. *Feria* is a game which focuses on market economics and the seasonal changes of prices. *El Robo* is a simple game which revolves around the perennial problem of what happened to the money in the Coop treasury. The game of *Coop* simulates a simplified version of the annual cycle of buying and selling by a cooperative. The game requires accounting skills on the part of the manager, and all players participate in an annual election where a decision is made to retain or replace the manager.

These games and their growing number of adaptations vary greatly in the amount of field testing which has taken place so far. Clearly established, however, is the fact that such games are feasible, that they are intensely involving for rural villagers and that they are effective in generating heated discussion and analysis of both the games and the real life which they simulate. Precisely what cognitive information they transmit, or exactly what aspect of the games is most effective in producing learning, are questions which remain to be answered.

Fluency games tend to be much simpler and come in a myriad of forms. Basically they consist of things like dice or cards containing letters or numbers. In all cases a simple set of rules provides players with turns at creating words, solving simple math problems, matching problems and solutions or betting on the outcome of a roll of the dice. Variations include a number and word bingo, a mathematical roulette game, a pinball game and a variety of word games based on traditional Ecuadorean betting games. In most cases the materials required are very simple and can be used in a variety of ways as players make up their own rules. These games have proven to be very popular, particularly among people with very limited skills. The games are non-threatening and entertaining. In formal literacy classes and in school settings they have been found helpful in maintaining attendance and dealing with discipline problems.

The expressive games have had less field testing than the other categories and in some cases are still in the idea stage. An example of the latter are rubber stamps. They are conceived of as a set of simple figures—human figures, animals, houses, etc.—which people can use to make their own posters, to create visual stories, to illustrate ideas or just for decoration. Basically they will be used as literacy support devices. In a similar vein, photographs and posters of local scenes and events can be used as stimuli for group discussions. Such devices are part of the process often used by people following Freire's consciousness-raising approach. As already indicated, the *fotonovelas* are included in this category. In the future such things as traveling drama groups made up of the actual people in the *novelas* and a set of cheap puppets which communities could use as a step in the direction of creating their own local theater presentations may result from the *novelas*. As can be seen from this very quick overview of the techniques being tried by the project, our first year has been spent in generating multiple techniques and methods for non-school education. Our approach is eclectic, based on the assumption that few precedents exist and that there is little basis for *a priori* elimination of materials. We also believe strongly that peoples' interest continues longer if they have a chance to choose their activities from a variety of alternatives. In a similar way, we are committed to working with a variety of institutions and potential distribution networks.

### *Distribution and Use of the Materials*

One of the basic tenets of the non-formal education project is the commitment to the use of a heterogeneous means of distribution. In Ecuador, as in many other developing countries, there is really no such thing as a genuinely national agency. Government ministries with national labels in fact serve only a selected part of the

population in any effective way. This is particularly true of the educational system, as was indicated by the figures at the beginning of this paper. The goal of this project is to explore ways in which the unserved part of the population can be reached and provided with functional education.

Without massive new outlays of resources, the only strategy which seems feasible is to find ways of making use of existing networks of communication. Creating new institutions or greatly expanding the size of existing ones is very expensive and time consuming. The alternative is to add to the activities of existing institutions and networks or to encourage modification in their activities. In either case the cost and time required are small relative to other strategies. As a result, the project has sought out and tried to make use of a wide variety of distribution vehicles for the non-formal educational materials. There are three types of distribution networks which might be used: large existing institutions, non-institutional networks and commercial distribution networks.

### *Institutional Networks*

The most extensive of these agencies is the Catholic Church, which has in the past proved its ability to contact and affect a huge percentage of the population in Latin American countries. Even if people are not *good* Catholics, they certainly have been influenced and taught by the Church. While many of the goals of non-formal education are compatible with those of the Church, the intent to increase participation and awareness of the possibilities for change may not be congenial to all Church officials. There exists a minority group within the Church which is advocating substantial reforms in the activities of the Church. This group would likely be supportive of the project goals and methods. The reaction of other parts of the Church remains to be seen. Present experience suggests that the reaction of the local village priest depends greatly on the way in which an approach is made to a community.

The largest agency whose explicit goal is education is of course the Ministry of Education. Their adult education program operates in all the provinces of the country and enrolls a substantial number of adults in literacy classes. Classes generally meet five nights a week for several hours. They are taught either by primary school teachers who are paid extra or by people hired specially for the task. The number of classes in each province varies from 10 to 15, in some, to 100 or more in other provinces.

The non-formal education project worked on a pilot basis in the adult education centers of one province this year. The teachers from all of the centers in the province received a short training session, and the Ministry is making copies of some of the project materials available to them for use in their regular program. In this setting, the non-formal materials are being used by an aspect of the formal system. The staff and the setting are typical of formal educational settings, but the materials and the clientele are characteristic of non-school educational efforts. In addition, some of the primary teachers working with adults have already taken the non-formal materials into their classrooms in school. If government reaction is favorable, the project expects to expand its work with adult education to cover several more provinces this year. Eventually the non-formal materials may be used on a national basis in these centers.

Mision Andina, Ecuador's national community development agency, currently operates in 5 of the 17 provinces of the country. Preliminary contacts with them have resulted in expressions of interest on their part to try certain of the materials developed in their own programs. Contacts with a number of Cooperative Unions have produced different results: some have been anxious to use materials immediately by distributing them to the education officers in the cooperatives; others, suspicious, have adopted a policy of waiting to see how the materials are used in other settings first.



Although cooperatives are not organized with education as a major goal, some of their major problems seem to spring from the fact that their members do not understand the basic principles of a cooperative and from the fact that many of them lack basic numeracy skills. Materials developed by the project to improve fluency in basic skills, as well as several simulation games designed to teach some of the principles of cooperatives, can be easily used as part of the activities of cooperatives during regular meetings. Once such activities are started, new needs arise and can be dealt with. One direction in which discussion can move is toward issues of nutrition and food preparation, for which a prototype game (*La Comida*) is also available.

The initial policy of the project has been to encourage experimentation with the materials by the widest possible range of institutions and individuals. This cafeteria approach means that any interested group can look over the range of materials available and decide to take one or more of them to try in their own organization. The project does little direct selling of the materials. Institutions which react in a negative manner are left alone, often to return six months later to ask if they can use a particular technique which they have heard of from an agency which is trying it out. Groups showing more than casual interest are offered short intensive training programs for members of their staff to become acquainted with the materials and ways in which they can be used. Organizations are encouraged to modify both the materials and the way in which they are used to best suit their purposes. The project asks only that feedback on what happened be made available.

The project is firmly committed to field testing the policy of promoting a multi-faceted distribution network for the non-formal educational materials. Our belief is that only in this way can substantial new resources be generated as people and groups become interested in using the new approaches. Each group must make its own materials—the project will only provide a few initial samples—and must find a way to sustain the interest generated by the first use of the materials. Our goal is a substantial multiplier effect which doesn't depend solely on government support of one or more ministry operations. Our goal is a complementary set of agencies, both government and private, which together reach the parts of the population currently neglected.

During the second year the project will set some priorities for focusing its own resources, but will continue to supply materials and training to a wide range of agencies, in the belief that such an approach deserves full-scale trial. Thus while the project will focus on certain selected agencies and provinces, our intention is to have development and spread taking place in other areas without our direct participation.

### *Non-institutional Networks*

In addition to using existing institutions, the project has fostered the creation of a non-institutional approach. CEMA, an Ecuadorian training agency, selected seven rural communities as sites for the first trial. Each village chose two to five people who received intensive training for a period of four weeks and then returned to the village to begin acting as learning "facilitators." These facilitators organize regular meetings of villagers—both adults and children—during which a variety of learning activities take place. They play learning games, discuss community problems, improve their skills and confidence with literacy and numeracy and often go on to take action concerning a village problem. Except for periodic visits from the trainers, these facilitators proceed on their own. Encouragingly, all seven villages continue to have functioning groups nine months after they began.

A second phase has now begun. Surrounding villages without facilitators have become interested in the materials and want to use them. At first they borrowed materials



and made their own copies. Now sufficient interest has been generated so that the original facilitators are running training courses for selected individuals from other villages. The result is a situation where *campesinos* from one village select representatives who receive training from a *campesino* facilitator in a neighboring village. Under these circumstances there is a high probability that what is taught will be directly relevant and will contain a minimum of useless external content. Potentially the costs of such a process are very low, and the possibility for spontaneous spread high. If such a process became self-sustaining, the multiplier effect and the low cost would make it very attractive.

### *Commercial Distribution Network*

Complementing the other two distribution networks is a third possibility: a commercial, market-based system. In effect this means making use of the private profit incentive in combination with existing wholesale and retail distribution mechanisms. One approach to commercial distribution being explored by the project involves a combination of local producers and groups of traveling salesmen called "*charlatanes*" in Ecuador. Commercial production and distribution is also being used for the *fotonovelas*. In the latter case the normal commercial channels for distribution are being supplemented by a variety of other mechanisms. For instance, some thought has been given to using bus drivers as a mechanism for reaching rural areas. Here, as in all cases, the project is pursuing a goal of multiple, complementary systems rather than relying on any single system.

The "*charlatane*" system seems to be most promising in areas where the population is too thinly spread for schools or where the terrain produces isolation. In these settings non-institutional methods are necessary because the economics of most institutional operations prevent them from penetrating into such areas. Even the poorest area has periodic markets. Because much of the material being produced for use in non-formal education is of a virtually self-teaching nature, it is feasible to think in terms of dissemination through markets or even village-to-village sales. For the very poor areas, the wares could be subsidized by being made available to the "*charlatanes*" at less than cost. The amount of subsidy would be small since the materials are very cheap. In many cases the *campesino* would need to buy only part of the device, since he could easily make the rest himself. The "*charlatanes*" would earn a percentage on anything which they sold, and with such incentives, would quickly devise effective schemes for reaching as many people as possible. One can also envision "*maestro-charlatanes*" who would combine a training and motivational role with their activities as salesmen. Again the attractiveness of both a low-overhead and a self-motivating distribution system is present.

The combination of institutional systems—both governmental and private—with non-institutional systems and with commercial networks has the potential of forming a comprehensive national network made up of complementary distribution systems. The result could be the closest thing to a national education system—as opposed to a school system—yet developed. The project is devoting itself to the development of all three categories of non-school systems for making educational activities available to the people of Ecuador.

The debate as to how centralized and coordinated such a "national" network should be will continue for some time. The project is operating on the philosophy that at least for now the lack of a single coordinating agency is desirable and in fact has a number of advantages. The problems of relying solely on centralized agencies, whether government or private, include at least the following factors: their capacity and penetration is often severely limited by shortages of personnel and resources; the population is not homogeneous and large segments are routinely discriminated against; there is a lack of

ty in programs; approval is needed from above before action can take place; and

almost inevitably, solutions and problem definitions come from a centralized or even an external agency. The result of these characteristics is usually the reinforcement of behaviors of dependency and passive acceptance of things as they are on the part of the recipients of services.

As an alternative, the project seeks to stimulate the creation of a *community-based demand* system, where people become aware of themselves as resources, and where communities begin to develop the skills required to interact with agencies already present. People develop a set of *survival skills*: the ability and willingness to approach the appropriate source of information or material and the techniques needed to get a reasonable hearing from organizational representatives, politicians or educators. Too often existing programs tacitly depend on the fact that only a small percentage of the population knows that they exist, and even fewer know how to gain access to their services.\* Large scale development of such skills would readily reveal the inability of the government to cope with such demands and would necessitate creation of additional approaches. Hence the focus of the project on self-generation of resources and skills and the value placed on involvement and participation. The combination of self-reliance and ability to make use of government capacities may provide the best hope for educational and economic development.

### Summary

This paper has sought to outline the development of the non-formal education project in Ecuador. In the first part the basic principles upon which the project is based are articulated. Next, the criteria used in seeking out new methods are discussed and a series of short examples are given of the three types of materials currently being used. The last section focuses on the difficult problem of delivery systems for the materials. The project's commitment to multiple, complementary systems is discussed, and current progress along those lines is indicated.

The note definitely describes a project in process rather than a finished product. The project has been in existence for a fairly short time, and many of the ideas are in a state of flux. The techniques and methods being used by the project are felt to be different enough from most other approaches to make an interim progress report valuable to others striving toward the same goals. The authors hope that these ideas will stimulate teacher training institutions to begin experimenting with an ever increasing variety of approaches which will help teachers become genuine community resources.

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\*In developed societies the same problems exist. Note, for instance, the following examples currently available in our own society: The New York Times guide to federal programs for officials of small towns and a published booklet of blank cable forms addressed to appropriate officials in New York City.