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ABSTRACT

Presented in this work are case studies drawn from developing countries, principally Madagascar and Niger. They are examples of radical alternatives designed to serve a population not served by conventional schools and to convey instruction quite different from what is usually given in schools. In brief, the programs are more production-oriented than the so-called work-oriented literacy programs and are aimed at reaching thousands of people. Four vital principles are embodied in this approach to education: 1) use of low-level manpower with concomitantly simplified and scheduled calendars of instruction; 2) emphasis upon specific skills and knowledge applicable to the lives of the learners; 3) a concern to build confidence through success and have learners apply their new skills and assume additional responsibility; and 4) to treat education as one of a complex of inputs designed to improve specific conditions. (FDI)

ALTERNATIVES FOR EDUCATIONAL DEVELOPMENT:
case studies or practical applications

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A B S T R A C T

The case studies here dealt with are drawn from developing countries, principally Madagascar and Niger. They are examples of radical alternatives in that they are designed to serve a population not served by conventional schools and to convey instruction quite different from what is usually given in schools. Such programs are justified, not as low cost alternatives to conventional schooling, but as programs better suited to certain development needs. Their unit costs, however, must be much lower than those of conventional schools.

In brief, the programs are production oriented, moreso even than the so-called work-oriented literacy programs, and they are large in scale, aiming to reach thousands of persons. Four vital principles are embodied in such an approach to education, 1) use of low-level manpower with concomitantly simplified and scheduled calendars of instruction, 2) emphasis upon specific skills and knowledge applicable to the lives of the learners, 3) a concern to build confidence through success and have learners apply their new skills and assume additional responsibility, and 4) to treat education as one of a complex of inputs designed to improve specific conditions.

For certain development needs such programs are much more feasible than the employment of sophisticated instructional technology utilizing "hardware" in lieu of manpower. They may also be seen as forerunners, or the initial programs of instruction which alert people to new possibilities and set them on the way to affording, and being able to profit from, more sophisticated instruction.

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The case studies to be discussed as instances of alternatives for educational development are drawn from developing countries, partly because my recent experience of alternative developments in education has been in developing countries but moreso because in developing countries, pressed most severely by the exigencies of finance and confronted with the dysfunctionality of foreign educational models, the need for alternatives is most urgent.

In this context of urgency, an educational alternative is not merely another kind of program aimed at the objectives of the established educational system, nor need it even be complementary to the established system--so as to fill gaps or provide some services at lower cost. The alternatives I shall discuss are intended to serve a different constituency and usually attempt to convey quite different learnings than are conveyed by the established system. We are all familiar with the reasons why strikingly different educational efforts are being called for, but the two main ones are worth repeating. New departures are required in education in developing countries because, first, the cost of supporting the established school systems is becoming prohibitively high and second, these systems are having little impact on the quality of life of the majority of the population. The second point is often summed up by noting the irrelevance of formal education to rural life.

I mention the matter of prohibitive costs, because educational finance is a critical issue in many developing countries at the present time and underlies the widespread attempts to apply systems analysis and cost-benefit methods to educational planning. Centres such as IIEP in Paris concentrate almost exclusively on problems of educational finance. However, the educational alternatives to be discussed here are not primarily intended to reduce the costs of education. Rather, their justification is in serving the needs of large groups of people beyond the reach of the established school system. It follows that these alternative developments will be characterized by low unit cost, otherwise, they could not possibly be made available to large numbers of people living near the subsistence level. Note the difference, however, between keeping unit costs low in order to serve specific groups of people and lowering unit costs so as to extend the services of an existing school system.

Serving the needs of people beyond the reach of the established school system leads to questions about the nature and purpose of education. It is worth emphasizing that these case studies of alternatives for educational development all concern programs having objectives different from those of formal school systems and that their very nature, the methods of instruction, the didactic materials, and the instructional situation itself, are quite different from what is typical of schools. Only if "education" is taken in a broad sense can these particular projects be construed as alternatives in educational development.

Effective alternatives in educational development must occur in settings quite different from that of the conventional school and must also serve a different constituency. The setting needs, in the first place, to be radically altered because a ritual has developed in conjunction with the conventional school which is usually seen as the gate, albeit a strait gate, to the modern economy. Therefore, the purpose of enrolling in a conventional school and the reason why families make large sacrifices to maintain even one member in school lies in the hope that the chance of success for that member, however slim, may be a means for the family in some degree to escape the limitations of rural life. Because the conventional school is so hopefully looked to as an escape route and its formalized procedures are seen as issuing in certificates or tokens redeemable for places in a richer and wider world, programs established within the pattern of the conventional schools and intended to encourage people in making the best of the possibilities of rural life will not be taken very seriously. The ritual of the conventional school simply has nothing to do with turning people's attention and hopes towards rural life.

The preceding remarks about the limited purpose and appeal of the conventional school indicate the nature of the constituency which new alternatives in education should serve. Radically new educational efforts need to be directed to the mass of people who have no choice but to find their livelihood and their human satisfactions in rural life. While education alone cannot make rural life more prosperous and more satisfying, some form of education must be in some degree contributory to any improvement. If the dissemination of knowledge and the communication of skills have no part to play in improving rural life, then we have naught to do but stand and wring our hands while waiting for some massive technological developments whose unexpected spin-offs may remedy the situations which perplex us. In arguing that an appropriate form of education can be important in the improvement of the lives of rural people I am fully mindful of the objections that have shrewdly raised by writers such as Philip Foster.[1] Because I take these objections seriously I would add that the constituency to be served by new educational alternatives will not only be rural but will also be older than the typical school population. It may sound cold-blooded, but it is a hard fact that radical educational alternatives are likely to be wasted on young children who have been conditioned to see education as their means of escape from rural life. The constituency to be aimed at will be older, possibly disillusioned, a good many of them may already be trying to wrest a living from the soil.

At the risk of seeming to labor my concern with the role of new educational alternatives in the enhancement of rural life, let me remind you that the first Bellagio Conference on Education and Development was held earlier this month from May 3 through May 5 and that a main issue in the conference was the possible contribution of education to rural development.[2] In part the approach of the conference was negative as economists, such as Mark Blaug and Michel Debeauvais, discussed the weaknesses of conventional educational planning, and particularly, the failure of educational programs to alleviate the burgeoning unemployment problems in urban areas. More positively, Philip Coombs was called upon to report on the study he is presently carrying out under the auspices of IBRD and which amounts to a review of non-formal educational programs in a large number of countries, mainly LDC's. It would be presumptuous to predict a decisive new trend at this stage, but it is surely significant that the major development-lending institution, IBRD, is supporting a study which at least suggests the possibility of breaking away from the Bank's long-established emphasis on technical education and almost exclusively capital support for educational development. What I found missing in the papers and discussions at Bellagio was detailed examination of non-formal education projects. My review of a few projects is not exhaustive, but I hope it will be suggestive, and I further hope it may give indications of the range of educational work which may be undertaken informally.

I shall pass over the range of literacy programs underway in various parts of the world, particularly those sponsored by UNESCO. My choice probably reflects a personal prejudice, but even the so-called work-oriented literacy projects seem to focus on literacy rather than on the inculcation of practical skills and carry the familiar overtone that to be truly human is to be literate. Concern about the efficacy of literacy projects also relates to the objections raised by Paulo Freire.[3] His contention that literacy programs organized by outside experts using outside materials concomitantly teach the recipients of the new literacy that their own culture is impoverished and the meaning of their lives is trivial is, I think, painfully true. To its credit UNESCO has tried to develop materials locally, but the difficulty of providing adequate reproduction facilities and adequate field staff means there is still considerable reliance upon dissemination of materials from the metropole. Though the metropole may shift from Paris or London to Dakar or Dar-es-Salaam, the message of literacy as finally disseminated remains significantly foreign and certainly urban, and thus remains fraught with some of the pernicious influences to which Freire objects.

Finally, I think it not too strong an objection to argue that literacy programs put the cart before the horse. In the words of a Tanzanian official, "Development is too important to wait for literacy." Even when literacy programs are work-oriented the instructional emphasis and the priority seems to fall upon development of literacy rather than upon productive skills. It is much more rare to find a program such as that of Ayo Ogunshe in villages adjacent to Ibadan where, as a result of increased production and a greater concern on the part of small farmers to market their crops more effectively, they began to ask for basic instruction in numbers and counting so they might check the weights and prices of their produce against the amounts quoted by the agents of the

buyers.[4] Literacy may well be a consequence of a practically oriented program dealing with immediate problems of particular groups of people, but literacy should then be introduced only as there is an obvious need for it and only as the people are interested in it. It is not necessarily the culmination of an educational program, for a great deal can be taught and sophisticated skills acquired without literacy being even a vehicle for instruction.

In this connection we should remember that western society was highly technical before it was extensively literate. How many threshing machines ran effectively for years on the strength of some verbal instruction, a lot of practical experience, and a few miles of haywire?

Essential to new alternatives in education is a break with the western tradition which so long has held that the essence of education is the mastery of various symbolic systems. The focus of alternatives in education must be upon increased production of food or saleable commodities or the inculcation of skills and practices which will make life more pleasant and more secure.

An example of such a production oriented project is the work of La Groupement Pour L'Operation de Productivité Rizicole.[5] GOPR, as I shall more conveniently refer to the project, was organized in Madagascar and consisted of a team of 28 Europeans and more than 900 Malagasches. The objective of the first contract was to effect an increase of 150,000 tons of rice production in four years, principally in two regions located on the high plateau in the centre of the island.[6] A simple description of the organization of the project shows that in each of the main regions there is a regional GOPR headquarters headed by a director with assistants for supply, training, and water control projects. In one region the director is a Malagasche, in the other region the director is French. In each of the two regions are 16 Sous-prefectures headed by 16 Chefs de Zone (32 in both regions) and all but one are Malagasche. At the level of the commune there are approximately 100 Chefs du Secteur plus several dozen intendants who manage seed and fertilizer supply centres. At the level of the cellule, which roughly corresponds to groups of villages making up a canton and including on the average 400 to 600 individual heads of families, there are more than 600 vulgarizateurs or village level extension workers or counsellors. In addition to this multi-level instructional group a small number of research workers are engaged in pilot projects, for a vital aspect of the program is that no technique is recommended to individual farmers which has not been tested and found appropriate for the conditions of the region.

The core of instruction is the dissemination of simple technical themes designed by a national research centre and tested over several years in pilot projects. These themes were then introduced through a carefully controlled program of training vulgarizateurs to contact and register individual farmers and to conduct a calendar of demonstrations for them.

The key to this project and the major hope for any system of non-formal education sufficiently vast to meet the needs of the mass of rural people is the assumption that teachers with minimal preparation can be

effective. The challenge of non-formal education is to disseminate simple knowledge and skills to great numbers of people so we have no choice but to create a large instructional force with very limited training. As applied in Madagascar, this technique of utilizing low-level manpower for teaching was much like using the vulgarizateurs as communicators who passed on skills and knowledge they had only recently acquired. Thus, they were not given lectures in the theory of rice-growing, nor were they given a background of pedagogical techniques, nor were they given any semblance of a complete course. Rather, they were given simple demonstrations and explanations to show how basic operations already being performed in the rice paddies could be done more effectively. They were not even given the entire year's calendar of demonstrations at one time, though the demonstrations were basically only four in number. Each demonstration was taught during a period of one week at the appropriate time of year and then the vulgarizateurs went on to demonstrate the techniques to the farmers.

The approach has much in common with the monitorial system which was once advanced as the solution to the cost of mass education in America, but as applied in rural areas it holds much more promise as the demonstrations do not represent a new and strange body of material to be learned but are aimed to help people modify and improve what they are already attempting to do.

These simple demonstrations of improved methods are symptomatic of the strength and possible weakness of non-formal education. Such massive education programs carried out by minimally trained personnel must begin where the learners are, they must be related to the activities already underway in a given area, and they cannot depart too radically from established practice. Their weakness lies in their immediate application to existing conditions, for they must deliver the goods and highly pragmatic peasants, who have little margin for error, will not endure programs of instruction which don't seem to make much difference. They certainly can't be fobbed off with the traditional schoolman's defence, "When you are older you will be glad you were made to learn these things."

The challenge to non-formal education is clear and severe: it must be based on an understanding of critical factors in a given area, it must be convincingly and sensibly presented to the people, and it must work.

The most striking difference between formal and non-formal education lies in the concern to have people experience success and move as rapidly as possible into greater control of their affairs. The long period of tutelage and the concept of education as preparation for a special way of life requiring mastery of arcane symbols and strangely sophisticated modes of working, which characterize formal education, are impossible in any effective program of non-formal education. In the context of a developing country it is not too much to say that the intrusion of formal education and organized schools was blatently foreign--they were the products of an alien manner of life and their purpose was to select and train a few people who might adapt to that new manner of life. Non-formal education will, over time, produce vast changes, but it cannot begin by being blatently foreign, and it must at all times orient itself in terms of the

condition of the people. Never can it aim at preparing them to remove to an utterly new and strange way of life.

Other important principles for disseminating new ideas to ordinary people may also be derived from this project, for experience shows that the selection of the vulgarizateurs is crucial to successful instruction. It has been important to recruit for this work the older sons of successful farmers, for such persons will be listened to and have sufficient prestige in their communities to lend credence to the program. Rudimentary work in literacy and numeracy is worked into the program as it advances, for the keeping of even the simplest records is important if there is to be any estimation of the success of the program and, more significantly, if areas of difficulty or particular failures are to be detected soon enough to take corrective measures.

Another striking feature of such a program when viewed as an educational undertaking is that it must be much more sensitive to the past experience of the learners, i.e. the farmers, than is usual even in such sophisticated schools as those of Montreal. Though there are but four simple themes to be introduced these cannot be rigidly enforced in the manner of subjects on which students are later to be examined. A noteworthy example is the third theme which stresses better weeding with the use of a rotary weeder. While the rotary weeder is beginning to take on well in one of the regions, it is not being accepted in the other region, because weeding in this latter region is often done by young girls as a social activity. They move from paddy to paddy in groups and are provided a free lunch by the owner. They don't want a rotary weeder in these circumstances even though it would do the job faster. The girls in this region are good weeders. GOPR's chief operations officer says there is no point in disturbing them when, after all, the weeder by itself does not increase the yield. But in the other region, where the people have no such zest for weeding, many farmers see rotary weeders as good investments.

At the risk of over-simplification I shall try to draw from this example a major difference between plausible educational alternatives and the types of formal programs which are associated the world over with the process of education. The essence of the alternative program is to have a tangible objective, even a limited objective, to tailor instruction to the accomplishment of that objective, and through simple but systematic record-keeping organized in an extensive feedback system to get the information necessary to effect corrective modifications in the original schedules of instruction. Such a system is not a program of instruction according to behavioral objectives, except in the very broadest sense. There can be no question of watching individual farmers and promptly reinforcing their effective responses. Rather the program starts with the knowledge that these people have been farming for many years and perform basic operations in ways that are more or less effective. The instructional task, then, is to demonstrate better techniques sufficiently related to the established modes of working that they can be understood by means of simple demonstrations and the farmers can then carry them out with only periodic checks from the vulgarizateurs.

Setting up a schedule of instruction to achieve specific objectives may not seem like a radical educational change, but in one respect it surely

is. The objectives are not typical educational objectives or, at best, they are very simple vocational objectives. This specific and humble focus leads to a sharper break with the traditional approach to education, for it flatly denies that a particular set of symbolic skills must be learned or that a definite schedule of pedagogical exercises must be undergone.

As a second example of a non-formal education project, work undertaken in functional literacy and cooperative education in the Department of Maradi in Niger illustrates another vital characteristic.[7] The word, "literacy" in the title of this project may seem at variance with my previous reservations about emphasis on literacy. However, I should like to point out that Jacques Beaumont of the Institut De Recherche Et D'Applications Des Methods De Développement, more briefly known as IRFED, the sponsoring organization of the project, in conversation with me outlined the following emphases in adult education projects as undertaken by IRFED.[8] He stressed that such projects were non-formal, that they sought to utilize methods of peoples' participation and dynamic planning, and that they did not take reading and writing as primary objectives, but first attempted to communicate some understanding of business methods, of simple accounting and of cooperative organization. Such projects serve as an introduction to the commercial, political, and administrative environment with which peasants have to cope if they are to have any chance of bettering themselves. Most of all, such projects had to help peasants learn to take responsibility and by assuming increasing control of their own affairs escape from the control of money lenders, etc. The first work in projects and work at the village level would be in the vernacular, but for some of the people subsequent work would have to be in French if they were to be better able to deal with the central government. In this project there is only a graduated attention to literacy with methods of work and organization being prime concerns for most of the people, some skills in the vernacular requiring business methods and numeracy for a smaller number of the people, and literacy in varying degrees being achieved by only a minority. One feature of this project stands out as an essential characteristic of effective non-formal education. This feature is certainly present in the project in Madagascar but can be more strikingly illustrated in Niger. It will also be instructive to note the vast difference between non-formal and formal education on this singular point.

The primary requirement of non-formal education is that it should succeed and that this success should be apparent to the learners themselves. Such direct and personal success is the driving force of the program and it can only stem from, and be maintained by, the confidence inspired in people as they learn better to do things for themselves. Herein lies the striking difference with formal education. While schools may pride themselves on some of their noted successes, upon their scholarship winners and upon the numbers meeting matriculation requirements, they do not hold such objectives for every student and are quite willing to accept a heavy attrition rate. This weeding out process is more severe in less developed countries than in most industrialized countries, and the familiar symbol of the educational pyramid graphically demonstrates that at each successive level of the system numbers of pupils have to be

ruled out as deficient because there is not room for them at the next level. Under such dreary conditions of unrelenting competition and shrinking opportunity, pupils persevere because the possible rewards are so great. Non-formal education can offer no such rewards and unless it can promise effective learning to virtually all who participate and can contribute directly to the more effective conduct of their day-to-day affairs, there will be no interest in such programs.

This pragmatic requirement establishes a tone and a purpose for non-formal education. It makes all questions of the elegance of instructional materials, the sophistication of the organization, and the formal certification of the teachers irrelevant, or at least subsidiary, to the basic question: is the program making any real difference? Moreover, the difference the program makes must be one which is understood and valued by the people being served. In this sense good non-formal programs are probably more pupil-centred and more concerned to start where the pupils are than some of the so-called "advanced" programs in our richest school districts.

There is also a rare element of faith required in non-formal programs because the people who organize these meagerly financed and humble-seeming projects must have faith that very ordinary people, people cut off from the main currents of modernization and even trapped in stagnant societies, are actually capable of doing a great deal for themselves. The faith is that given a chance to know and offered a genuine opportunity to see some profit from their efforts, they can learn a great deal from simple programs of instruction and take more responsibility for their own affairs.

Two striking examples of the aptitude of peasant leaders for administrative responsibilities are offered in the report on the project in Niger. As of late 1967, village officers in the region south of Maradi were asked to handle the collection of all outstanding seed loans. They attained one-hundred percent reimbursement in less than one-quarter of the time it had taken government staff to get seventy-five percent compliance the previous year. In the 1968-69 market season the peasant secretaries of one cooperative were organized to compute the rebate owed to the members. When previously done by government agents this job had required a month; the peasant secretaries accomplished it in four days. I would suspect that in addition to any quality of learning which may explain these levels of performance, the motivation of people who are looking after their own affairs is a prime factor in enabling peasants with meagre educations to out-perform officials better qualified technically. Here, surely, is one of the great hopes of non-formal education, namely, that it helps people to help themselves. That old slogan has a special meaning for the rural populations of under-developed countries. Only insofar as they can learn to handle credit, can learn to organize for their own benefit, and can learn rudimentary politics can they deal more effectively with centralized administrations and so have a real possibility of bettering their lives. Unless they see such hope of betterment, no campaign to turn their attention to possibilities of rural life has much chance of success. Formal schools which have tacked a little agriculture, usually taught in cursory fashion, on to the regular

curriculum have not had any success in convincing people of the opportunities of rural life. In fairness, it must be added that the non-formal programs do not achieve this result by themsleves. In both examples here considered it has been vital that other services, such as water management and cooperative organization, as well as credit and supplies of seed and fertilizer, were parts of a total package. But is it unfair to charge that formal schools, and ministries of education, have not shown great alacrity in entering upon such cooperative ventures? Cooperation does seem to come more readily when "real" schools and pupils aiming for "O" and "A" levels <u>are not</u> involved.

Few nations have made a more determined effort than Tanzania, through education for self-reliance and the cultivation of school shambas, to orient students to the predominance of agriculture in the life of their country. Yet it seems the Farmer's Training Centres--recently become the Rural training Centres, the National Youth Camps, and the more formal Cooperative College at Moshe have had the greatest impact.[9] Much of the work of the Cooperative College, I may add, is at the level of the cooperative training reported in Niger and is carried on through short courses, extension courses and residential seminars for executive officers of cooperatives rather than through extended, school-type courses.

In concluding this illustrative discussion of educational alternatives, two points require further consideration. 1) How effective have these non-formal alternatives been? 2) Can the principles illustrated in the two examples be applied to other alternative programs?

I think the evidence for the effectiveness of the program in Niger is good; even within the limits of a small scale program peasants have begun to do more for themselves and cooperative organization has been strengthened. Even the election procedure has been strengthened, with new candidates coming forward and peasants no longer being willing to accept a simple voice vote in favor of a local dignitary.

Whether the project in Madagascar achieved the goal of 150,000 tons of rice production in four years is not clear, for exact measurement is impossible when numerous peasants are storing unknown quantities of rice. The most impressive evidence is the end, or at least the drastic reduction, of the between season shortage. In past years farmers have sold almost all their rice at the time of harvest and before the next harvest have run short of rice and been obliged to buy manioc (which they don't like) and even to buy back seed rice at higher prices than they had received at harvest time. Now, most farmers seem to have rice to sell and rice to store, and between harvests are buying salt, sugar, and meat rather than manioc. Peasants have been borrowing more money to purchase implements, fertilizer and graded seed, and the record of repayment of loans has so far been 98.5%. Rates of tax collection have also increased. As in Niger, some striking social changes have occurred. Most notably the farmers, with the strength gained from rudimentary cooperative organization, are standing up to the "collectors" (usually agents of rice-millers or rice merchants), and it was a radical change when the head of a farmer's group challenged the collector's method of weighing the rice and refused to sell. In a word, the rice-growers are

acquiring some of the knowledge and strength to deal more effectively with the commercial world which has previously exploited them without difficulty.

The vital principles of non-formal education illustrated in these two projects are chiefly four: 1) Use of low-level manpower for instructors with a concomitantly simplified and scheduled calendar of instructor-training. 2) Emphasis on specific skills and knowledge directly applicable to the lives of the learners and the conditions in their region. 3) A concern to build confidence through success, to have learners apply their new skills and assume additional responsibility. 4) To treat education as one of a complex of inputs designed to improve specific conditions or to achieve definite production outcomes.

Non-formal education, or any alternative program intended to serve large numbers of people living in subsistence economies will have to take account of the four preceding factors. In spite of the money that has been invested in television instruction in Cote d'Ivoire or the well financed programs in American Samoa, I do not expect revolutionary developments in the technology of teaching or in the application of communications technology radically to alter the possibilities for dissemination of information among rural populations. I do not deny the efficacy of the new communications media, but I would argue that in countries where the cost of labor is low and where there is in fact a desperate surplus of labor, strategies which can utilize low-level manpower to perform useful instructional tasks will, for a long time, compare most favorably to highly capitalized attempts to overcome educational deficiencies with sophisticated technology.

Indeed, two of the programs for diffusion of innovation which have used technological input and seem to have achieved notable success are distinguished by the fact that (a) they used a low-cost technology and (b) they depended upon local organization headed by minimally trained local people. I refer to the Farm Radio Forum Project--Ghana 1964-65 and the work on diffusion of innovation undertaken by Everett Rogers in Brazil, India and Nigeria.[10] These projects were all indebted to the pioneer work of the Farm Radio Forums initiated by the Canadian Broadcasting Corporation, but what stands out in all of them, and fits well with the critical factors identified in this report on educational alternatives, is the importance of the local discussion group. Merely broadcasting information is a severely limited technique; the efficiency of the projects was greatly improved when farmers met in groups to hear the broadcasts and when there was discussion following the broadcast. Moreover, it was through the discussion groups and the efforts of the discussion leaders that a significant level of feeback was achieved. Groups submitted questions pertaining to problems in their areas. Most individual farmers would not have been able to submit questions, nor would the broadcasters, through the medium of a few hours weekly radio time, been able to respond fully to a scattering of questions from many individuals. Thus, the group process of identifying the general concerns in specific areas, of casting these in well structured questions and, finally, having again the resources of a listening group to discuss and interpret the answer, made the radio broadcasts much more effective.

Without reviewing other educational alternatives such as the Youth Camps and Clubs in Jamaica or the National Service Camps in Tanzania, I offer one suggestion as the key to effective development of educational alternatives to serve the rural populations of less-developed countries. Face-to-face human communication involving low-level manpower in large numbers and prepared by means of minimal but carefully designed schedules of instruction must be the start of new and expanded programs. As people learn and acquire confidence through success, dependence upon face-to-face instruction will decrease. Given the chance to learn, humble people can become skilled at asking more appropriate questions and become able to ponder for themselves answers provided by a strange voice via radio or television. People must be prepared for such remote and individual instruction, it is not where they can begin. To conclude in the strongest and least equivocal terms, I will suggest that as an alternative system of education, the Open University in Great Britain is <u>not</u> a plausible model for the mass of people in less developed countries. Great as the Open University is proving to be, it is appropriate for a society which is highly literate, which has varied and dependable communications, and which can afford a large investment in an alternative to expensive university education.[11] Much groundwork and many cycles of more humble instructional endeavour must be completed in rural areas of developing countries before a comparable technological onslaught upon training needs can be seriously considered. Technological models of anything like the complexity of the Open University could be disastrous folly if undertaken as the first generation of educational alternatives in the less developed countries.

NOTES

[1]Philip Foster, Education and Social Change in Ghana, Routledge and Kegan Paul, London, 1965. While Foster has long argued against the fallacy of hoping to use curricular changes as means of changing career aspirations of students, his argument is, essentially, that school programs cannot alter the conditions of life, particularly the economic opportunities. His view follows that of Archibald Callaway, as first expressed in articles in West Africa in the early sixties. On the question of the schools' capacity to develop interest in rural living, Foster is most explicit on pp. 293-5, where he also raises the broader question of the efficiency of formal education for the "dissemination of those technical skills necessary to economic development in the early stages."

Another pointed argument to the effect that parents send children to traditional schools because they see schooling as a means of rising above a meagre life of farming is offered by V. L. Griffiths, "The Education of the Young in Rural Areas," in Education, Employment and Rural Development, James R. Sheffield (ed.), Nairobi, East African Publishing House, 1967, pp. 307-321.

[2]Mark Blaug, "Educational Policy and the Economics of Education--Some Practical Lessons for Educational Planners in Developing Countries," pp. 63-71; Michel Debeauvais, "The Contribution of the Economics of Education to Aid Policies: a Critical Comment," pp. 72-83; Philip Coombs, "Opportunities in Nonformal Education for Rural Development," pp. 154-182; these papers are all included in Education and Development Reconsidered, Vol. Two, offset, The Rockefeller Foundation and the Ford Foundation, 1972.

The study on which Coombs' paper is based was commissioned by the World Bank and later UNICEF commissioned the International Council for Educational Development (in 1971) to conduct a broad analytical study of nonformal education for rural development.

[3]Paulo Friere, Pedagogy of the Oppressed, Herder and Herder, New York, 1971. The idea of the cultural domination associated with typical literacy programs was more succinctly introduced in two articles in successive issues of the Harvard Educational Review, "The Adult Literacy Process as Cultural Action for Freedom," Vol. 40, No. 2, May 1970, pp. 205-225; "Cultural Action and Conscientization," Vol. 40, No. 3, August 1970, pp. 452-477.

[4]Reference to work in adult education by Ayo Ogunshe was made at the National Curriculum Conference, Lagos, September, 1969. Archibald Callaway was emphatic in remarking on the value of these programs.

[5]For information on the project of La Groupement pour L'Operation de Productivité Rizicole in Madagascar, I am chiefly indebted to Nathaniel McKitterick, "G.O.P.R. in Madagascar: a

Unique Technical Assistance Project," mimeograph, Washington, 1970, 52 pp; and to portions of the report "Alphabetisation Fonctionnelle," mimeograph, Mission Schoenmaeckers-Thore à Madagascar, 1970. There are some notable differences in emphasis between the two reports. Schoenmaeckers-Thore treat all productive activities briefly and are more concerned with the milieu, the social organization, and pedagogy.

[6]The two regions wherein the activities of the project were concentrated are Antsirabe and Fianarantsoa.

[7]For information on the work in Niger I am indebted to Peter A. Easton, "Functional Literacy and Cooperative Education in Niger," mimeograph, 14 pp., 1970. The project in Niger was supported by IRAM (Institute for research and application of development methods), which has introduced in French speaking Africa the concept and technique of "rural animation".

[8]Information about the policy of IRFED (institut international de recherche et de formation en vue du developpement harmonise) and the related organization, IRAM, was provided by M. Jacques Beaumont during a conversation in his office, Paris, December, 1970. It is also appropriate to note that another French organization which has worked extensively in "rural animation" and whose methods (e.g. as applied in Senegal) correspond to the training technique employed in Madagascar and Niger is SATEC (Société d'Aide Technique et de Cooperation).

[9]A variety of institutions at various levels and serving different age groups are concerned with agricultural education or training in Tanzania. The Farmer Training Centres, formerly under the Ministry of Agriculture, have now become Rural Training Centres, under the Ministry of Rural Development. Courses are also offered through the Institute of Adult Education, the Cooperative College at Moshi, as well as some very specialized courses (e.g. for chain saw operators) of short duration at institutions such as the Olmotonyi Forestry School.

[10]Information about the "Farm Radio Forum Project-Ghana," was derived from a report under that title prepared by Helen C. Abell, mimeograph, 179 pp. 1965. The work there reported compares to the more extensive range of projects carried out by Everett Rogers, principal investigator, "Diffusion of Innovation in Rural Societies;" see especially, Modernization Among Peasants: The Impact of Communication, Holt, Rinehart and Winston, 1969.

[11]Comparison of the work in Niger and Madagascar to that of the Open University is, perhaps, far-fetched. If so, comparison to the Programme d'éducation télévisuelle: 1968-1980 in Ivory Coast may be more instructive. To institute the massive program

of television instruction contemplated as a replacement for, or an improvement upon, conventional schools will immediately cost not less than 29% more per pupil. If, as is hoped, pupil wastage is reduced the overall cost of primary education will be more than doubled (more pupils staying long in school) even if there is no increase in the first-year intake. The payoff is expected to be a much lower unit cost per graduate. However, there will then be a much larger number of primary school leavers to face the increasingly bleak future confronting primary school leavers in under-developed countries.