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EDUCATION FOR DEVELOPMENT*

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IF I HAD a definitive answer to the question, "What sort of education is required for accelerated development in Third World countries?', I doubt whether I would be here tonight. More than likely I would be at the top of Mount Olympus communicating my ideas to the gods for dissemination to the mortals below. The jet-set among those mortals would in turn be engaged in low-flying acrobatics over the developing countries while propagating my educational strategy.

However, being a humble mortal my offerings are presented in humility, helped along by the views of other mortals, some of whom frequent the foothills of Mount Olympus but never receive a clear message from the top.

First of all, I should like to declare my interpretation of the concept of development. And that is simply that a country could be said to be developing if there has been progress towards the employment or self-employment of the whole of the potential working population; if there has been progress towards the elimination of poverty; and if there has been progress towards a reduction in glaring inequalities in income distribution.[1] Now, that is a narrow view of the meaning of development, but I believe it to be a pragmatic one. And I take an equally pragmatic view of education in that I make no sharp distinctions between education and training in dealing with this practical topic of education *for* development.

One of the main features of educational planning in the developing countries during the 1950s and especially in the 1960s was the great faith that planners showed in the role of formal education in the process of national development. This faith, supported by manpower studies and the resources of international aid agencies, led to a massive expansion of educational facilities to meet pressing needs for middle and higher level manpower and to contribute in general to social and economic development.[2] The expansion of educational systems was further stimulated by parental

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[1] cf. D. Seers, 'What are we trying to measure?' *Journal of Development Studies* (1972), VIII, iii, 21-36.

[2] P. Foster and J. R. Sheffield (eds), *Education and Rural Development* (London, Evans, The World Book of Education 1974, 1973), 1.

demand, population growth, migration from rural to urban areas, and by the aspirations of young people who were encouraged in many ways to believe that academic qualifications would lead to good jobs. Thus progressively longer periods of formal education became the main route to wage and salaried employment resulting, some critics have argued, in an insatiable thirst not so much for education as for educational qualifications. Indeed, the desire for more education seems to have been motivated partly by employment practices in that as education has become more widespread so employers have tended to require higher educational qualifications for the same job, perhaps because this simplified their selection procedures. From many accounts it is clear that the rising demand for conventional forms of schooling in developing countries has placed a great strain on limited resources, has lowered the quality of schooling on the educational ladder to the university loft, and has created serious doubts about the value of much of formal education in economic development.[3]

Education has become the world's leading preoccupation as far as the spending of public funds is concerned, ranking a close second to military expenditure.[4] In the budgets of most developing countries expenditure on formal education represents one of the largest single items. In some budgets it is as high as 40 per cent,[5] while as a percentage of the Gross National Product it already exceeds 5 per cent in several countries.[6] Moreover, education has been described as a 'rising cost industry' in which each year increased expenditure is required to achieve the same level of provision as in the previous year. Inflationary costs coupled with the compounding factor of population increase clearly dictate a limit to the level of possible spending on education. Some economists argue that that limit has been reached when expenditure on education begins to grow at a rate faster than the growth of the Gross National Product,[7] whilst the World Bank points to a figure of 20 per cent of the national budget as setting the limit on educational spending.[8]

During the early years of independence in African states large imbalances in expenditure on education, especially at the secondary and tertiary levels, in relation to other budgetary provisions could be justified because of the need to Africanize the civil service and the private sector. Education seems to have had a good success record in this process, for Africanization

[3] See for example, R. Dore, *The Diploma Disease: Education, Qualification and Development* (London, Allen and Unwin, 1976), 1-13, 84-97.

[4] E. Faure *et al., Learning to Be : The World of Education Today and Tomorrow* (Paris, UNESCO, 1972), 12.

[5] *The Sunday Mail*, 27 Aug. 1978; a Special Correspondent, London, reported that Kenya devoted 40 per cent of its budget to education.

[6] World Bank, *Education : Sector Working Paper* (Washington, World Bank, Dec. 1974), Table 3.

[7] P. H. Coombs, *The World Educational Crisis : A Systems Analysis* (New York, Oxford Univ. Press, 1968), 52-60.

[8] World Bank, *Education : Sector Working Paper*, 21.

has proceeded more rapidly than was expected.[9] But associated educational over-supply at the upper levels frequently has left in its wake educated unemployment, underemployment and an over-production of graduates in arts and law, and too few with technical, para-professional and scientific skills.[10] Moreover, the unfulfilled promise of industrial growth and large-scale mechanized agriculture and the high cost of creating wage employment have resulted in serious disparities between the output of educational systems and the availability of employment at all levels. The problem has multiplied continuously as school leavers are motivated to compete for the limited openings in urban employment where wages generally far exceed earnings from rural pursuits.[11]

Another contributing factor to the imbalance between the output of educational systems and the availability of employment is that the provision of schooling has become a major political issue in the less developed countries. Politicians can rarely afford to insist that the expansion of formal education be closely related to the employment market and thus to the growth of the economy. But even when attempts are made to link education to a supply and demand model it is extremely difficult to have effective checks on over-supply because of the long, sequential process of education. Long-range manpower forecasts have tended to exacerbate the problem for they are often based on inaccurate or incomplete information and exaggerated estimates of economic growth.[12] Their focus has usually been on 'high-level' manpower and on the 'modern' sector to the neglect of the specific manpower and training needs of the rural areas. Furthermore, the manpower planner's apparent belief in a close relationship between years of schooling or academic qualifications and various types of jobs — that, for example, 'a costing clerk should have ten years of schooling' or 'a personnel manager should have a university degree' — is not typically reflected in actual practice, nor in the demands of the job, and says nothing about the quality of the required education.[13] Manpower planning might need to take account of the not unreasonable assumption made by Philip Coombs that 'if a person has a good basic education, is well motivated and reasonably intelligent, he can adapt quite quickly to a wide range of jobs, regardless of what the "book" may prescribe in the way of educational qualifications'.[14]

[9] J. R. Sheffield and V. P. Diejomaoh, *Non-Formal Education in African Development* (New York, African-American Institute, 1972), x.

[10] Coombs, *The World Educational Crisis*, 75.

[11] Commonwealth Secretariat, *Education in Rural Areas : Report of the Commonwealth Conference, Accra, Ghana, 23 March to 2 April 1970* (London, Commonwealth Secretariat, 1970), 1.

[12] M. Grandstaff, *Non-Formal Education and the Expanded Conception of Development* (East Lansing, Michigan State Univ., Non-Formal Education Discussion Papers No. 1, 1974), 45.

[13] Dore, *The Diploma Disease*, 87.

[14] Coombs, *The World Educational Crisis*, 80.

Manpower studies, then, can usefully serve comprehensive educational planning (a) when they are firmly grounded in the clearly observable present needs for specific jobs at all levels of employment and self-employment in both the urban and rural sectors of the economy; (b) when they adopt a more flexible approach to the assigning of academic qualifications or years of formal education to particular jobs; and (c) when recommendations on the content of training bear a close relationship to the functions actually to be performed in a job. An obvious rider must be added, and that is that manpower predictions may be of limited value for educational planning if the assumptions underlying the economic and social policies of Government are not made explicit.[15]

A manpower plan that meets these conditions, and is accepted and vigorously acted upon by Government and employers, could greatly influence the form and content of education at all levels and in diverse settings. Broad acceptance and action will not follow, however, unless the plan is systematically explained and discussed with employers and with the very wide range of people concerned with the process and provision of education. The main recommendations of the plan will need to be communicated clearly and simply to parents and young people through educational and related institutions, the mass media and guidance and counselling services. Indeed, an appropriately treated explanation of a manpower plan could become an essential ingredient in a national programme of political education, for I suspect that a broad-based plan would reveal the need to view education through a wide angle lens and not as something which is essentially the prerogative of educational institutions. Political education about education is vital because the continuous expansion of conventional forms of full-time education is unlikely to create employment, alleviate poverty and thus reduce inequalities. These goals are closely associated with economic growth and, as Harbison has pointed out, 'education becomes a relevant factor in economic growth only when it is properly integrated with all other factors in development'.[16]

The usual way in which the integration of formal education with other developmental factors is attempted is through curriculum reform. Much has been written about irrelevant academic curricula, especially in rural schools, and much has been done to make them more relevant to local needs.[17] These efforts are often perceived by parents as leading to an inferior type of schooling designed to keep school-leavers on the land. Such parental perceptions are highly rational wherever the land has little to offer. But curriculum

[15] J. Vaizey, *The Economics of Education* (London, Faber and Faber, 1962), 107.
[16] F. H. Harbison, *Educational Planning and Human Resource Development* (Paris, UNESCO/I.I.E.P., Fundamentals of Education Planning No. 3, 1969), 24.
[17] See for example, V. L. Griffiths, *The Problems of Rural Education* (Paris, UNESCO/I.I.E.P., Fundamentals of Educational Planning No. 7, 1968), 20-37.

development designed, for instance, to improve powers of observation, and which therefore must draw on the local environment, is clearly educationally justifiable and politically defensible, for the power of observation is a valid attribute and has the potential to be transferred from one setting to another. Curriculum reform, then, related to the acquisition of transferable abilities, skills and attitudes is an important step towards the integration of all levels of education with various aspects of development. But, as with our manpower plan, educative consent is desirable and curriculum reform could well constitute another topic for a national political education programme.

While we anxiously await these reforms at the formative years of our children's lives, we are still left with the problem that if a long uninterrupted period of formal education remains the most sought-after goal of most pupils and their parents, frustration that could have serious political repercussions may be difficult to avert. Various schemes have been suggested in recent years which could be interpreted as being designed to lessen the effect of this inevitable educational frustration. Some are firmly based on the strengthening of the linkage between education and employment. Most reject the still widely held view that schooling *per se* is a preparation for life, and accept instead that real education is a continious process related to dominant concerns and human development needs at several stages in the life cycle.

The idea of making provision for continuous, life-long education — a better term would be life-long learning — from the pre-school stage to various forms of adult education seems, on the surface at least, to be an expensive egalitarian concept that only the wealthy nations can afford. But this is not really so, for the concept is eminently practical when it is founded on two central principles. The first principle is that education, training and all other forms of planned formal and nonformal learning should be interspersed with work throughout life.[18] It has become fashionable in the large international organizations such as UNESCO and the Organization for Economic Co-operation and Development to use the term *recurrent education* when referring to a system of education derived from this principle. The second and more challenging principle that forms the foundation of life-long education is that if man learns how to learn and becomes a self-directed learner, he can overcome most of the barriers to the attainment of those of his own realistically perceived goals which have an educational content.[19]

These two principles have major consequences for educational planning. They suggest, for example, that there may well be a need to divert at least some of the resources from the upper levels of a system of uninterrupted

[18] For an analysis of the application of this principle in developing countries, see V. Stoikov, *The Economics of Recurrent Education and Training* (Geneva, International Labour Office, 1975), 95-108; and also F. H. Harbison, *Human Resources as the Wealth of Nations* (New York, Oxford Univ. Press, 1973), 125-31.

[19] Faure, *Learning to Be, 209-10.*

full-time education to an integrated system of in-service education and planned on-the-job training. They suggest too that once education becomes a continuous process the distinction between success and failure, so paramount in the conventional system, loses at least some of its impact. Thus, to refer to the influential UNESCO manifesto, *Learning to Be*, 'An individual who fails at a given age and level in the course of an educational career will have other opportunities. He will no longer be relegated for life to the ghetto of his own failure.'[20] A fine ideal, but since formal opportunities for continuing education will be severely limited for many years to come in the developing countries, self-learning, or more realistically *assisted self-learning* has the potential not only to reduce costs but to make education more widespread, more meaningful, and more relevant to national needs. The concept of recurrent life-long education, then, must of necessity embody the principle of assisted self-learning, which in turn has major implications for educational technology — that fascinating field concerned with the innovative use of media, learning packages, distance-teaching techniques and the like.

In broad terms, a strategy of recurrent education involves the gradual transformation of the present youth-centred educational system to the point where education is no longer seen as the continuation of a long period of full-time study in schools and post-secondary institutions during adolescence, but is made available over the individual's whole lifetime at appropriate stages related to his own needs and aspirations, and in alternation principally with work and similar experiences.[21] The strategy cannot work unless it evolves from the provision of a 'good' basic education which in its final years would need to be planned to allow for a guided and tested decision at the age of about sixteen between further study and work. The same flexibility would need to be built into all forms of post-basic schooling (e.g., by the provision of a transferable vocational preparation element in general education) and also at the higher levels of formal education for those who remain in the system but may at any stage opt for the world of work. This poses a major problem for secondary school and tertiary level curriculum planners and for those who will become engaged in the field of nonformal adult education.

For the majority of school leavers, that is, for those who choose the world of work or, more realistically as far as the developing countries are concerned, are forced to seek employment or self-employment after basic schooling, opportunities for entry into post-work experience programmes of formal and nonformal adult education assume particular significance. Indeed,

[20] Ibid., 77.

[21] For a description of the main features of a system of recurrent education, see O.E.C.D., Centre for Educational Research and Innovation, Recurrent Education : A *Strategy for Lifelong Learning* (Paris, Organization for Economic Co-operation and Development, 1973), 17-29.

in a system of recurrent education, which encourages a life-long concern for the integration of work and study, adult education becomes the dominant component in the system.[22] Crucial to the role of adult education in a recurrent education system is the co-ordination of the existing diverse range of adult-learning opportunities and their integration with the youth-centred formal provision; the linking of all forms of education to employment and to social and manpower policies; the training of adult educators for work in recurrent education centres, adult education agencies, Government, and commerce and industry; the establishment of sound guidance services; and, above all, the provision of financial resources requiring intervention on a substantial scale by Government and the private sector.

Against the background of these general observations on recurrent education I now turn briefly to one writer's interesting if somewhat radical proposals for the application of the concept in developing countries. Professor Dore of the Institute of Development Studies in the University of Sussex suggests an agenda for educational reform based on three operational principles:

1. That all recruitment into work should start early — between the ages of 15 to 18, depending on a country's educational resources, and for most developing countries at about the age of 16. The civil service would need to take the lead in introducing early recruitment policies, and Government should offer incentives to the private sector to do likewise.
2. That all education beyond the age of about 16 should take the form of on-the-job learning and recurrent in-service and in-career education and training on a part-time basis which could incorporate schemes of educational leave for periods of full-time study. Pre-career courses and qualifications would thereby become far less prevalent.
3. That all selection tests used, for example, in selection for secondary education and for occupational recruitment should be aptitude tests or other acceptable alternatives, and not conventional learning achievement tests which distort the school curriculum and are subject to cramming.[23]

The practical implications of Dore's proposals are numerous, especially in career development. In the administrative departments of the civil service, for instance, all new recruits might start as clerks, and in the light of their response to the work environment and to on-the-job training some would be selected for in-service education, perhaps involving a full-time element, which when completed might lead to accelerated promotion to administrative posts. Similarly, and to quote Dore:

[22] O.E.C.D./C.E.R.I., *Recurrent Education : Trends and Issues* (Paris, O.E.C.D., 1975), 42.
[23] Dore, *The Diploma Disease*, 141-67.

> Future engineers could train first as craftsmen; some of the craftsmen could be trained as technicians, and the ablest of these sent off for full training as engineers. Doctors could begin as medical assistants; teachers as pupil-teachers; university teachers as research assistants . . . ; architects and accountants and quantity surveyors could begin as clerks and be selected for professional training . . . .[24]

In short, we would hear more frequently than we do these days the familiar boast of many a successful businessman: 'I started in this place as the tea boy.'

The proposal has merit in that it is not too far removed from recorded successful experience, particularly amongst post-war generations in the industrial nations. It would help with educated, unemployment and obsolescence in skills, and meet the need for middle-level manpower, frequently reported as being in short supply in the developing countries. It could conceivably lead to a more equal distribution of income, and yet, because it allows for the emergence of people with ability and perseverance, it is not necessarily tied to that goal. Furthermore, unfavourable attitudes towards vocational and vocational preparation schools, presently regarded as second or third choices, are likely to change since these would become a normal route to high-level manpower positions for many of the more able, especially if the curriculum did not contain a too narrowly defined vocational content. The last point is consistent with experience in many developing countries where it has been found that vocational education designed for specific jobs is best provided as an out-of-school activity involving nonformal training in the work situation interspersed with short periods of formal education and training.[25]

The early recruitment system would result in tertiary institutions having more mature goal-directed students, secure in the knowledge that they had a job to return to, and who would not only see relevance in their courses but would seek relevance and thus influence for the good much of the present dispensation. The appropriateness of the design and content of tertiary education would be further influenced by the closer liaison between educational institutions and employers sponsoring students. Increasingly the provision of education beyond the basic level would become more of a partnership between Government and the private sector.

The advantages of an educational strategy that makes specific provision for entry into work at a relatively early age, followed by periods of nonformal and formal education, need to be balanced against any inherent limitations that the system may possess and any objections to it that are likely to be raised. Some of the main arguments against the introduction in the developing countries of a recurrent education system based on an early

[24] Ibid., 143.
[25] Stoikov, *The Economics of Recurrent Education and Training*, 104-6.

recruitment policy are centred on such issues as: the ubiquitous problem of limited employment opportunities; the perceived undesirable effect of having education beyond the age of about 16 controlled by the civil service and large commercial and industrial organizations; the associated problem of favouritism in the selection of employees for further education; the restrictions placed on job mobility as a result of the bonding of employees which may be necessary as a hedge against losses of company-sponsored trained workers to other organizations; the problem of production foregone while employees are engaged in periods of full-time education and training; the disadvantages of delayed attainment of full professional status; and the obvious limitation that the system fails to allow for continuity of education for those with exceptional ability and in some scientific and technical fields where continuity is essential.[26]

These limitations cannot be dismissed lightly. Many of them would carry more force in some countries than in others, and where they do the system would have to be modified accordingly and introduced with flexibility. The scheme holds very little promise for the really poor countries, but in some of the higher-income developing countries where there is an expanding modern sector, a surplus or foreseeable surplus of secondary-school and university graduates and a shortage of *experienced* middle and higher-level manpower, the early-recruitment-into-work recurrent education proposition, suitably adapted to meet specific needs, might well provide the only practical model for the meaningful integration of education with employment.

However, since gradualism appears to be the hallmark of educational reform, it is unlikely that any developing country will seek to adopt a comprehensive system of recurrent education — with or without early recruitment into work — until the concept has been successfully tried and tested at those levels in the existing educational system where it will cause the least disruption to the *status quo*. Most countries already have successful examples of the use of a model of intermittent education and work, particularly in technical fields where day-release and 'sandwich' courses are fairly common and are provided at considerably less cost than full-time education. The extension of such schemes to the higher levels of formal education becomes an increasingly attractive proposition whenever the demand for skilled manpower exceeds supply. On the other hand, where supply exceeds demand it is difficult to justify expenditure on much of sequential higher education when a student-year at a university, for example, costs anything from 30 to 200 times more than a pupil-year in primary school.[27]

[26] Ibid., 96-9; Dore, *The Diploma Disease*, 147-53.

[27] R. P. Dore, *The Role of Universities in National Development* (London, Association of Commonwealth Universities, Bulletin of Current Documentation, Occasional Paper, July 1978), 12-13.

Some critics argue that since there have to be economies in educational expenditure, it is at the university level that they should be applied, 'as economies not in quality but in numbers'.[28] Assuming the absence of racial and similar constraints, this is a valid argument for those countries which are already producing unemployed graduates. But it may give rise to a short-sighted policy if 'quality' is assessed merely in terms of performance in high-school examinations; for academic excellence does not necessarily equate with performance in the world of work. And perhaps it is from this world that universities should attract more of their students. If they do, then it seems reasonable to assume that the recurrent education model will be found to offer the distinct advantage of possessing a largely self-regulating check on the over-supply of graduates because of the linkage with employment and the spreading of education over a longer period, thus allowing for shifts in interests and in realistically perceived needs for further education in relation to career development and manpower requirements.

The two most important practical implications of the adoption by universities of a recurrent education system centre on the ways and means of making university education more accessible and more attractive to the adult working population.

Accessibility raises a number of issues. Flexible entrance requirements and the provision of part-time pre-university programmes and bridging courses will probably need to be considered, depending on the extent to which the lower levels of education have been cast in the recurrent mould. The utilization of distance-teaching techniques and university study centres further promote access — as does a learner-controlled system in which students are permitted to withdraw after completing a number of course units and resume their studies at a later stage, retaining credit for work completed. Access to university education can be greatly facilitated by schemes of association with other tertiary institutions and by allowing interchangeability of credit for units of study completed, whether on a full-time basis or by various combinations of these formats, so that study and work can proceed concurrently.[29]

University courses are made more attractive to most working adults when they are based on mature student interests and employment needs; when they have been developed in collaboration with employers and the professions; and when conventional courses have been converted into 'learning modules', made no longer than they really have to be and capable of being combined in meaningful ways to meet diverse requirements for various

[28] e.g. G. Hunter, 'A comment on educational reform and employment in Africa', in Foster and Sheffield (eds), *Education and Rural Development*, 281.

[29] C. Duke, 'Survey of world trends on access to adult education : The contribution of the universities', *Journal of the International Congress of University Adult Education* (1976), XVI, ii, 6-31.

types of qualifications. 'Learning contracts' whereby the student negotiates his own study programme are perhaps the most attractive, especially in continuing professional education. Pressures for the modification of teaching methods and evaluation procedures frequently arise when adults are involved in a formal learning situation. Democratic group methods soon become favoured after initial orientation, as do less conventional forms of examination such as open-book, peer-group and continuous assessment.[30]

If universities and other tertiary institutions are to respond to the real challenges of recurrent education and thus become centres of development education, they will need to resolve issues like these. And it is important that they do so; for, since higher education in the developing countries has become the goal of so many, it influences the form and content of much of education at the lower levels.

My focus up to this point has been mainly on a conventional system of education and its integration with one of the major factors in development, namely, employment. I have suggested that integration is facilitated by viewing formal education in the context of life-long learning and by the gradual introduction, starting at the tertiary level, of a system of recurrent education. This system of intermittent education and work would in turn utilize the resources of nonformal education — that vast field of largely unco-ordinated education and training which lies outside the formal system but which is nevertheless organized and, in its own way, systematically provided by many public and private agencies.

I now turn specifically to this field, for nonformal education is more directly and immediately related to development than is the formal system and pursues objectives which formal education is ill-equipped to achieve. Moreover, as Guy Hunter points out, 'it may well be one of the most flexible and efficient forms of education there is — efficient because it does not (as all schools must do) waste so much effort on pupils who cannot benefit'.[31]

Nonformal education has been described as capitalizing on the principle that learning something 'just before using it is more productive than learning it, and using it when, or if, you need it'.[32] Thus education is not the goal; it is rather the means to the goal. And the means need not always include the cornerstone of education, literacy, as desirable as it may be, for development programmes involving skill and knowledge acquisition in agriculture, health and the like can proceed in the context of illiteracy, and more often

[30] Ibid.
[31] Hunter, 'A comment on educational reform and employment in Africa', 282.
[32] D. G. Green, 'Non-formal education for agricultural development : A systems perspective', in Foster and Sheffield (eds), *Education and Rural Development*, 102.

than not their urgency dictates that they cannot be delayed until functional levels of literacy are attained.[33]

This elastic perspective of education is reflected in the literature on nonformal education in that it deals with a great diversity of activities ranging from indigenous apprenticeships and adult-literacy programmes to sysmatic on-the-job training and structured occupational skills training provided outside the formal system. It also includes agricultural extension and farmer training, co-operative education, women's work, youth work and community education in health, nutrition, family planning and local government — to name but a few of the more prominent programmes. Crude estimates suggest that nonformal education constitutes roughly half the present educational effort in the developing countries, and yet until quite recently it received very little attention from educational planners.[34] In the industrialized nations the field has shown prodigious growth, apparently developing rapidly during the decade or so after the Second World War. One study carried out in the United States at that time concluded that the outlays of certain major business corporations on nonformal education for their employees and customers rivalled in size the budgets of the largest universities.[35] But by and large, accurate and comprehensive assessments of the cost of nonformal education are difficult to secure. Programmes of industrial and rural development not infrequently have major educational components of a nonformal nature which are not shown in budgets or accounts as 'educational costs'. These inputs represent the hidden expenditure on much of nonformal adult education. And it is probably better that they remain hidden, certainly in the public sector, because there appears to be a tendency in some countries for Governments to respond to pressures for more education by attempting to divert to the formal system any available fiscal resource bearing an education label.

This would be an unwise re-allocation of educational resources since programmes of nonformal education exhibit characteristics inextricably linked to development: they tend to arise in response to immediate needs and local community requirements; they usually address themselves to pressing social problems likely to be excluded from the system — the poor, the isolated, the illiterate, the unemployed and the underemployed; they can be

[33] Michigan State University, *Non-Formal Education : The Definitional Problem* (East Lansing, Michigan State Univ., Non-Formal Education Discussion Papers No. 2, 1974), 33.

[34] Ibid., 36-7.

[35] Referred to in P. H. Coombs and M. Ahmed, *Attacking Rural Poverty : How Nonformal Education Can Help* (Baltimore, Johns Hopkins Univ. Press, Research Report for the World Bank prepared by the International Council for Educational Development, 1974), 22.

effective where resources are limited; and they are generally regarded as being efficient in terms of time and cost.[36]

In recent years several extensive surveys of structured nonformal education programmes have been conducted by international organizations and universities. Numerous case studies have been prepared of programmes that have attracted the attention of aid agencies, especially those supporting rural development. These surveys illustrate both the possibilities and limitations of nonformal education in environments where employment generation lags far behind the output of the school system.

The Village Polytechnic self-help movement in Kenya, for example, represents a bold, pragmatic attempt to relate education to rural development. Village Polytechnics — of which there are two types, Formal and On-the-job Learning Polytechics — arose out of the need to provide skills training for local, rural self-employment to Kenya's primary school-leavers, some 40 per cent of whom can neither go on to secondary school nor find employment. The polytechnics are small institutions housed in very modestly built structures and staffed by school teachers, local craftsmen and expatriate volunteers. They are designed to serve local areas and offer two-year courses in English, mathematics and book-keeping, in farming and domestic science, and in the traditional rural crafts of carpentry, masonry and tailoring. In addition, a few courses such as mechanics, tractor-driving, bee-keeping, poultry-keeping, tinsmithing, tanning, bicycle-repairing and quarrying cater to needs that are purely local. The smaller village polytechnics appear to be the most flexible, responding to employment opportunities as they arise and emphasizing extension work rather than formal courses at a centre.[37]

As an experiment in non-formal education for self-employment the village polytechnics seem to be reasonably successful in providing a form of training related to community requirements, but there are indications that they may be saturating local demand for skills while having very little effect on the primary school leaver employment problem.[38]

The Brigade System of Vocational Training in Botswana is beset with similar problems. The brigades have received a great deal of international publicity because they attempt to provide cost-covering vocational training to primary school-leavers through contract jobs in building, carpentry, farming, handicrafts, mechanics, textiles and tanning. The cost to donor agencies is, however, considerable; for it would appear that well-qualified Batswana

[36] M. Grandstaff, *Alternatives in Education : A Summary View of Research and Analysis on the Concept of Non-Formal Education* (East Lansing, Michigan State Univ., Programme of Studies in Non-Formal Education, 1974), 35-62.

[37] See case study in Sheffield and Diejomaoh, *Non-Formal Education in African Development*, 75-86.

[38] J. E. Anderson, 'The formalization of non-formal education : Village polytechnics and prevocational youth training in Kenya', in Foster and Sheffield (eds), *Education and Rural Development*, 293-9.

are reluctant to work in remote rural areas, resulting in a heavy reliance upon expatriate staff. The quality of brigade vocational training will, of course, vary with the quality of staff and the extent to which expatriate staff, in their desire to meet contract production figures, regard students as labourers rather than as trainees. Expansion of the system is limited by the small internal market and the customs union with South Africa, which floods Botswana with inexpensive goods from the Republic. But in countries with an expanding and self-generating or protected rural market, the brigade model of vocational training holds considerable promise as a means of creating some wage employment and self-employment.[39]

These and many similar examples of structured nonformal education, while not without potential for expansion, are nothing much more than micro approaches to macro problems. As important as education for employment generation may be, it is unlikely to create a large number of jobs, or opportunities for self-employment. In most developing countries the first priority is clearly to improve the competencies of those already in some form of employment, and much of nonformal education is directed towards this end. In Nigeria, for instance, low-cost Vocational Improvement Centres use existing plant and equipment to up-grade, on a part-time evening-class basis, the practical and trade skills as well as the general education level of both literate and illiterate lower grade industrial workers, artisans and those who are self-employed or apprenticed to small entrepreneurs.[40]

A much larger scheme, and one to which the Whitsun Foundation has recently drawn attention as a possible model for Zimbabwe Rhodesia, is the National Apprenticeship Service (SENA) scheme in the South American republic of Colombia.[41] SENA is a training organization which, although attached to the Ministry of Labour and Social Security, enjoys considerable administrative and professional autonomy in the use of its US $64 million budget, derived mainly from a private sector payroll tax. It has two major programmes: an urban programme of skills training and up-grading at various levels offered at technical training centres and on the shop floor for employed adults and young apprentices; and a rural short-course training programme to improve the skills of farmers, farm labourers, rural artisans and small entrepreneurs in their own community settings. In addition, SENA makes extensive use of mobile training units in its rural programme and for urban skills training outside the wage sector, as well as in its efforts to increase employment opportunities for unemployed workers and the landless. The

[39] See case study in Sheffield and Diejamaoh, *Non-Formal Education in African Development*, 65-74.

[40] Ibid., 35-43, for case study.

[41] D. H. Grainger, 'National Apprenticeship Service (SENA), Colombia : A Model for Skills Training in a Developing Country' (Salisbury, Whitsun Foundation, mimeo, 1978), 8.

organization — with a staff of nearly 8 000 and an annual training capacity of 800,000 — is directed and managed by a representative National Council, and the work is decentralized to 18 country-wide regional offices, which in turn exercise representative control over 65 training centres and an equal number of mobile training units. The management system also includes consultative and advisory services.[42]

SENA's rural mobile training programme is of particular interest because it has shown how a travelling group of instructors can take low-cost skills training to men and women living in even the most remote areas of Colombia, parts of which can be reached only by mule or canoe. Some of the 'mobile units' consist of nothing, more than an instructor and his teaching materials, including tools and audio-visual equipment. Other units may use the resources of a fully equipped instructional vehicle. The mobile unit courses consist of self-contained modules of instruction, demonstration and practice offered at convenient times to trainees over a period of a few weeks to three months. The courses are based on detailed training syllabuses and materials prepared by the SENA documentation centre, and cover agricultural crops, livestock and small farm projects, construction, machinery, mechanics and a variety of other practical topics, which are adapted to local conditions by the instructor.[43]

There is not much evaluative evidence on the success of SENA's rural programme, but that which there is suggests that the impact of the mobile training extension approach has been greater where it has formed part of broad development schemes at the local level.[44]

Evaluative studies of other rural training and extension programmes invariably come to the same conclusion.[45] They lead to the obvious observation that education designed as an aid to the improvement of economic and social conditions in rural areas, like all education for development, is indeed a very blunt instrument in the absence of comprehensive area plans that bring together into meaningful interaction at least the minimum ingredients necessary for local rural development — transportation, a dependable marketing and pricing system, supplies of production factors at suitable prices, basic reforms in land tenure, as well as the supporting services of agricultural research, training and extension, credit facilities, management services, and enabling institutions like farmers' associations and local self-government.[46]

Given an adequately balanced supportive structure, there is validity in

[42] Ibid., 1-7.
[43] Coombs and Ahmed, *Attacking Rural Poverty*, 46-7.
[44] Ibid., 48.
[45] Ibid., 231-50.
[46] A. T. Mosher, *Getting Agriculture Moving : Essentials for Development and Modernization* (New York, Praeger, 1966), 63-161.

Sir Arthur Lewis's view expressed more than twenty years ago that 'expenditure on bringing new knowledge to peasant farmers is probably the most productive investment which can be made in any of the poorer agricultural economies'.[47] The availability of supportive structures would also give credence to the recommendation frequently voiced at international conferences on education and development in Africa and elsewhere that 'a more significant contribution to rural development can be made by a much strengthened, more clearly thought-out and effectively co-ordinated educational service to adults than by alterations in or expansion of the existing system of primary and secondary schools'.[48]

One of the largest providers of a rural adult education service and one that takes new knowledge and improved technical and household practices to peasant farmers and their families is the agricultural extension service of many developing countries. Stripped of its trimmings the conventional agricultural extension approach involves the use of education and persuasion to encourage farmers to adopt practices that have been developed by specialists, research stations and other institutions, and ideally, shown to be effective on a small scale under the particular local conditions where the innovation is to be introduced. The larger extension services employ a variety of educational methods and techniques in their programmes of education and persuasion : at meetings, field trials and demonstrations; in training centres and master farmer training schemes; through personal contact with individual farmers; on radio and television; and by means of printed materials, learning packages and kits, and by visual displays. Where education and persuasion have failed some of the more authoritarian services have resorted to compulsion, even at the risk of becoming alienated from the rural people.

The extension approach — which is not confined to agriculture but is often used, for example, in health, nutrition and family planning programmes — rests on an evolutionary view of rural development; that by creating awareness, interest and knowledge of a sound agricultural practice, the more innovative in a rural community will, after mental evaluation and successful small-scale trial, adopt the practice. Then follows the slow process of diffusion and wider adoption by the more cautious, known in the diffusion literature as the 'early and late majority'. And finally, a few of the 'laggards' may deign to adopt all or some of the recommendations in the practice.[49] Protagonists of this theory, including those cast in the community development

[47] W. A. Lewis, *The Theory of Economic Growth* (London, Allen and Unwin, 1955), 187.

[48] J. R. Sheffield (ed.), *Education, Employment and Rural Development : The Proceedings of a Conference Held at Kericho, Kenya in September 1966 (Nairobi, East* African Publishing House, 1967), 22.

[49] E. M. Rogers, *Diffusion of Innovations* (New York, The Free Press, 1962), 76-120.

mould, view excessively slow or incomplete adoption as a function of the characteristics of the so-called 'target population'. If they are peasants, then it can be expected that they will exhibit characteristics of peasantry inimical to rapid adoption, such as fatalism, a low desire to achieve, lack of innovativeness and deferred gratification, and low empathy.[50]

However, these subcultural barriers to adoption are increasingly being viewed with scepticism by rural development workers. Their experience often suggests that perhaps the majority of peasants make rational decisions on the adoption of practices and new market incentives when they are convinced that the technical recommendations and knowledge being imparted are dependable and appropriate to their means and will lead to an improvement in their standard of living. But frequently the technical recommendations are not sound in the sense that they fail to take into account the total situation and the 'life-space' of the individual, which may include a complete lack of interest in the innovation as being either impractical or too risky or not related to more fundamental needs that remain unfulfilled.

Partly as a result of limitations like these in the extension approach and partly as a rejection of the benevolent authoritarianism that characterizes most agricultural extention efforts, the community development purists lays claim to the superiority of his particular philosophy and educational approach. He argues that nonformal education for rural development starts with the identification of 'felt needs' or 'wants' in the community; that once expressed needs have been firmly established the community can be gradually assisted to become 'development minded', and through group work and community participation in decision making, it will learn to organize itself for appropriate action, calling on extention and other specialists if required.[51]

Community development as a grass-roots form of nonformal education has accomplished much in helping people to run their own affairs and in developing local institutions for co-operative self-help. It is seen to be less authoritarian than the extension approach, although in practice this is not always the case; for the non-directive approach to community development is balanced by the generally more successful directive approach. Spontaneous community development is too slow for most rural areas, and as Loveridge has argued in his survey of the British experience of nonformal education:

> The popular community development concept of 'felt needs' has clearly had defects as a measure of priorities; the real needs have

[50] See for example, E. M. Rogers and L. Svenning, *Modernization among Peasants: The Impact of Communication* (New York, Holt, Rinehart and Winston, 1969), 19-41.

[51] See for example, T. R. Batten, *The Non-Directive Approach in Group and Community Work* (London, Oxford Univ. Press, 1967), 11-17.

> not been felt, let alone expressed, and imposed physical development may result in much great cerebration as the result of new experience than the expression of thoughts based on existing experience.[52]

Moreover, if the majority of peasants are indeed 'rational economic men',[53] then in areas that clearly have development possibilities and an adequate infrastructure nonformal education may more logically be concerned not so much with the remoulding of traditional attitudes and values as with assisting people to acquire new skills and understandings within the context of community supported programmes of development.

But in countries where there is a gulf between the rich and the poor and no, or very little, attempt to develop basic services in poor areas, nonformal education has been known to take a very different form, and found to have some effect in South American countries. I refer, without pursuing, to the kind of adult education advocated by Paulo Freire in his book *Pedagogy of the Oppressed* — a 'problem-posing' education that strives to raise the level of critical consciousness of the peasantry, and helps them to learn 'to perceive social, political and economic contradictions, and to take action against the oppressive elements of reality'.[54] However, it remains to be seen how effectively Freire's politically conscious peasants would acquire the skills necessary to work and manage the land if they ever gained control of it.

A further argument against a revolutionary type of education[55] is that many rural areas already have at least the beginnings of an infrastructure and some local resources which can be systematically harnessed to move people out of abject poverty and, given more favourable conditions, moved into the cash economy. In these areas the 'minimum package approach', as described by the World Bank, holds considerable promise.[56] Here in Rhodesia my colleague, Dr George Smith, has ably demonstrated through continuous operational research in the Tribal Trust Lands the validity of the

[52] A. J. Loveridge, 'A Survey of British Experience of Non-Formal Education for Rural and Agricultural Development in Developing Countries' (Univ. of London, Inst. of Education, Paper prepared for the International Council for Educational Development, mimeo, 1974), 52

[53] C. A. Anderson, 'Effective education for agriculture', in Foster and Sheffield (eds), *Education and Rural Development*, 37-8.

[54] P. Freire, *Pedagogy of the Oppressed* (New York, Seabury Press, 1973), 19; F. A. Guldbrandsen, 'Paulo Freire and the problem of consciousness', in M. Grandstaff (ed.), *Historical Perspectives on Non-Formal Education* (East Lansing, Michigan State Univ., Programme of Studies in Non-Formal Education, 1974), 170-4.

[55] See for example, an interview with Paulo Freire, 'As educators we are politicians and also artists', in B. L. Hall and J. R. Kidd (eds), *Adult Learning : A Design for Action — A Comprehensive International Survey* (Oxford, Pergamon Press, 1978), 271-81.

[56] World Bank, *Rural Development : Sector Policy Paper* (Washington, World Bank, Feb. 1975), 41-2.

package-programme approach in a field experiment which, unlike those supported by the World Bank, deliberately avoids the provision of credit. The scheme is based on a judicious blend of community development and agricultural extension philosophies, coupled with the integration of all factors relevant to small-scale agricultural development. Briefly, it involves the mobilization of local savings through the establishment of savings clubs; the teaching of members of these clubs how to use their money for their own development by participating in agreed agricultural projects; the systematic provision of basic technical information on the main crops or livestock selected; the bulk ordering of supplies, and marketing; and practical demonstrations before each major operation on the land of savings club members participating in the programme.[57]

This micro-economic scheme — and there are others like it in Rhodesia — has achieved remarkable results with extremely limited resources. It has attracted the attention of several overseas organizations and aid agencies, largely because it adds to the accumulating evidence supporting the expansion and adaptation of the disciplined package approach to fit large-scale integrated programmes of rural development based on small holdings, co-operative farming and land settlement schemes. But whatever the size of the project and whatever the management system — be it highly authoritarian or be it concerned with the involvement of local people in planning, decision-making and implementation — experience has amply demonstrated the importance, once personal and community confidence has been established, of the inclusion of practical nonformal educational components in all programmes of rural development.[58]

And it is not only for agricultural development that multiple sources of nonformal education are required. Where agriculture is modernizing and growth points are evolving, extension and training services should reach out to the small businessman, the rural artisan, co-operative societies and the influential women's clubs. These services need to have effective links with community development organizations and education for local government, with health and family planning education, with functional literacy programmes and with various agencies concerned with resource education and intermediate technology.

All these educational approaches and training efforts have major areas of pedagogical overlap and content interdependence. The services they

[57] G. A. Smith, 'A Strategy for Rural Development : Savings Clubs and Package Programmes' (Univ. of Rhodesia, Inst. of Adult Education, mimeo, 1974).

[58] Loveridge, 'A Survey of British Experience of Non-Formal Education', 74-80; Harbison, *Human Resources as the Wealth of Nations*, 80-99; cf. M. Rahnema, 'Education and equality : A vision unfulfilled', and T. Dodds, 'Distance teaching alternatives in education and for development, in Hall and Kidd (eds), *Adult Learning : A Design for Action*, 65-6, 245-6.

represent would undoubtedly benefit from close association and field co-operation, and from the sharing of staff training resources. Their co-ordination through a large central organization may be undesirable because flexibility in response to needs is not normally a characteristic of bureaucracies. Nevertheless, the SENA management system mentioned earlier has distinct possibilities, as does a similar proposal made by World Bank researchers for the creation of multipurpose rural development centres connected to small district training centres.[59] Whatever the system of co-ordination and management, the overriding aim should be to arrange for extension and training needs to be continuously monitored and communicated to the potential suppliers of nonformal education.

The message that I received from the foothills of Mount Olympus and from tried and tested practice is that education *for* development is utilitarian at just about every level; that it takes place in a recurring way in many different forms and settings; that it is firmly related to the world of work and thus to the adult population; and that unless it is integrated with development efforts it will achieve very little.

[59] Coombs and Ahmed, *Attacking Rural Poverty*, 221-2.