

EDUCATION IN RURAL AREAS

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Report of the
Commonwealth Conference on Education in Rural Areas
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Commonwealth Secretary-General

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FORWARD

During the 1950s more than 170 million people in the world migrated from rural areas into towns, attracted by the prospect of better living and regular employment. Many were disappointed but few returned to their own communities. Nevertheless, more than two thousand million people, two thirds of the world's population, still live today in rural areas, and, despite the migrations, their numbers are increasing. It was in recognition of their needs, and the inadequacy of the provision made for them at present, that the Commonwealth Conference on Education in Rural Areas brought together delegates from 23 member countries with rural populations totalling more than 700 millions.

Traditional educational processes have become increasingly irrelevant in the face of rapid technological development and evolutionary changes in family and community values. This situation has not arisen from an unawareness of the desired ends of education. Nearly fifty years ago the aims of education for developing countries were stated with clarity and enlightenment: "Education should be adapted to the mentality, aptitudes, occupations and traditions of the various peoples, conserving as far as possible all sound and healthy elements in the fabric of their social life; adapting them where necessary to changed circumstances and progressive ideas, as an agent of natural growth and evolution." The underlying problem was also identified: "The real difficulty lies in imparting any kind of education which has not a disintegrating and unsettling effect upon the people of the country." (1)

(1) Education Policy in British Tropical Africa,
Cmd. 2374, H.M.S.O., 1925.

Yet, in 1970, there is little evidence that the solution has been found. Governments today find themselves, reluctantly but unavoidably, devoting up to one third of their annual revenues to the provision of a form of education which they recognise as potentially dangerous, creating a rapidly increasing number of unemployable school leavers for whom schooling has opened a window on the world while leaving the door shut. All too often the reward for a Government's investment in education is a youth problem, young people alienated from their traditional culture, unable to find a foothold in the modern sector of the economy, and unwilling to reconcile themselves to the tedious poverty of rural life. Few of them are as articulate as Cameron Duodu's "Gab boys":

"We respected nothing and nobody, and in turn, no one respected us or cared two hoots about us. We had all 'finished' school and yet we had no work . . . If we had no work, we thought, it was not because we were bad but because there were no jobs. Tell us to go back and work on our parents' farm - to 'go back to the land', as the politicians' cliché ran - and we would say: 'Look here, sir, if we wanted to be peasant farmers, we would not have wasted a full ten years at school learning to read and write . . . If we are to be farmers at all, we don't simply want to weed a piece of land and plant yam or plantain or cocoyam or cassava or vegetables on it in the topsy-turvy way we've seen our fathers do for years, but which barely gives them enough food to live on, let alone bring them money. No, sir.' Ask us: 'But do you know any better way of farming than your fathers?' Our answer would still be a big 'No' . . . Our teachers had no specialised training in agriculture. How could they teach us agriculture? They just gave us a plot to plant things on. And the things grew, thanks to the good soil. Any ass can do that."(2)

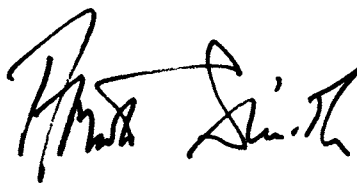
(2) Cameron Duodo: The Gab Boys, Deutsch, London 1968.

The townward drift cannot be reversed, but life in the rural communities can be made more rewarding, materially and intellectually, for those who stay. Young people need to be persuaded that the prize for educational success in their village school is not necessarily the award of a passport to the town. Healthy rural communities are the foundation of a country's wealth and well-being. Educational and development programmes, therefore, should equip young people for modern living and at the same time provide the stimulus and the means to develop in the rural areas progressive communities attractive to the young people, and providing all their inhabitants the opportunity to achieve a reasonable standard of living in return for their labour.

The process of education can no longer be conceived in terms of a single period during childhood in preparation for a lifetime of work. Continuing provision is needed for all members of the community so that change and development may be encouraged with the minimum of disruption to the essential fabric of society. Co-ordinated and comprehensive educational systems for the rural areas should provide for the young people, in school and out of school, and for their elders, enabling villagers to compete on equal terms with their urban counterparts. Only thus will rural people achieve that standard of life and status which they merit as the originators of their country's wealth.

Rethinking and educational reconstruction are urgently required, for unless adequate provision can be made on a large enough scale within a limited time, the outlook is bleak.

The Commonwealth Conference saw the key to this great problem in terms of involvement. If comprehensive public participation can be stimulated by imaginative leadership, then action will be possible on a scale large enough to meet the mounting challenge of social disruption and disappointed hopes. While the size of the problem should not be underestimated, there are solid grounds for optimism that, given inspiration and unstinted support by their leaders, the rural populations of the developing Commonwealth can play a major role in creating their own future prosperity.

A handwritten signature in black ink, appearing to read 'P. M. Singh'. The signature is fluid and cursive, with a large initial 'P' and 'M'.

CHAPTER 1

Education in Rural Areas: An Overview

INTRODUCTION

1. It is now recognised that comprehensive policies and programmes are necessary to raise the level of skills of rural communities and to develop attitudes of sympathetic understanding towards the complex social and economic changes which make up the development process. The selection of rural communities for special attention at the end of the first United Nations development decade reflects the disappointment with the results of concentration on modern industrial production, large-scale mechanised agriculture and the education and training of high-level manpower. Experience has revealed unforeseen difficulties and the high cost of creating job opportunities in the modernised sectors of the economies of low-income countries. Experience has also revealed the failure of such investment to provide sufficient openings for the increasing numbers of young people at all levels whose aspirations are directed to employment in the modern sector.

2. A further stimulus to the formulation of an alternative strategy is the realisation that many of the sharpest social problems which affect the less affluent countries of the world at present are felt most acutely in the rural areas of these countries. Improved living conditions, and particularly amenities such as electric light, piped water and modern sanitation, are much more prevalent in urban than in rural areas. Opportunities for cash-earning employment also are predominantly to be found in the urban areas. The seats of government and administration are to be found in urban communities and decision-making is influenced by that fact. The cities have a particular appeal for young people because of the facilities and amenities to be found in them and not in the rural areas. In economic terms, it is the farming community which suffers

most from fluctuations in world commodity prices, whose children find it most difficult to find places in schools and drop out earliest, and who benefit least from social welfare programmes. Yet rural people are still the overwhelming majority of the population in most developing countries and constitute the mass of the nations' tax-payers and the politicians' constituents. Many young people reared in a rural environment see no prospect, if they remain in the rural areas, of escape from a life that is arduous and brings little material reward. They emigrate to the cities, thereby adding to an already depressed employment market and increasing the strain on over-stretched social services.

3. Rural dwellers represent a major political force which must be taken into account. They can and do express their dissatisfaction with an established order which does not appear to cater for their needs. Development programmes prepared without the active participation of the established rural population have a very high failure rate. The rural population can, through non-co-operation, very effectively impede any development strategy. On the other hand rural people, given the skills, motivation and leadership, can participate constructively in development activity. They may indeed achieve economic gains of a permanent and widespread nature upon which development can continue through the gradual increase in agricultural surpluses and the progressive diversification of the rural economy. Above all, it has been increasingly recognised that social and economic development are interdependent. The need now is for comprehensive programmes which seek to raise the overall level of rural living, the technical skills, the education and social welfare and the purchasing power of whole communities, and so motivate them that they will improve their economic status with the minimum of social disruption.

4. There must always be a place in development planning for specific activities of high capital intensity and for skills of the highest professional standard, but in many situations these must be complemented by programmes designed to produce the necessary level of appropriate skills carefully related to real needs at local level. The way is thus cleared for broad planning in education and rural development for the benefit of the majority of the community, the rural masses.

5. The Commonwealth Conference on Education in Rural Areas accepted that the range of educational activities in rural areas should normally be designed to meet the needs of four

major groupings, membership of which overlaps. The need for a comprehensive rural development strategy requires that any plan for education and training in rural areas should be as well integrated as possible, with the maximum of operational co-ordination among the various agencies involved. One of the weaknesses in the way in which educational influences have been brought to bear upon rural communities is the tendency towards compartmentalisation separating the schoolmaster, the social welfare and community development worker, the instructor in technical skills, and the agricultural extension agent, all of whom are engaged in the education and training of rural people. The need is for a common appreciation of the task which they all share and for each kind of educator to contribute what he can towards the work of the others.

6. The conference sought points of contact between four kinds of educators working among rural people - those working in the formal school, those engaged in all levels of adult education and community development, those concerned particularly with the education and training of out-of-school youth and those involved in the various forms of agricultural education and training. The broad aim of the conference was to enable such educators to pool their thinking with fellow specialists from other Commonwealth countries, and to bring together the various sets of interests so that shared objectives could be clearly understood and areas for co-operation discerned. The attainment of this objective was facilitated by a tendency during discussion to range from topics which were the exclusive concern of the particular group, for example the role of the inspector of schools in rural areas, to topics which were of interest to all groups, for example the preparation and production of educational media. This review of the collective thinking of the conference therefore seeks to examine, for each of the four main conference themes, first, those elements of special concern, and, secondly, those elements where a co-ordinated approach may be devised.

THE FORMAL SCHOOL

7. The conference reviewed the responsibilities of the formal school in rural areas towards the community as a whole and rural development generally. A matter of major interest in the discussion was the tendency of the school to be treated as a self-contained institution. This interest was expressed positively by emphasising the fundamental need for school and community to work together to the maximum mutual benefit. It was recognised that there are limitations to what the typical

rural primary school can achieve in practice. It was considered, nevertheless, that the rural school can usefully contribute towards the mobilisation of the rural community through the formation of attitudes sympathetic to development among young people. It was also seen as one of the sources of leadership in the rural areas and a resource in terms of physical plant and equipment by which some of the broader social and educational needs of rural societies might be satisfied.

8. The first responsibility of the school is to provide for the children a satisfactory education in the rural context. There are several factors which militate against this. Among them are the isolation of the rural schoolmaster from his fellow teachers and from new ideas and techniques, deficiencies in standards of building and elementary equipment, the inadequacies of much teacher training, excessively overcrowded classrooms, the low morale of the teaching profession in the face of low salaries and the presence of other government personnel who have moved into the rural area and assumed some of the teacher's role as adviser and mentor to the rural community, thus reducing his prestige.

9. Before new responsibilities can be laid on rural teachers, programmes must be developed which will better enable them to carry out their primary responsibility. These will mean new approaches to the pre-service and in-service training of teachers in order to raise the professional quality of the staff involved in rural schools, a broadened role for the schools inspector in the rural areas, emphasising his function as adviser rather than "inspector" (with its intimidatory overtones). They will also mean systematic attempts to develop the physical and material resources of the schools by such means as expanded school building programmes using low-cost methods of construction, and the promotion of local production of simple learning and teaching materials.

10. Once this foundation is provided, there are a number of possibilities of the deployment of the resources of the rural school so that it may have a beneficial influence on the rural community and stimulate development activity.

11. The main area where the school can have such an influence is in the formation in rural children of attitudes sympathetic to life in the rural areas. Such attitudes can best be promoted through the development of integrated curricula which will build upon a foundation of basic skills by developing con-

confidence, curiosity, self-reliance and the ability to communicate. Such curricula would clearly place a greater emphasis than has often been the case upon independent study and enquiry by the child himself, designed to bring him into direct contact with his local environment, using this to the maximum in developing basic skills, promoting a familiarity with the processes of nature and contributing to an understanding of the potentialities of rural living. Such an approach would not mean that rural primary schools would teach technical skills whether in agriculture or in other craft activities. These schools would seek to establish the foundation of basic skills and attitudes upon which specific vocational training outside the school system might subsequently build.

12. To bring about these changes the teacher will need to be retrained in new techniques which differ radically from traditional methods and may not be welcomed by many teachers whose practices are set hard. Teachers must also be involved in developing new curricula, because the need to relate curricula to the immediate situation means that much of the development work must take place at local level. A special place was seen therefore for local teachers' centres which might serve this purpose as well as assisting in breaking down the isolation of teachers in rural schools.

13. The initial training of teachers also merits attention. Many training colleges tend to train for an essentially static teaching situation and consequently produce teachers who are unlikely to stimulate attitudes in their pupils which enable them to further and profit from the cumulative process of social change in the rural areas. Teacher education and training is a shared responsibility involving Ministries, inspectorates, professional associations, headmasters, senior teachers, teacher training colleges and Institutes and Schools of Education. These last should have an operational as well as a research function and be especially concerned to ensure that the activities of the teachers' colleges are as appropriate as possible to the educational, social and economic realities of the communities in which the teachers serve.

Evaluation

14. Current practices in examinations and testing of pupils should also be re-examined as to their relevance in relation to the need for the schools to contribute towards the development of rural society. Accepting the need to promote specific

basic skills and attitudes in individual pupils for whom in the majority of cases there can be nothing more than primary education, the trend away from terminal testing should be encouraged. The practice of continuous assessment should be developed so that the individual needs and aptitudes of each pupil become clear to the teacher, when appropriate steps can be taken to develop them.

15. Nevertheless, valid assessment of pupils at the end of the primary school course is necessary so that the most suitable students can be selected for the comparatively few secondary schools that are available in many predominantly rural countries. In particular, means should be devised to compensate for the difference in levels of attainment between pupils of urban and rural origin in secondary entrance examinations. Selection procedures valid for all pupils at this stage should be devised in preference to the application of some form of weighting to examinations which would favour pupils from rural areas.

Educational media in the school

16. Emphasis on the individual approach to learning requires a greater range of learning and teaching materials, including reading material, than the typical rural school can normally offer. Books are probably the most crucial of materials and their supply presents specially difficult problems which can only be solved at the national level through the development of training and production facilities, possibly with international assistance. Some other media offer the prospect of local self help. Schools could act as community resource centres for the production of simple educational materials, for example village newspapers, and serve some of the needs of both the schools and various workers in adult education, community development and extension work. The more complicated aids to learning, requiring expert technical and professional staff to produce test, operate and service them, can in certain contexts be valuable. There is however, a possible danger that administrators may put too much faith in what can be achieved through expensive ventures in the mass media. It is important to maintain a sense of priorities and to take into account the costs and benefits of such activities as compared with less spectacular work with lower cost media.

The school and the community

17. The relationship between the school and community

must be reinforced and extended if the school pupil is to profit to the maximum from the physical and human environment in which he lives. The school community should play a continuing part in the educational life of the school. In addition, the school should become a focal point for all educational activities in a particular rural area, providing a direct educational service to children and also supporting services to other educational workers. At the same time the rural teacher must be prepared to serve as a leader and to stimulate development generally by sharing with the community what he has to contribute.

OUT-OF-SCHOOL EDUCATION AND TRAINING FOR YOUNG PEOPLE

18. Even where national education systems are adequate for the needs it is generally recognised that out-of-school education and training are extremely useful and desirable. The aim of these systems is to provide young people who are mainly outside the school system with the technical skills and other personal qualities which will better fit them for employment. Such programmes may also in certain circumstances seek to organise the application of these skills by direct involvement in development work such as roadmaking or bridge-building or by participation in settlement schemes.

19. The mere provision of training, plus certain specific projects to absorb trainees, cannot solve the needs for acceptable employment of the growing numbers of young people out of school. Essentially the need is for comprehensive development policies aimed at raising the level of rural living, since it is this sector in most developing countries that is capable of providing opportunities for employment in the immediate future.

20. There are four categories of young people for whom out-of-school education programmes are needed:

For the unschooled, who are likely to be still fairly closely identified with traditional life, the need is for the development of their skills in relation to their traditional employment. For this group, work-oriented functional literacy programmes can be of the highest value, particularly when backed up by short courses on specific themes in rural training centres.

The early drop-out from primary school is in the same broad category as the unschooled youth, except that his brief educational experience may have aroused his aspirations for wage-earning employment and he may therefore be more likely to leave the rural area. In this case, the need is for skills training programmes and courses which will build upon and ensure the maintenance of his elementary literacy and motivate him towards rural development.

The primary school leaver is often distinguished from other categories of young people by exaggerated and unrealistic job aspirations shared by himself and his parents. He is strongly motivated, therefore, to leave the rural areas for the towns where he might hope for acceptable employment. The underlying reason for this is the combination of low rewards and inferior living standards associated with rural life and the apparently attractive amenities which the urban areas offer. As the townward movement gains pace and the possibilities of acceptable employment there diminish, dangerous social and political tensions arise from the frustrations suffered by this group. These tensions can be tackled by various training programmes which aim to provide a combination of skills, training and civic education which, it is hoped, will motivate primary school leavers into directions profitable to the national development effort. The numbers that can be absorbed by such programmes - national youth services, settlement schemes for young people, special vocational training centres - are, however, small in relation to the size of the training need and generally somewhat expensive as individual enterprises. No significant impact can be made on this problem until there is an all-round development effort in the rural areas, including the provision of improved communications structures and other material amenities, increased rewards for rural people relative to townspeople, and training programmes which will appeal to young people.

For young people still in school out-of-school programmes can usefully supplement the formal school curriculum. Various youth organisations have long provided activities for young people in school. Newer youth organisations with an emphasis on development

are also engaging themselves in this way, for example, the Malawi Young Pioneers or Community Service Volunteers in Britain. This is an encouraging trend. In particular they provide opportunities for learning technical skills and encourage participation in appropriate forms of community service. In addition, they provide opportunities for social activities.

21. An activity not to be neglected which can further development is the establishment of Young Farmers Clubs. The impact of Young Farmers Clubs in arousing interest in agriculture represents a very special contribution to development, providing a foundation upon which most specific agricultural training programmes can be based at a later date.

Appropriate forms of training

22. In determining the forms of training appropriate for rural youth, two categories of training activities can be identified:

- (1) the training and establishment of improved farmers;
- (2) training to promote various non-agricultural crafts, skills and services in the rural areas.

23. Various approaches are possible in both categories. These include training in purpose-built institutions confined to a specific activity, training in multi-purpose institutions, training attached to "masters" (whether in farming or in artisan crafts), training in the family situation. An effective extension service is essential to the success of those aspects which involve the training organisation reaching out to the trainee. For agricultural training, there are already such services although almost invariably these are undermanned.

24. There is an absence of a parallel service concerned with the promotion of small crafts, industries and businesses in rural areas, a small industries extension service. The establishment of such a service by governments would provide immediate returns in terms of rural development. In view of the importance of building up the training capability of existing rural master craftsmen, in-service training programmes for them, coupled with the necessary system of loans which they might need to develop their facilities, can do much indirectly

towards satisfying the training needs of young people out of school.

Content of courses

25. In view of the rapidly changing social and economic situation in many countries, a broadly based approach to the planning of course content is desirable, with emphasis on training in practical skills. Such training must be related to the changing skills demands resulting from technological advance. In addition to the necessary practical component in courses, great importance was seen in a non-technical element which should be concerned with civic education in the broadest sense. Young people should be made aware of the main features of the economy and society in which they are living and awakened to the kind of contribution they might make to national development.

26. Courses for both girls and boys should have much in common. The particular requirements of girls should, however, be taken into account through the provision of courses in home economics, child care and special skills required for local job opportunities for girls.

National youth services

27. These organisations have not been functioning long enough to show the distinctive contribution which they might provide in meeting the needs of young people in the countries where they operate. They vary greatly in objectives, training approaches and content of courses but have some features in common. National youth services are relatively costly. Because of this it is unlikely that they can deal with more than a small number of those in need of training. The particular strength of the service should be in the training of young rural leaders, technically skilled above the average and highly motivated towards the development of the rural areas. Such training can also instill a sense of national consciousness into young people of widely differing communal backgrounds, thus providing an educational element which hitherto has been confined to those young people fortunate enough to gain access to the higher educational echelons, or had the privilege of taking part in Outward Bound and similar courses.

The consequence of training

28. Systematic follow-up must be an integrated part of any training programme. It should preferably be carried out by the original training agency which should be obviously best aware of the qualities which it wishes to see in its former trainees. The training agency must, of course, co-operate in this with the various specialist advisory services which are in regular contact with rural communities. The purpose of follow-up is to ensure the application in the working situation of the skills which have been taught, to obtain information from trainees on problems encountered so that the training course might be appropriately modified, to introduce new techniques, and to provide data upon which the need for refresher course can be assessed.

29. Follow-up must be concerned with more than practical, technical skills. To ensure the application of these skills, what is also needed is guidance on such matters as business-management, book-keeping, land-law or co-operative regulations. Follow-up activities are thus concerned with reinforcing the contribution to the rural development process provided by initial training.

30. There are other factors which can help to ensure the application of skills taught and which can assist the follow-up process. In the case of programmes for training and settling improved farmers, for example, settlers are likely to strike sounder roots and have a more progressive influence on their rural surroundings if they are settled together in mutually-supporting groups rather than individually. Each group must have in its number suitable and respected leaders, drawn possibly from amongst the trainers.

The urban situation

31. It was argued that much of the problem of urban youth, particularly in developing countries, is a reflection of the failure of measures of rural development to hold out to many young people of rural origin the prospect of a future which is rewarding and hopeful. The urban areas therefore become crowded with young job-seekers who, when faced with failure, often turn to anti-social activities. A two-fold attack on this problem is needed. First, in the rural areas, all-round development measures are necessary in order to produce a progressive atmosphere with which young people can identify

themselves. Secondly, in the towns, specific programmes are required for those young people who have lost contact permanently with their rural background. These programmes would be designed to offer to this fully urbanised element both vocational and social training facilities.

Other considerations

32. Evaluation

Rigorous evaluation by outside bodies not concerned in the operation of programmes can play an important part in influencing governments towards the development of effective programmes for young people. Local personnel should be associated with the evaluation exercise in order to ensure sensitivity to local political and social factors. It is important that care should be taken to formulate the results of evaluation in such a way that policy-makers can readily use them.

Costs

Costs are an obvious constraint on the development of informal programmes. It is important to recognise that out-of-school education concerns several departments of government as well as non-governmental organisations including those in commerce and industry, all of which should recognise their responsibility by direct involvement. It is important that more information should be available about various schemes which have specialised in paring costs and in generating income and employment so as to yield the highest returns on investment in youth training. Investment in training young people must be combined with parallel investment in other directions such as the development of rural infrastructure or the education of adults, in order that youth training may produce its maximum rewards.

Leaders

Three main requirements in the training of leaders are, first, the training of suitable personnel who operate directly with groups of young people at project level; secondly, the need to educate the

established leadership in the need for commitment to rural development, and, thirdly, for the involvement of young people in this process. Youth leadership can be produced by orthodox training programmes from conventional sources, the secondary schools. One source which has been neglected is the natural leadership that exists in rural communities and particularly among young people. Efforts should be made to nurture local leadership from this source. Such leaders can be expected to understand fully and be committed to the local rural situation. This is generally preferable to the importation of leaders from outside sources. Primarily therefore leadership training should be undertaken in the local situation. Experience in other regions and in other countries where comparable work is going on can sometimes be useful.

International co-operation

The provision of technical expertise, volunteers, tools and equipment, will require international co-operation. The contribution from outside must be appropriate to the recipient country whether in terms of the quality of the expertise or the capacity of the tool. International programmes of co-operation must recognise the realities of the local situation in terms of development, employment, finance and technical capacity and adjust their activities to fit the situation.

Since many departments of governments are involved in out-of-school education within particular countries, it is important that in each country a single co-ordinating agency should be set up through which aid to the out-of-school sector may be channelled.

THE EDUCATION OF ADULTS

33. Adult education includes a wide range of courses and educational activities, formal and informal, intended to enable adult populations to improve their general educational or cultural levels or to learn or improve upon their technical skills. It is a vital element in the development process, providing the understanding as well as the technical capacity essential to full human involvement in development.

34. In rural areas, adult educational activities fall into two main groups. The first aims at raising the cultural and intellectual levels of rural communities. The second seeks to promote in rural communities the skills and motivation to make a contribution to rural development.

35. The former has a vital role to play where the traditional culture is under pressure from modern forces projected through the mass media, the schools and other forms of communication. In such circumstances there is a danger that much that is valuable in the traditional culture will be thoughtlessly discarded, or alternatively that traditional forces in a community will become stubbornly committed against the processes of social change. Adult education can help to reconcile traditional and modern standpoints by involving the community in the new processes and explaining these to the people. In a practical sense, adult education can help to preserve those traditional skills which can still play a valuable part in a rural economy in process of modernisation.

Courses of an academic nature

36. Adult education of an academic nature also has a role to play in many rural communities where in the past there have been incomplete educational systems and where therefore there are substantial numbers who might have been able to profit from continuing their education but who had to drop out from school prematurely. Furthermore since in rural areas social provision and intellectual stimulus are relatively lacking in comparison with urban areas, adult education has a special contribution to make in enriching the quality of rural life.

Community education

37. Activities designed to raise the level of living of rural communities centre upon practices related to better living standards, to improved health and hygiene, to the care of children (particularly in their early years), to the production of better quality foods and better nutrition, to improved husbandry and the processing of agricultural produce, to improved business and management techniques, indeed to the widest range of activities which affect the life of rural communities.

38. The effect of education in these areas is generally to produce changes in attitude. Education itself cannot give rise to the economic activity necessary if the changes in attitude are

to bring discernible returns in development terms. If they are to yield the best results, therefore, adult education programmes of this nature should be part of a package of rural development activities designed to change not only the attitudes of rural people but also the material environment in which they live.

Literacy

39. Literacy has a special part in the process of community education. Various approaches have been devised and practised throughout the world. Generally, there is now a move away from the traditional approach to literacy which advocates literacy for its own sake and seeks to achieve it through some form of mass literacy campaign. The swing away from this approach is explained by the inability of certain rural communities to relate their new-found literacy to any practical end within their own experience and by their difficulty in maintaining literacy when follow-up reading materials are almost non-existent. The more recent approach to literacy advocates the selection of groups for intensive treatment so as to improve their skills and production capacity. This seems to make more economic sense in that it relates to a precise end and the participant can readily perceive the practical gains that will accrue to him through his taking part in a combined literacy and technical training programme. This approach to literacy work has been strongly promoted in the current Experimental World Programme of UNESCO. Because, however, such programmes are aimed at specific groups and have a heavily vocational bias, there is also a need for other approaches to literacy of a more general educational nature of including elements of civic or community education. Ideally all types of literacy programme should play a part in an overall plan for rural development which can potentially involve the whole rural community.

Technical and vocational training for adults

40. In the main such programmes are likely to be concerned for several years to come with raising the level of basic farming skills. It is important, however, that such programmes should develop and work from the existing level of skills within the rural community, rather than seek to impose alien standards of limited applicability. Training on the job in the workplace, whether of small farmer or of rural artisan, is especially valuable in order to convey to the trainee the understanding that the programme applies in his own personal

situation. Rural training centres with a residential capacity have a useful role in backing up training programmes which reach out to the rural dweller where he works and lives.

Family planning

41. The adult educator has a vital contribution to make in spreading among rural communities the understanding of the need for and the practice of family planning. Too often the spread of family planning is regarded as a purely technical matter and the province therefore of health departments. In fact, such exercises can be easily invalidated by a failure to take into account the understandable suspicions of the community at whom the programme is directed. To bring this about, technical personnel and adult educators must work together in the planning and execution of the programmes.

Educational media

42. Both the simpler and the more sophisticated media can play an important part in the education of adults in rural areas. In the former category, low-cost, locally produced media and materials are an essential reinforcement of the face-to-face work of those involved in communication with adults, especially when transference of factual information is involved. Some of these media can be manufactured locally and tailored to local requirements, using local materials whenever possible. The making of teaching aids should be an essential component in any training course for those working directly with adult learners and the means for making simple aids should be available locally to persons engaged in adult education. This local provision must be reinforced by the resource of a national centre which can call upon the professional expertise necessary for pre-testing, action research and production of the more complex forms of media.

43. Radio has assumed special importance with the advent of the transistor set. Broadcasting is a complex and technical business and calls for professional training. Ideally programmes intended for specific areas should be locally produced. Where they are produced centrally it is essential that the production staff should be in continuous contact with the regional and local situation.

Evaluation and continuous assessment

44. There is need for continuous assessment of programmes to ascertain their effectiveness in attaining their stated goals and supply data to the programme planners in the light of which improvements can be worked out. Continuous assessment should be built in to any adult education programme aimed at community improvement. Long-term rigorous evaluation is important to policy-makers for assessing the value of particular programmes and to provide data for comparing the benefits of different approaches.

45. The mass media tend to be costly both in terms of material facilities required and the expensive professional expertise involved. It is therefore of the greatest importance that careful evaluation should be carried out of all ventures in these media so that the benefits in relation to the costs can be clearly seen by those involved in policy-making.

The role of women

46. The trend towards equal participation of men and women in all aspects of adult education work should be encouraged. The final objective should be the full mobilisation of the joint capacities of men and women whilst allowing the special capacities of each to develop to the full.

AGRICULTURAL EDUCATION

47. Agricultural education was viewed within the overall context of rural development. Agriculture itself, being the principal occupation of the majority of the population in developing countries, inevitably has an important place in overall development planning. To stimulate the process of agricultural development is more than simply a matter of bringing science and technology to bear on existing systems of rural land use. The human element is also of primary importance, as is the development of various essential supporting structures. Education and training, motivation, the development of rural infrastructure and services, the marketing and pricing system, all have important parts to play in an integrated development process. All of these components are in effect inter-dependent. The ability of one element to achieve results depends upon the efficient functioning of the others. The complexity of the process of improving agricultural practice must never be underestimated.

48. The main groups of people requiring agricultural education and training are (a) the practising farmer, (b) the field worker or extension agent, (c) the professional support worker, the agricultural technician or agricultural scientist.

The education and training of the practising small farmer

49. Training programmes must be shaped to meet the differing needs of small farmers. These vary according to the farmers' level of development, which may be still that of subsistence agriculture, or at a transitional phase moving towards the cash economy, or at the stage of a specialised commercial farming. The nearer a farming community is to the subsistence system, the more difficult are the problems of getting agricultural development moving.

50. At the level of the subsistence or near subsistence farmer, the main problem is that of motivation. A training programme that seeks to communicate various elementary procedures which can bring about substantial improvements in the situation of the subsistence farmer can be effective only if the farmers are motivated to respond to the programmes. The special needs which concern the farmers must therefore be identified so that training can be directed specifically at these in the hope of evoking positive response. This process of identification demands knowledge of the local community on the part of the field worker and in turn demands that the local community should fully accept the field worker. Important questions of attitude arise which must be taken into account in training programmes for field workers.

51. In approaching largely subsistence communities, various strategies are possible. In particular, it might be important to direct a special training programme at groups or individuals who are known to be changing in their traditional attitudes to agriculture so as to create within the rural community a body of improved farmers who can demonstrate the effects of better agricultural practices. The various media of communication including written and illustrated materials are essential in imparting information to modernising farmers and in bringing about positive responses. In this connection also, selective and intensive literacy work, if it is related to the rural environment and to particular agricultural processes, can facilitate communication and raise agricultural productivity.

52. The primary task of communication with small, or near subsistence farmers must be carried out in their working situations in conditions which are understandably real to them. There is, however, an important supporting function in the communication process for residential rural training centres which farmers and their wives can attend for short courses on specific topics. These courses reinforce a particular message or process once indications of changing attitudes can be seen.

53. The essential ingredient in promoting the development process among near subsistence farmers is the quality of the leadership available locally. The quality and skill of the field worker is therefore crucial. Since the needs of communities at this level are diverse, and since the growth-points for development activities may be found anywhere within this wide range of needs and interests, the field worker at village level should preferably possess a variety of skills rather than particular expertise in, for example, agriculture alone. Often, however, it is the personal qualities of the field worker - his maturity, his ability to inspire confidence - which produce results. Ideally the need is for development teams which possess various skills. If, as is frequently the case, financial reasons rule this out, field workers operating independently should have regular in-service training courses in order to keep them abreast of recent developments.

54. In view of the importance of women in many traditional agricultural systems, it is important that they should not be overlooked in any development and training programme. Women engaged in subsistence farming need help as much as men to develop agricultural skills. Women also have additional needs related to their role as home-makers which should be catered for. As the agricultural development process proceeds, the roles of men and women in the more commercialised agricultural system tend to become more clearly differentiated and provision may have to be made for specific training needs.

Farm settlements

55. Because of the heavy expenditure that they often involve, settlement scheme proposals should be rigorously examined and their potential worth established before they are launched. Such schemes involve the building of new communities as well as the adoption of systems. It is essential that the co-operation of settlers in such schemes be attained;

community education and training are therefore key elements of these programmes. The purpose of this education and training is to gain the commitment of the settlers to the scheme and to provide settlers with the diverse skills needed to exploit it to the full. Training programmes should therefore include, in addition to instruction in agriculture, elements of accounting, budgeting, health and nutrition, the use of credit, and cultural and social provision.

56. Careful evaluation of the costs and benefits, and of the social advantages of such schemes, is essential to provide guidance for future settlement policy.

Training the extension worker

57. Initial training of extension workers should be broadly based. The training programme should include a grounding in relevant agricultural theory and practice, elementary business techniques, a knowledge of health and nutrition as they relate to the rural situation, and an introduction to the principles of social psychology and elementary communication skills and techniques. In addition regular in-service courses are necessary to keep workers in the field aware of new developments.

Training the agricultural technician

58. A close understanding is vital between the front-line field worker and the support worker in the laboratory. Each must understand the problems and potentialities of the other. Whilst the technician needs a rigorous training in his particular specialism, there would be great value in an initial training year in which the training of extension workers and technicians overlapped.

Teachers of agriculture

59. Many of those engaged in teaching in agricultural colleges, farm institutions and farmer training centres have had no training as teachers, and rely purely upon their specialist expertise. This is a major weakness which should be remedied. The organisation of courses, possibly by university departments, in which such personnel would be able to spend some time on the principles and practice of teaching, as well as other activities which might improve their role as communicators, would be a valuable innovation. An inducement through the

award of certificates and suitable incremental credit might help to promote such courses. Equally, for potential instructors undergoing degree or diploma level studies at university, Education courses are necessary. Indeed the possibility of running such courses jointly with teacher training courses geared to the orthodox school system would afford an excellent opportunity of promoting greater understanding between each group.

Agricultural scientists

60. The agricultural scientist must have breadth as well as depth of knowledge. It is therefore necessary that, in addition to developing excellence within the particular subject specialism, degree level studies in Agriculture should include courses which will equip future professional agriculturalists with a broad view of the role of agriculture in society. Courses in aspects of the social sciences and in agricultural economics would help to fill this need.

Continuing training

61. At whatever level, from the field worker to the research scientist, initial training is the beginning of training and throughout any working career in-service training must be a continuing feature. A particularly difficult phase in most careers comes very soon after the initial training period is over and the young worker is confronted with the realities of the working situation. It is important at this stage that his initial training should be speedily backed up with in-service guidance and that more experimental personnel should lend their support to ensure the firm establishment of the young worker. Training must be recognised as a responsibility which all share.

National Councils for Agricultural Education

62. As in many other fields of professional activity which involve workers with skills ranging from those at a relatively modest level to those requiring complex knowledge and understanding there is need for co-ordination of the education and training facilities provided. The establishment of National Councils for Agricultural Education would inevitably do much to provide this co-ordination and assist governments as sources of sound advice in respect of the design and implementation of policy.

National Councils for Agricultural Research

63. The provision for agricultural research in most countries at the present is shared among various institutions, some under the authority of Ministries of Agriculture, others under the control and direction of universities, still others, in some cases, supported by commercial organisations. The establishment of National Councils of Agricultural Research would undoubtedly provide the means for better co-ordinating research effort in agriculture, and could well lead to the exercise of influence as authoritative as that exercised by Medical Research Councils.

Agriculture in schools

64. The primary school is not the place for vocational training in agriculture. The most that can be hoped for is that attitudes sympathetic to rural life could be induced in children through, for example, environmental studies. At secondary level, it is possible to handle agriculture as a serious subject for study. In many developing countries there is a strong motivation on the part of secondary school students away from agriculture. It would therefore be of great value if experiments which have been successful in introducing agriculture into secondary schools were documented and the information widely disseminated. Clearly, with the growing interest on the part of governments in promoting agriculture at all levels including the schools, it is urgent that a systematic reorganisation of curricula, teaching methods and textbooks should be undertaken with the hope of promoting the interest in agriculture that is widely seen to be necessary. One means whereby interest in agriculture might be stimulated would be by the introduction of national and community service programmes for young people. Information about the working of such programmes would be of value to those responsible for agricultural policies.

The projection of the role of agriculture in national development

65. Enlightened and understanding co-operation on the part of the general public is basic to the success of agricultural development programmes. All institutions and agencies have a responsibility in the building of such understanding. Ways in which this can be brought about include open days and agricultural shows; courses might be organised for senior personnel not involved in agriculture; at the top level, conferences and seminars fulfil the same function. One of the

objectives is to establish appreciation of interdependence of town and country and the general understanding that balanced national development must include the development of a sound rural base.

SOME POINTS OF CONTACT

66. The schools, work with young people, work with adults, and the communication of the fundamentals of improved agriculture, all in their differing ways are focussing on the difficult problems of getting rural societies moving, in particular of introducing ideas, skills and attitudes to rural people so that together with other development activities the many problems of economic backwardness can be overcome. Too often, perhaps, these four sets of activities have operated apart from each other. Yet clearly, their interests overlap at many points and they may have much to gain from working together.

The attitudes of young people towards the land

67. For several decades many young people with and without formal education have reacted against life in rural communities and sought employment in the towns. This phenomenon has led to the drift from the land being regarded as essentially an educational problem. One consequence of this has been attempts in various ways to introduce an agricultural vocational element into the village schools. This has proved ineffective because of the physical immaturity of the children, the inadequacies of the teachers made responsible for agricultural education, and because the schools have a prior responsibility in establishing the basic skills of literacy and numeracy. Furthermore, social practices in relationship to land tenure and the status of the young in traditional society generally prevent independent farm practice being taken up by the young school-leaver. Another factor of importance is the attitude generally adopted by parents in respect of the children they send to school, namely that the school automatically involves qualifications for work of a non-agricultural character.

68. At the conference the agriculturalists and educationists agreed that the primary school should not become involved in teaching vocational agriculture. The task of the school should be to familiarise young people with the rural environment in which they live, promoting in them through rural science and other courses an interest in the processes of nature and the potentialities of rural living. These positive attitudes might

be built upon by specific out-of-school training programmes whose task would be greatly eased if it were not necessary, as is so often now the case, to combat trainees' antipathy towards the land.

69. The content and methods for the teaching of agriculture at this level must be related both towards requirements for post-secondary vocational training in agriculture and towards developing greater understanding of the inter-relationship of agriculture and other branches of the national economy.

70. One way of furthering interest and understanding of agriculture as a possible career would be the development of out-of-school programmes of community or national service directed to develop work in the rural areas. Such activities would also contribute to the general understanding on the part of the community of the inter-dependence between town and country.

71. Unless steps along these or similar lines are taken, the increasing numbers of young people frustrated in their attempts to seek acceptable employment will be a source of major social upheavals of a disruptive character.

The community school

72. The school in terms of plant and skills is a major resource in many rural communities. It is important that the fullest use should be made of that resource so that its value is felt not only by the children during the few hours of the day when they are in attendance but also by adult and youth groups at other times. The school should be in the fullest sense a living part of the community. In normal school hours, it is at the service of the children. After school, it should be a focus for a wide range of community and adult educational activities providing a meeting-place for rural people to pursue their social and educational activities.

73. In the training of teachers attention should be given to their role as progressive agents within the community. This is particularly important in respect of those who will work in the rural areas. Classroom teaching places a heavy burden on the individual teacher. The possibility therefore might be explored in developing countries, as it has already been in certain more affluent countries, of attaching youth and community workers to village schools where they are given a

lighter teaching load and required to devote a proportion of their time to youth and community work.

Community service and adult education

74. Secondary school students, having a comparatively high level of general education and having fairly long vacations at intervals throughout the year, constitute a valuable resource which might usefully be brought to bear on the adult education needs of rural communities. The involvement of such students in traditional literacy work is not new, although, among many modern authorities on literacy who advocate the more work-oriented approach, what has been called the "each one teach one" approach finds little favour. It is now regarded as important that the literacy teachers should themselves be thoroughly competent in the technical or vocational skills to be taught to participants in the programmes. Secondary students can be of more practical value in work of interviewing and data-gathering. Secondary school students, having a knowledge of and entrée to the rural communities from which they come can with a minimum of training be used in this work.

Teacher and instructor training

75. There is a general feeling that all personnel engaged in communication with rural communities should share at least part of a basic training course. Trainee primary school teachers should understand the agricultural problems of their communities and be acquainted with some of the basic techniques that can be adopted to deal with these. Extension workers and community development workers should appreciate that their task concerns more than the mere transmission of technical information. They are also concerned with social and attitude problems and require an understanding of adult learning processes and difficulties. An integrated basic training year for all engaged in communication with rural communities would allow the sharing of expertise which has hitherto often tended to be compartmentalised in special training establishments and would go far towards promoting the integrated rural development policy which is generally agreed to be necessary.

Educational Media

76. Attention has already been drawn to the place of the educational media in the schools in the rural environment (paragraph 16) and in adult education (paragraph 42). It is

sufficient here to reiterate the importance of identifying the skills and resources needed on the one hand for the field worker, whether he be classroom teacher or extension worker, in respect of his particular audience and training situation, and the skills and resources required centrally in respect of the more complex problems related to the more sophisticated teaching and learning materials, including the use of such media as radio and television, and the production of programmed and taped audio visual materials. For the former, training in certain simple techniques and the provision of relatively simple material in local centres is essential. For the latter, a national or regional resource centre staffed by persons with the necessary special skills is equally necessary. The latter type of centre should also be a resource for supporting and reinforcing the work in the rural centres. It is essential that the provision of these facilities should be co-ordinated to prevent unnecessary overlapping of effort.

Evaluation

77. It is agreed that in the formal school situation, out-of-school education and training for young people, adult education and education for agricultural development, it is necessary to provide systematic assessment and evaluation of the work being undertaken. In the school situation, a swing away from the terminal testing of attainment towards continuous evaluation will reveal special aptitudes and shortcomings in individuals. In the other areas, where the project approach is used, the need is for evaluation to establish the social impact and economic benefits in relation to costs, and to assist the policy-makers in the assessment of past efforts and the identification of new lines of development. In all programmes there should be appropriate forms of continuous assessment to provide the feedback necessary for the modification and improvement of the programme. In the whole area of evaluation an opportunity presents itself for co-operation through the exchange of information and possibly in the provision of an inter-departmental service. In view of the importance of evaluation of the effect of media, the possibility might be considered of establishing local educational services centres.

78. The provision of appropriate education for the rural communities of the less affluent countries presents a range of different problems. To stimulate development among these communities is to open the way towards national prosperity, physical well-being and satisfying employment for the great

majority of the populations of these countries. Admittedly, the development process involves much more than education, but the spearhead of the attack on ignorance, which is the essential precursor to other aspects of a development strategy, is education. It can provide the skills, the understandings, the inclination towards progress upon which the other components of a development programme can be built.

79. It is hoped that this analysis of the role of education in rural development will assist in the identification of new lines of action and point the need for further investigations to be undertaken into particular aspects of educational programmes for rural communities.

CHAPTER 2

The Formal School: Aims and Objectives

1. The group responsible for examining the role of the formal school in rural education accepted that the aims of the formal school should include providing the child with the skills of communication in language and mathematics, and a knowledge and understanding of the environment in which he lives, including recognition of the interdependence of man in his various activities upon his fellow men and the physical world around him. To these provisions should be added such basic attitudes as tolerance, independence, flexibility of mind, humility in the face of the wonders of nature, and a respect for manual work. The objective of the education process should be to enable the child to develop independence, confidence and self-reliance.

THE CURRICULUM

2. The curriculum which embodies these aims should be designed to encompass the development of a child as a whole person, living within, and interacting with his rural environment, but prepared and ready to meet the rapid changes, political, social and economic which are likely to continue to beset him. Most people in schools now and in the future are likely to have to adjust themselves constantly to changes in modes of thought, occupation, leisure and, hopefully, increases in income. The education which they receive must prepare them for making these adjustments.

3. The curriculum must be relevant to the child and to his environment, and he must be able to recognize and appreciate this relevance. Up to the present, with some exceptions, the curriculum has been dominated by an approach through subjects, often seen in isolation one from the other. New needs will require that the curriculum must be looked at as an entity. To this end the curriculum must be developed so as to cover broad areas such as communication, environmental studies, practical skills and aesthetic activities and the school so organised that

the learning-teaching reflects the unity of the education provided. As the curriculum must be intimately related to the physical and social environment in which it is to operate it must be developed by the country itself and should not be imported from elsewhere. Principles on which the curriculum is developed are more important than content. The community as a whole should be actively concerned with curriculum development and planning, and deliberate steps towards this end should be taken by administrators and educationists.

4. Any curriculum for a child in a rural area should help him to synthesize his environment. It should be taken into account what children are like and that they learn actively and individually. The curriculum should recognize that for a large majority of children for many years to come primary education will be terminal. However, it is stressed that in rural areas education should not attempt agricultural or vocational training. Rather it should be general, laying an appropriate foundation for the more specific job training that properly comes after leaving school.

5. It has been argued, with considerable economic justification, that rural development, and, particularly, agricultural development, should precede educational development. We cannot subscribe to this. Each requires the other. As the UNESCO Conference on Community Schools in Developing Countries says, "the success of any programmes of development must depend in very large measure on the skills and even more on the attitudes of the human being involved"(1).

6. The demand for universal primary education is insistent and quickening in pace. Experience in the past has shown that even if formal education leads to a drift of population towards the towns and to increased unemployment, it cannot be halted. The best we can do is to lessen its impact. The primary and secondary education of the rural population must be used as a positive and constructive force in rural development.

7. The importance of the teacher to the effective introduction of any new curriculum cannot be stressed too much. We can only ask of teachers what they can implement. Teachers themselves should be active participants in the curriculum development process.

TEACHER TRAINING

8. Since the role of the teacher is fundamental to what can be achieved in schools, then appropriate training, both pre-service and in-service, is vital in any education system. This is

particularly true in a period of rapid change such as the present, when long established traditional methods are giving way to child-centred methods, making much greater demands on the imagination and the intellectual powers of the teacher.

9. Within the training of teachers recognition must be made of the dual role of the college, namely that of education and training. Education provides the teacher with a body of knowledge and understanding and prepares the teacher for change, for flexibility, for adaptability, whilst teacher training gives skills and abilities to respond to the demands which the teaching-learning situation places upon him.

10. The present educational qualifications of recruits for primary teacher training are unsatisfactory and present serious problems for those responsible for their education and training in the time available.

11. Curriculum development and research, the training of teachers for both primary and secondary schools in rural areas should not be confined to teachers' colleges. Universities, Institutes of Education and Schools and Colleges of Education have an important role to play. The latter should provide leadership in research, in in-service training and in special courses for training teachers who become tutors in teachers' colleges. They can assist materially with teachers' college students' education. The increase of interest of such institutions in primary and secondary education most certainly should be encouraged.

12. The appointment of the right people as tutors to teachers' colleges is vital. At present, in general, two types of people are being appointed. Either they are teachers with long experience in the field but with little academic background who tend to perpetuate themselves in their students and are concerned largely with established teaching techniques, or they are graduate teachers with mainly academic knowledge and interests with little or no experience of primary schools or of the nature of young children. The graduate teachers often have ideas, but not always the experience to perceive their practicability or otherwise in the school situation in rural schools.

13. Possibly one of the greatest gains in primary education would be made by an improvement in the morale and a change in the attitudes of the teachers. Attitudes of tutors in colleges are vital to those of teachers. In teachers' colleges the mode of recruitment and appointment of tutors needs revising. The skills and

qualities needed by tutors should be identified. There is a need for seminars and workshops for teacher trainers, managers, administrators and heads of schools. An improvement in the attitudes and morale of the teacher in the school cannot be expected until the colleges of education, the school supervisors and the administrators are able by their example to give confidence to the teachers.

14. Attitudes of staffs are largely a matter of group dynamics. The teachers' colleges and administrators will need to pay attention to the possible methods of modifying attitudes.

15. There should be an intimate relationship between the theoretical and the practical aspects of teacher preparation. The methods used to train teachers should correspond to those which the teacher is expected to use with children. Thus tutors should work with their students, not only in classroom situations, but in informal situations outside classrooms. There are a variety of ways in use for giving practical training. Among these are a three-year course in which the second year consists of practical teaching; internship in schools near the University during the fourth year, with attendance at the University on Saturdays, and the use of special schools with specially selected staff and headmasters capable of supervising practice teaching. In Malawi, a year's teaching in schools is sandwiched between two vacation terms of theoretical study. In all cases the college staff as well as the schools should be involved and it is important that they should recognise each other as members of the same team working together for the benefit of the students and the ultimate welfare of the children in the schools.

16. In some cases training courses have given teachers a paper qualification which attracts a higher salary, but it is often difficult to distinguish the trained teacher from the untrained on the classroom floor. This probably points to two things, either that training courses are often not sufficiently related to the actual needs of the teachers in the teaching situation, or that there are not sufficient incentives to reach for improved professional efficiency.

17. Since so many teachers are untrained, poorly trained, or poorly qualified, in-service training programmes are vital. But teachers require continuous in-service training over their whole teaching career. The primary teacher often lacks academic breadth. Yet he is expected to teach all subjects. The continuous revision of courses, introduction of new courses such as new mathematics, new science, and new social studies are difficult for

the best of teachers. While it is recognised that ideally a teacher capable of covering the whole field of primary education is desirable, under present conditions in many countries a degree of specialisation may be appropriate. Teachers with special aptitudes could be trained to introduce the new materials and ideas and to help their colleagues to become familiar with them. However, if there is to be integration of the curriculum as a whole, such specialisation poses difficulties. Younger children may feel insecure where specialisation involves contact with several teachers. However, by organising for co-operative and team teaching the special talents of teachers can be used to good purpose.

18. The level of teachers in primary schools in some rural areas is such that little can be done by irregular in-service courses. Something more comprehensive and continuous is needed. Special schemes are being introduced in different countries. For example, in Botswana groups of untrained but experienced teachers are brought into a special college for six weeks and then returned to schools, but with regular assignments for a further ten months. This is repeated in the following two years for each teacher. In addition a special four weeks' course for headmasters is being initiated.

19. Professional bodies of teachers themselves have played an important role in providing in-service training for teachers. They should be encouraged to expand this role as such voluntary training is generally enthusiastic and successful.

20. There is difficulty in retaining outstanding primary teachers in rural areas. The rewards and conditions for such people are not great enough. In rural areas the teacher was once looked to for help and advice on many matters which are now a responsibility of other service organisations, resulting in a decline in the status of the teacher. New ways of involving teachers in the community and thereby strengthening their social status must be devised. Additional qualifications frequently result in the loss of teachers to primary schools. Other factors which add to this loss include frustration through lack of materials, equipment, books and facilities, and the isolation he now notices.

INSPECTION OF SCHOOLS

21. The isolation of teachers, their lack of training and background, their great need for in-service training, point out the importance of the inspector of schools. Inspectors have three

main functions, namely (a) ensuring the efficiency of the school in its organisation, teaching, use of resources and equipment, and in carrying out its intended role in the community, (b) advising, guiding and leading, (c) acting as a catalyst of ideas and giving inspiration and leadership to his teachers. The emphasis given to any one of these functions depends upon the stage of development of the system under consideration. Inspectors are vital to the whole system of primary and secondary schools for they are the essential link between isolated teachers in rural areas and the administrators whom they keep advised of the quality of the schools and of the teachers, and the needs and the requirements of the schools. It is they who must interpret policy and bring ideas to teachers. Theirs is the task of breaking the isolation. As frequent visits are necessary to do this, priority must be given to the provision of adequate transport and reducing the size of the inspector's district.

22. It has been stated that for teachers to give of their best, promotion based on performance is necessary. Such a scheme requires assessment, and this would be a function of the inspector. If too frequent assessments are made and reports written then this inhibits the advisory role of the inspector. Some educational systems have changed the name from inspector to avoid the fear of the assessment functions from the past. If the inspector adequately fulfils his other roles there should be no fear. The name inspector is well respected in the community at large.

23. The need for inspectors to carry out assessment is sometimes questioned. Before advice can be given, however, assessment of the needs must be made. In addition the administration has a duty to parents and children to see that schools are as efficient as possible within the resources available. Unfortunately not all teachers are truly professional in their approach. The inspector represents the Administration in rural areas. But many inspectors seem to have little or no authority. If they are to be effective in their work authority needs to be given to them to make some on-the-spot decisions.

24. Inspectors need to be outstanding persons and great care should be taken in their selection and training. They, like teachers, need to be kept abreast of new ideas and developments if they are to lead. On appointment they should be given well-planned induction courses. They need from time to time courses in new subjects and teaching techniques, conference with their fellows, stimulation from the Chief Inspector, and above all they need to be kept in touch with what is going on. This is especially

so for the inspector in isolated areas .

25. Some apprehension has been expressed from time to time at the appointment of senior civil servants without experience in education as heads of Ministries of Education.

EVALUATION AND MEASUREMENT

26. In the development of an educational system in which the child is recognised as an individual reacting with and contributing to his ever widening environment, evaluation and measurement can play an important part. Evaluation may be of the suitability of the curriculum and the educative processes, of the effectiveness of the teaching, of the pupils' progress and ultimate level of achievement. It can also be diagnostic or prognostic in purpose and be concerned with both cognitive and affective factors. To be of the greatest usefulness the measuring instruments - the tests - must be clearly identified with the purpose they are intended to serve.

27. While the objectivity and accuracy of the instruments for measuring psychological factors and the results of educational processes cannot be compared with those of the instruments for measuring physical quantities, evaluation and measurement in education can play a beneficial role, so long as their limitations are recognised. The trend to be encouraged should be away from selection procedures and terminal testing towards that of a positive classroom tool that will enable the teacher to best serve the individual needs of his pupils. Thus new forms of evaluation to identify and measure the important but somewhat intangible aspects of education, including special aptitudes and abilities and emotional factors such as attitudes, should be developed and used to supplement and gradually replace existing testing procedures.

28. As there is unequal opportunity for selection for secondary school under the present examinations at the end of primary school for children in rural areas, possible methods of equalising their opportunity should be investigated. Some form of weighting is sometimes used. It would, however, be better to improve the selective procedures rather than try to equalise opportunity by weighting. Political and social considerations would need to be taken into account in seeking solutions to this problem.

29. In allocating secondary places the only really valid criterion is that of the child's ability to profit from secondary

education. A highly valid and reliable series of prognostic lists combining the ideal of aptitude, attainment and attitude tests with continuous teacher assessment is necessary for this purpose. To attain this teachers would need pre-service and in-service training of evaluation and measurement procedures, of their possible uses, and of their limitations.

30. In the immediate future, if the curriculum using the environment of the child in the rural area is to be followed the examinations must take account of it. Parts of the tests should have direct relevance to the rural environment as well as common areas of knowledge and skills suitable for both rural and urban children.

31. Earlier it has been stated that the curriculum should be relevant to the rural environment. If the examinations are not similarly relevant, then teachers will neglect the environmental studies. To avoid this, curriculum planners who are cognizant of the basic aims and objectives, should be represented on examination boards to make certain that the examinations reflect these objectives. The curriculum should have its own evaluation as an in-built factor.

32. An intermediate aim should be the addition of suitable aptitude testing and cumulative records from schools. However, it is believed by some that the level of teacher competence is not generally sufficiently high to introduce this at present. Therefore, high priority should be given to in-service training courses on evaluation and testing.

33. At present many examinations are trying to test both achievement and aptitude for secondary work. It is not possible for the one test to do both.

34. A number of the most desirable aspects in education are very difficult to test. Such aspects include attitudes, judgment, honesty, etc. The communication skills should be encouraged but they are difficult to assess. We must encourage the skills of listening and speaking which are so difficult to evaluate.

35. The testing of students completing teachers' college courses should be reviewed to see to what extent assessment methods of both theoretical studies and practical activities might contribute to the preparation of the students and as a means of measuring their attainment.

36. It is clear that at present our instruments in use are tentative and crude. They are biased in favour of urban children. We need to research the results of our selection with their achievements in secondary school. Efforts must be made to refine examinations in the ways suggested and work towards improved procedures using aptitude testing, cumulative records, teacher evaluation etc. Feedback is necessary with the implementation of new ideas and methods.

37. Finally it is often the case that schools in rural areas are not adequately equipped and have unequal facilities and opportunities when compared with urban schools. Some of the weaknesses in the present examination system would automatically disappear if priority was given to raising the standards of schools in rural areas.

EDUCATIONAL MEDIA

38. Books of various kinds are probably the most universally acceptable and useful of the media available. Perhaps it would be better at this stage to refer to reading material, as a distinction can be made between course books, reference books and books used for pure enjoyment, while at the same time there is a vast field of printed matter such as newspapers, magazines, catalogues, and advertising material which serve not only to provide reading matter but help to bring the school closer to life in the wider community. The school should exploit all the opportunities provided by reading material of all kinds.

39. Teachers in the past have relied unduly upon course books which may meet the need of a stereotyped static curriculum but which are less well adapted to the new methods of teaching which emphasise a more individual approach closely related to the immediate environment from which they work outwards with the view to widening the pupils' horizons. For this purpose a wider range of small reference or resource books is preferable in sets of three or four for class and for class library purposes. The induction of the habit of turning to books for information and enjoyment is one of the major aims of primary education.

40. In developing countries difficulties in the supply of books are encountered because of the cost and also the poor quality and unsuitability of many of the books at present available. Some teachers when free to do so change their textbooks too frequently and sometimes choose unsuitable material. To meet this difficulty some countries have set up textbook committees which review and

approve books for use, but these committees are subject to heavy pressures from publishers and other interested parties. Here, as in so many other things, a suitable balance must be held between the economic use of the available finances and the encouragement of initiative on the part of the teacher.

41. Wherever possible, books should be written and produced within the country in question and expert advice should be sought to ensure accuracy of content and adequacy of treatment. Always the need of the pupil should be paramount. Needless to say course books must be in line, both in content and method, with the long term aims and short term objectives of the curriculum.

42. At the present time, many schools in rural areas are so short of equipment and the financial stringency is so severe that priorities of supply need to be set up. Even books may not be the top priority since the teacher may have to produce his own reading materials, in which case supplies of paper and writing materials are possibly the first need. Certainly the wisest use of the funds available is essential as also is the exploitation of all the educational material obtainable cheaply from outside sources.

43. Books for use in schools should include material reflecting both rural and urban environments and particularly the inter-relationship that exists between them.

44. It is suggested that the Commonwealth Secretariat should prepare a directory of persons and agencies from whom accurate information can be obtained and to whom written material and illustrations can be referred for checking for accuracy and appropriateness.

45. Many primary school leavers rapidly revert to near illiteracy. Unquestionably the lack of suitable reading materials in sufficient supply and easily accessible is the major factor in this regrettable state of affairs. Community resources centres should be set up to make newspapers and books available to the community and the school. Indeed the primary school itself is probably the best place for such a resource centre. Such centres should be supplemented and assisted by the use of mobile library facilities and the employment of book boxes. International agencies such as UNICEF and UNESCO should be encouraged to aid developments along these lines.

46. Teacher centres or resource centres should be established to assist teachers. Such centres should be concerned with

simple equipment which could be made by the teacher and children, they should be places where the teachers could seek guidance and come together to share experiences and to learn from one another. Such centres would not necessarily mean new buildings but could be established in primary schools, secondary schools, or primary teachers' colleges in rural areas. If established in the teachers' colleges they would involve the college staff with practising teachers from the schools, to the mutual benefit of both. It is important that a distinction should be drawn between curriculum centres which are involved in the production of new ideas and curricula, and the teacher centres which are more concerned with curriculum implementation.

47. Mrs Coppen, in her paper, "Educational Media for the Development of Rural Education" says, "What I have in mind is the establishment in selected village schools of Educational Materials Workshop Centres to which teachers and community workers at all levels could come for instruction and help in making their own teaching materials, such as simple wall charts, flannel-graphs, cut-outs, matching cards for language work and apparatus for practical mathematics. None of these materials needs much artistic skill, but most primary school teachers and most adult education workers need help and inspection to get started, and in most developing countries they lack facilities in their homes where they could make simple educational aids"(2). Such centres should be established in rural communities.

48. To enable them to function properly technically trained personnel should be available. These personnel could be teachers who have received training in this field.

49. There is an increasing variety of educational aids of all kinds becoming available. Care should be taken that these aids do not dominate the teaching. Teachers should not use educational media and ideas merely because they are fashionable and are being used in other countries. There must be co-ordinated planning between all ministries concerned with the use of educational media and centres. Not only must the initial cost and supply be planned but provision must be made for technical personnel, maintenance and replacement facilities. There must be co-operation with producers of broadcasts, films and television programmes.

If audio-visual aids are to be used in rural areas they should be transistorised and simple to use and handle.

51. Educationists must be prepared to convince their ministries of the proper educational priorities, and the need to spend

available funds on such priorities .

52. To supplement resources special requests could be made to agencies and foundations for assistance with specific projects which need not necessarily be dramatic .

THE SCHOOL AND THE COMMUNITY

53. The school, if it is to use the environment of the child, cannot function effectively in isolation from the community of which it is integral part. Teachers need to identify themselves with the community in which they teach. They should accept leadership roles which are given to them by the community. Teachers should encourage the community to participate in the life of the school. This can be done through formal parent-teacher associations, local school boards, etc., but more is needed. The school could become the local centre for the cultural and educational activities of the rural area. Attendance at Speech and Sports Days is not sufficient. There should be developed a concept of community involvement in curriculum and the educative process .

54. The need for community involvement means that the teacher must remain long enough in his school for leadership to be established and for him to be accepted by the community. As Houghton and Tregear say in the UNESCO report, "Many of the present methods of rewarding success are, to put it mildly, quite cockeyed, involving as they do the removal of men and women from work in which they excel to roles for which they sometimes have no gift whatever"(3).

55. Communities have responsibilities to their teachers. They need to provide adequate accommodation in keeping with the professional status of the teacher and assist wherever possible in the development of the school. The style of school buildings should be changed to take this concept into account.

56. The proposals suggested in these discussions look forward into the future. Many of them are still not fully implemented even in the most developed countries. Difficulties of implementation are great, and cannot be hurried. Advances can only be made slowly, and within available resources. Stress is laid on the use of pilot schemes which can be evaluated before there is any attempt at general introduction. Such schemes could involve clusters of schools centred round teachers' colleges. The concept of the child active in his rural environment is a thesis propounded over a long period of time, the consequences of which

are only now becoming clear. In developing countries this change in direction constitutes a revolutionary concept of the role of the teacher. It calls for the dissemination of information and a change of attitudes of administrators, teachers' college tutors and teachers alike, but hopes are high that the rural child may find satisfaction in his environment and opportunities for gainful employment.

RECOMMENDATIONS

Curriculum

1. The curriculum in rural areas should be reorganised to cover broad areas such as communication, environmental studies, practical skills and aesthetic appreciation. It should be relevant to the environment of the child and should equip him to meet change.
2. Countries should develop their own curriculum intimately related to their physical and social environment.
3. Although basic skills would be included, the primary school should not be thought of as vocational training for rural areas. Many of the children will later leave their rural area and will need to be equipped for life in urban areas.
4. The community as a whole should be actively concerned with curriculum development and planning.
5. The assistance and co-operation of Universities, Institutes of Education and Schools and Colleges of Education should be given to primary and secondary schools through re-search, curriculum development and the training of teachers.

Teacher Training

1. Urgent consideration needs to be given to the appointment of people with the right qualities as tutors in teachers' colleges.
2. Untrained teachers need training. Schemes such as those being tried in Botswana and Malawi offer fresh approaches which might be capable of replication elsewhere.
3. In-service training programmes both for the poorly trained teacher and the experienced trained teacher should be improved and increased in number and should be more systematically organised.
4. The professional bodies of teachers could be encouraged to arrange their own in-service training courses.
5. Seminars of administrators, teachers' college staff and heads of schools should be held on ways of improving teacher attitudes.

Inspectors of Schools

1. Inspectors should be given more authority in their areas. It should be possible for them to make on the spot decisions where policy is known.
2. Adequate transport needs to be provided for inspectors in rural areas to be able to carry out their full function.
3. Consideration should be given to reducing the size of inspectors' districts to further their effectiveness.
4. Inspectors should undergo induction courses on appointment, and should have the opportunity of regular conferences and attendances at courses.

Evaluation and Measurement

1. Terminal tests in primary schools are often used as a measure of achievement and as a selector for suitability for secondary education. Ways should be found to separate these roles.
2. Teachers' college courses should include a study of measurement and evaluation procedures.
3. The early introduction and use of student records and continuous testing is recommended.
4. Present terminal tests place the child in rural areas at a disadvantage. Such tests should include material common to urban and rural children, but should also have material specifically related to the rural environment.
5. Curriculum developers who are fully aware of its aims and objectives should also be on the examination boards which do the testing.
6. A review of the methods of assessing the competence of students training to be teachers on completion of their courses is recommended.

Educational Media

1. Ministries need to check on the quality and suitability of the many books being made available.
2. Books for use in schools should include material reflecting

both rural and urban environments, and particularly the inter-relationship that exists between them.

3. The Commonwealth Secretariat should prepare a directory of persons and agencies from whom accurate information can be obtained, and to whom written material and illustrations can be referred for checking for accuracy and appropriateness.
4. To prevent a reversion to secondary illiteracy by school leavers suitable reading materials should be made available, possibly through the schools. The extension of mobile libraries and book box schemes is an urgent need. These could be projects for assistance by agencies or foundations.
5. Teachers Centres should be established along the lines suggested in paragraph 16 of the paper "Educational Media for the Development of Rural Education"(2).
6. Before educational media are introduced planning should ensure adequate technical assistance, maintenance, and the co-operation of all relevant Ministries.
7. There should be a proper estimation of priorities in education for rural areas, and these should be followed.

The School and the Community

1. The schools in rural areas should become the focal centres for the cultural and educational activities of the area.
2. There is a need for rural communities to provide adequate housing for teachers if they are to stay in the community.

References:

- (1) Houghton, H. and Tregear, P.(eds): Community Schools in Developing Countries, Unesco Institute for Education, Hamburg, 1969, page 10.
- (2) Coppen, H.: Educational Media for the Development of Rural Education, (Conference document CRE(70) A/4).
- (3) Houghton, H. and Tregear, P.(eds): op.cit. page 22.

CHAPTER 3

Out of School Education and Training for Young People

1. As has been accepted in many countries, a well-designed system of out-of-school education and training for young people is a very valuable complement to formal educational provision, particularly at a time of very rapid social and economic change. Such a system should provide, first, an opportunity for young people to make their contribution to national development and to the development of their immediate communities; secondly, a structure through which the young adolescent can find a means of furthering his or her personal and social development whether through 'adventure training' or through community service; thirdly, in countries where the employment situation for young people is especially difficult, basic technical and vocational skills to profit from whatever opportunities for wage-earning employment exist and, where necessary, the attitudes of initiative and self reliance to become productively self-employed. The special concern of the conference with education in rural areas, and particularly with developing countries, led to a preoccupation with the problems of young people out of school when faced with an employment situation in which wage-earning opportunities are limited and expanding slowly, if at all, and where it is becoming increasingly clear that the products of the formal school, particularly the primary school, cannot be, for the most part, absorbed into the modern sector of the national economies.

2. Informal programmes of education and training cannot themselves solve the employment problems of young people out of school. An across-the-board design is needed in which out-of-school education and training for young people would be part of a co-ordinated development strategy which would include investment in and the development of the rural infra-structure, marketing, the provision of seeds and fertilizers and measures related to the education and social welfare of the adult community.

3. Finally, it was recognised that in many developing countries the greatest potential area for the employment of young people out of school is on the land and in related rural industries.

Rural development, directed at the promotion of improved agricultural practices and small industries, based upon local natural resources, is an essential strategy if there is to be a progressive impact on the lives of the majority of young people in these countries.

THE OUT-OF-SCHOOL TRAINING NEEDS AND PROBLEMS OF YOUNG PEOPLE

4. Four categories of young people can be identified:
- 1) The un-schooled - those who have never been to school.
 - 2) The early drop-out from Primary School - those who have been to school but did not complete the primary course.
 - 3) The school leavers - those who have completed a fixed level of schooling who then encounter difficulty in finding appropriate employment.
 - 4) Those at school - those who although receiving formal education would benefit from out-of-school education and training both from their own point of view and from that of the community.

A further possible category was recognised but not explored - young people in employment.

5. A classification of out-of-school education and training proposed by Professor Callaway was accepted:-

- (a) Preparation for occupations
- (b) On-the-job training
- (c) Education for community improvement.

The needs of each group were viewed in the light of this classification.

6. The un-schooled The unschooled young person will largely be in some form of traditional occupation or employment. His main need is for the development of manual skills and literacy. An effective method of giving help lies through the improvement of the techniques and training capability of existing employers. In this way a multiplier effect might be achieved involving larger numbers of workers and creating additional job opportunities. Job-oriented functional literacy programmes are of the utmost importance for this group.

7. Multipurpose rural training centres, settlement schemes (large and small) and training on family holdings would seem to be the most effective way of making a significant impact on the substantial members of unschooled youth in many developing countries. More selective approaches such as National Youth Services, National Service programmes, "brigade" training programmes which cover their costs, and schemes of settlement and training in combination can also make a valuable contribution.

8. The early drop-out from Primary School The problems of this group are similar to the first category except that the early drop-out may have special personal problems and frustrations which are partly the products of his school experience. In this group there often is a fairly high proportion of girls. For those under fifteen years of age, pre-vocational education and training may be useful. It may also be necessary to take the special frustrations of this group into account in planning course content by the provision of specific non-vocational elements within the programme.

9. The School Leaver More information is urgently needed on such questions as - what do adults expect of the school leaver? what are the aspirations and expectations of the young themselves? is the young person at school being given the best preparation for life? Further research and study by universities and social research institutes is urgently required on such topics.

10. The main problems with this group of young people is to find or create employment and to prepare the school leaver, both technically and in his attitudes, for such openings. Rural development as a source of new employment is essential. At the same time parents must be educated to accept the realities of the employment situation and the fact that the attainment of a particular level of schooling can no longer guarantee for the

school leaver a particular level of employment.

11. A strong deterrent which holds back the involvement of school leavers in the rural areas is a wage structure which favours the urban dweller. All the developing countries of the Commonwealth have unbalanced economies in the sense that current pricing and wages policies, and the distribution of public goods and services, favour the urban areas. Clearly policy changes are called for during the 1970s to bring about a greater equilibrium in the rewards to effort of rural producers on the one hand and urban producers on the other. In practice this means that, as well as looking again at the system of pricing rural produce so that the returns to the farmer are more equitable with those of the urban worker, governments must pay much more attention to the development of rural infrastructure such as transport, marketing, water supply, welfare services etc.

12. The training needs of school leavers can be met by national youth services, apprenticeship schemes, settlement and training schemes, training brigades which cover costs and Young Farmers' Clubs, although no one of these affords a complete solution. A contribution can also be made when, in addition to their traditional social training purpose, a responsibility in providing some technical skills is recognised and practised by Boy Scouts, Girl Guides, the Boys Brigade, etc.

13. The aim with all these schemes must be to prepare the trainee generally for the realities of life in rural areas, usually that is modernised farming, rather than in one specific skill. The young person who completes his elementary school education and returns to the land is an important growth point upon which efforts to promote improved farming might profitably be focussed. He therefore requires careful attention and fostering.

14. Those at school Formal academic education does not for the most part prepare young people for life in the rural areas. Out-of-school education and training is necessary therefore as a complement to the work of the formal school. Various organisations are engaged in bringing out-of-school education into the schools. Among these are branches of national youth organisations, 4H Clubs, Young Farmers Clubs, Scouts, Guides etc. Such groups can make a valuable contribution in promoting a sense of community responsibility, an outlet for community service and in developing technical skills. Activities of this sort are to be encouraged in addition to purely social activities. In particular, young people in school should be involved in

community service projects to bring them in touch with and increase their understanding of the problems of their society and enable them to make a contribution to their solution. An important objective for such work must be to create respect for the countryside, for rural life and a pride in work. These activities should be given equivalent status with other more traditional activities; credits for achievements might be included in the student's record.

15. The school is not an appropriate place for training in specific trades or vocational skills. A broad preparation for a working life in a rapidly changing situation is required of it. Career guidance and counselling should also become an important aspect of the formal school in order that young people leaving school will understand the realities of the employment situation.

THE FORMS OF TRAINING APPROPRIATE FOR RURAL YOUTH

16. Provision must be sufficiently flexible to take account of the wide variety of interests and the changing needs of the young people involved. Nevertheless two major categories can be seen:

- a) training for the development and establishment of improved farmers;
- b) training for ancillary skills, crafts and services in the rural areas.

In the first category, training can take place within

- a) purpose-built farmer training institutions;
- b) on-the-job in large settlement schemes which open up new areas or introduce new cropping patterns;
- c) in small settlement schemes near or within local communities;
- d) with master farmers;
- e) on family holdings.

Various approaches to extension can operate in all of these situations including for example 4H Clubs and Young Farmers Clubs which have a special focus on youth.

In the second category, the possibilities are:-

- a) training in purpose-built craft institutions related to specific skills, including business training;
- b) training through multi-purpose rural training institutions;
- c) training on-the-job through existing craftsmen, artisans, and businessmen.

17. A possibility which could usefully be explored was the development of a Small Industries Extension Service parallel to the Agricultural Extension Service.

18. The potential contribution of the 4H and Young Farmer type of rural youth club was closely reviewed. An amalgam of the two types could be useful in training for citizenship as well as for better farming.

19. The clubs should be to a large degree independent, self programming, self perpetuating. Adequate professional staff is needed to backstop a well trained leader corps and to undertake club advisory work. Such activities should be incorporated into national and local development plans, and national objectives set. Schemes of proficiency testing in practical skills can also be devised. Activities of this type are invaluable in encouraging initiative and in training young people to think for themselves. They can be useful in involving industry, local authorities and the community itself in the affairs of youth while giving the young people an opportunity of taking part in partnership programmes with the rest of the community.

20. The value of short residential courses in management and in business skills for young people should be recognised. Similar refresher or up-grading courses can be very valuable, together with longer courses of systematic training which introduce new skills and techniques to established farmers or artisans in rural areas.

21. In general a widely based approach to programme planning was favoured. Courses must be practical, meaningful to the trainees and lead to perceptible rewards. Dangers can arise from narrowly based courses where young people may be prepared for a career which could become no longer viable, e.g. shoe-making. The level of complexity of the skills taught largely

dictates the length of courses .

22. The non-technical element in course content is especially important. Its purpose should be to prepare young people for their duties as citizens, to make them aware of the contribution which they can make to the development of their country and familiarise them with the state of the economy. All courses must be designed to meet the needs of the young people and the needs of the area in which they are located, with provision through feed-back for adaption of course content and the setting of new goals.

23. There is in many countries a growing need for operative courses for manufacturing and service employment. Care should be taken to train to a level of skill appropriate to the employment available and to avoid over-training.

24. In relation to girls interests, in many cases today the demand is for equal provision. Girls see themselves as equal partners in matters of civic responsibility, organisation, management, etc. Account must be taken however of the additional requirements which girls usually have in the field of home-making, health, child care etc.

25. In the development of a diversified rural economy, new attitudes and skills are required. It is important to ensure that young people are prepared for these. A clear emphasis should be placed on devising industries to meet local consumer demand as far as possible as well as industries ancillary to agriculture. A Rural Industries Development Service which not only provides finance but also provides instructors to train, help and advise the young person at the work place would be of great value in this work.

THE CONTENT OF COURSES - VOCATIONAL AND NON-VOCATIONAL

26. The kind of courses provided is very closely bound up with facilities for training instructors and teachers and the development in such personnel of sufficient motivation and enthusiasm to encourage young people to make their lives in the rural areas. The selection and training of instructors is of major importance. The International Labour Office is to be particularly commended in specially selecting instructor training for high priority of attention.

27. An important factor in the planning, establishment and execution of courses is the close association of parents. The objectives of training must be clearly understood by them and their direct and indirect assistance in the training programme ensured.

THE ROLE OF NATIONAL YOUTH SERVICES

28. Firm conclusions on the role of national youth services generally are difficult to reach due to the wide diversity of organisations in existence.

29. This approach is one of many. National Youth Services can be fairly expensive and often therefore are not sufficiently large to make a significant impact on the numbers of young people who might benefit from such training. On the other hand, where the objectives of such services are clearly defined they can make a particularly worthwhile contribution to nation-building in Leadership Training, Social and Civic Education and in raising the general level of technical skills. They give to the young people who participate a sense of pride in their country, a feeling of achievement and an encouragement to stand on their own feet. Potentially therefore they have a very valuable role in the preparation of young people who can give a lead in promoting new ideas, the agents of change so vital to progress in rural development.

30. From a social point of view, a National Youth Service can help to unify and give cohesion to a nation, boosting the morale of a depressed sector of the nation's youth while drawing off temporarily numbers of young people from an over-crowded labour market. Girls also are given an opportunity, of ten otherwise denied them, to identify themselves with the needs of the country and to contribute to national development. Against this, National Youth Services can draw heavily on scarce national resources both of finance and supervisory manpower. Thorough cost/benefit studies of these organisations should be very helpful in indicating whether such bodies should be expanded further.

THE CONSEQUENCES OF TRAINING: FOLLOW-UP, SETTLEMENTS, ETC.

31. Adequate follow-up is a vital aspect of all training. Indeed training without follow-up can often be meaningless. Follow-up must be the primary responsibility of the parent institution, although other agencies must obviously be involved. There should

be close co-operation between the training agency and the Advisory Services of the technical departments - Agriculture, Home Economics, Business, Co-operatives, etc.

32. An important element of follow-up is provision of facilities for re-training by short refresher courses to bring attitudes and techniques up to date. Machinery must exist to convey to the training agency information and reactions from students so that deficiencies in existing programmes can be corrected.

33. It is insufficient to train young people solely in vocational skills. They must be provided with help and advice on management, marketing, labour relations, legal aspects, etc., to assist in the application of the vocational skills. This should be the responsibility of an adequately financed and specialised staff.

34. Settlement should not be seen as an independent operation but as part of the training and development programme. It should be carried out in close association with institutional and other training and maintain a continuous relationship with supporting services. New settlers are liable to be much happier and in a better position to make an impact on rural communities generally if settled in groups rather than individually. An additional factor which helps to ensure the success of programmes is the inclusion of former trainers or instructors in the settlement group. An important ingredient for success is the capital requirement for settlement. This is best provided on a revolving fund basis, repayments being made as projects begin to show profit. This applies not only to agricultural settlement but also to the whole field of employment in rural areas, including self-employment.

YOUNG PEOPLE IN URBAN AREAS

35. The situation of young people out of school in urban areas was briefly considered, particularly of those young people who have come fairly recently from the countryside. The cause of much immigration into the towns lies in the failure of rural development programmes. An effective rural development strategy aimed at improving the rewards from farming as well as the quality of rural living in social terms would diminish the appeal of the towns for young people and contribute constructively towards a solution of the urban youth problem.

36. The need was also emphasised for the maintenance of an adequate balance of training provision for all young people

whether they are resident in the countryside or the town. Provision of disproportionate opportunities in the towns merely increases the townwards drift.

37. An important additional consideration was the adjustment of rural young people to city living, particularly once disillusionment with the towns following on difficulties in starting employment had set in. Through the use of the modern mass media much could be done to project advances in rural areas to young people of rural origin seeking urban employment, and thus possibly shorten the time spent unproductively in the towns.

SUPPORTING FACTORS IN THE DEVELOPMENT OF PROGRAMMES - EVALUATION, COSTS, LEADERSHIP TRAINING, INTERNATIONAL CO-OPERATION

38. Adequate arrangements for the evaluation of programmes are an essential component of out-of-school education and training for rural areas. Without the evidence of thorough evaluation it is not likely that policy makers and planners will be convinced of the contribution which youth programmes can make to national development and thus the release of resources necessary for expansion will be impaired.

39. A particular need is the evaluation of projects at the local as distinct from the regional or national level. Work which is carried out only at the national level is of doubtful value. Objective evaluation by outside bodies not directly involved in programmes can make important contributions to influencing national government policy. Evaluation should be expressed in language which is objective and understandable. Frequently reports are formulated in the technical jargon of the social researcher which is quite incomprehensible to the practical operator in the field. Evaluation exercises must be mounted in co-operation with local personnel who should be closely identified with the study as it is carried out. Local people are familiar with detailed social and political factors which may not be readily perceptible to the external evaluator. Evaluation must take such social and political factors into account as well as purely economic ones. There were particular difficulties inherent in the measurement of social factors, but the task is not impossible. A major need, however, is for a demonstration of the cost effectiveness of programmes.

COSTS

40. Cost factors are a major constraint on programmes, particularly in the field of non-formal education. Governments should recognise that out-of-school education and training is not only of concern to Ministries of Education but directly concerns other Ministries and non-governmental agencies. It therefore affords an opportunity for inter-departmental co-operation and funding by local authorities and by commerce and industry.

41. Direct and indirect investment in the education and training of rural boys and girls in and out of school must be balanced with investment in the education of their parents. This total spending on education must also be balanced with other investment in the rural economy such as providing subsidised fertilizers or building roads, bridges, markets, settlement programmes, etc. Out-of-school education and training programmes must demonstrate their capacity for effective resource use in order to strengthen the claims of the out-of-school sector for increased investment.

42. In the evolution of programmes careful consideration should be given to those approaches which make best use of the available supply of instructors and managers. Another feature which merits careful consideration is the adoption or introduction of low-cost and appropriate tools and equipment. While keeping in mind the long term need to modernise fully, countries must beware of the pitfalls of prematurely introducing sophisticated machinery which cannot be operated or maintained efficiently and the type of technology which saves labour in situations where labour is abundant. The implications for this in the youth employment field are very clear.

43. Income generating training schemes are an especially interesting development in some countries which could overcome some of the constraints and costs: more information is needed on these approaches.

THE SUPPLY AND TRAINING OF LEADERS

44. In considering leadership training, it is important to consider the established attitudes of many of those in leadership positions at the national and local level, the importance of reorientating their thinking to the needs of young people and rural development and the implications of this for education and training.

45. Teachers, instructors, managers, extension workers can be recruited from special instructor training courses and from the secondary schools. A lucrative source, and one which is often overlooked, is the natural leadership qualities existing amongst young people themselves. Local leadership, both youth and adult, must be nurtured to supplement leadership from outside. Leaders are born but they can also be trained. Those who show qualities of sympathy with young people, a progressive outlook, an awareness of themselves and their surroundings and above all a liking and appreciation of rural life, should be encouraged and prepared for this vital role in the community.

46. The training of leaders is best carried out in the local environment, although there can be value in experience in another area or perhaps another country where comparable activities were being satisfactorily pursued.

INTERNATIONAL CO-OPERATION

47. There is a need for close international co-operation in the field. The supply of tools and equipment is one obvious area where an international contribution could be made. The tools for progress must however be those appropriate to local levels of development, employment and technical capacity. Donors must be reconciled to the objectives, needs and aspirations of the recipient. Volunteers and experts from outside sources must be carefully selected and well orientated. Technical assistance can, however, help in areas where local expertise is not available. The overall administrative direction of a programme must rest in the hands of the recipient country. However, those involved in development work should be given some measure of personal responsibility if they are to be fully committed to their work. If international assistance is to be effectively brought to bear on an area which concerns several Government departments, it is vital that a strong co-ordinating agency should be established to oversee the overall programme and act a focus and channel for aid.

48. There is a strong case for the exchange of technical information between developing countries along with publicity on the educational value of out-of-school education and training. An African regional clearing house on youth activities is being established on a pilot basis by Unesco at Addis Ababa. Other similar clearing houses could usefully be set up in other regions of the world.

COMMONWEALTH CO-OPERATION

(1) There is a need for a major realignment of national policies towards the rural areas. This would serve to raise the basic level of rural society, establish a satisfactory infrastructure and stimulate the employment opportunities and rewards essential if large numbers of young people are to find job satisfaction and a meaningful and dignified way of life. Such a strategy must be tackled at the highest policy level and might usefully be referred to the next meeting of Commonwealth Heads of Government.

(2) Recognising the over-riding importance to all countries of the development of policies at the highest level for young people outside the school system, the convening of a Commonwealth meeting of ministers responsible for youth deserves the maximum encouragement.

(3) An important contribution could be made by the Commonwealth Secretariat in the collection, collation and distribution of information on out-of-school education and training for all Commonwealth countries. The difficulties of international communication and the passage of information are such that this function might be given priority of attention by the Secretariat. For example, greater emphasis might be given to youth and youth activities in the C.E.L.C. Newsletter as well as to more specialised Secretariat publications.

(4) The exchange of professional personnel engaged in out-of-school education and training has been included within the activities of the Commonwealth Clearing House Fund. This should be encouraged and developed further. There is special value in such exchanges in the development of new ideas and approaches in the field of out-of-school education.

(5) Technical assistance arrangements now operating within the Commonwealth Secretariat might usefully be expanded to include youth programmes.

CHAPTER 4

The Education of Adults

1. The term "adult education" as used here, includes all forms of education outside the school system for persons who have left school, or have not been to school, who are seeking to improve their fund of knowledge and skills in order to better their lives. It ranges from institutional courses designed to impart specific information or to promote learning of conventional subjects, through to educational activities intended to bring about an improvement in general education, impart cultural values or specific technical skills, but not directed to meet formal course requirements. It includes the educational aspects of all activities which promote social and economic development - indeed everything resulting in value change for the individual and for the community.

2. Whilst adult education programmes must relate closely to the local social and cultural environment, and indeed reinforce what is valuable in the local cultural inheritance, the purpose of adult education should not be to perpetuate cultural differences amongst groups and communities. Indeed it should consciously seek to forge growing bonds of unity and understanding among them. Adult education programmes in rural areas should be so framed and administered that this fundamental purpose of unification and integration is kept well in focus.

3. The overriding need in rural communities is for social and economic development. Adult education can help to satisfy this need and activities should seek to facilitate this. Greater emphasis will consequently have to be placed than has often been the case upon the investment function of education without totally neglecting its consumption function. The rural economy and rural populations have specific needs. A shift of resources and emphasis in adult educational programmes may be required in order to satisfy these needs to the degree to which a solution through education is practicable.

THE CULTURAL AND INTELLECTUAL NEEDS OF ADULTS IN RURAL AREAS

4. The cultural aspect of adult education in rural areas should not be merely to preserve and hand on the traditional culture of the rural areas. It should also seek to impart direction to traditional culture in order to obviate any tendency towards stagnation and to make the traditional culture responsive to change, so that the traditional culture and the pressures of modern cultural and technological development become as far as possible reconciled and work together constructively. The best of traditional culture can be usefully preserved and can enrich modern society. In particular, it can serve to cushion the social impact of modernisation which may, as has been repeatedly shown in many continents, have adverse social side-effects. At the same time, the modernisation process must be recognised as irrevocable, even the remotest rural community now coming within the orbit of modern mass media and other influences for change.

5. The overriding responsibility for providing for the educational needs of adults in rural communities clearly lies with governments. Non-governmental agencies can play a useful complementary part in this process. Universities, for example, through their extra-mural departments and extension arms have a long tradition of active participation in adult education particularly in its cultural and intellectual aspects. They can continue to make a valid contribution to the educational needs of adults in rural communities, within an overall strategy which has the approval and support of governments. The fundamental objective of such strategy should be to promote in rural people a confidence and pride in their cultural values and an awareness and plans of their nation. In this connection, the mass media of communication can assist in increasing popular appreciation and understanding of national culture and identity and of the objectives of national planning, an aspect which has often been neglected in the past.

6. A special facet of adult educational activities which seeks to promote and develop traditional cultures relates to the development of craft industries. With the rapid growth of tourism in many countries, the commercial outlets for local craft industries are inevitably developing rapidly and valuable opportunities for employment are being created. Care must be taken lest the impact of tourism should needlessly debase local craft traditions. Some of the earnings from tourism might be devoted to the provision

of facilities whereby the indigenous skills which support local crafts could be passed on and developed. Local craftsmen could be advised and assisted so that their products are as marketable as possible in terms of design and quality of finished workmanship. At the same time, any attempt to import foreign made imitations in order to satisfy tourist demand should be strongly resisted.

7. The purely intellectual needs of rural communities merit special attention. These needs include the expansion of the personal interests and intellectual horizons of rural people as well as the attainment of recognised academic standards for admission to regular courses for professional and technical training. Rural areas have generally been less well served by formal education in all its forms. Thus it can be expected that there will be in the rural areas numbers of people who dropped out of school at an early stage who could benefit by further academic courses organised through adult education programmes. Similarly, rural areas, in contrast with urban areas, are less well served by the various mass media of communications and are thus deprived to some degree of the continuing educational stimulus which these can bring.

8. An integrated adult education plan aimed at satisfying these needs would require a variety of approaches - face to face teaching through study groups, correspondence activities, specially prepared radio and (in some cases) television programmes. The success of such a strategy is greatly dependent upon access to books and other learning and teaching materials. In many rural areas facilities for obtaining these through conventional channels are almost non-existent. Particular importance must, therefore, be attached to the development of rural library services including mobile libraries, postal library services and travelling book boxes. The production of educational media, and the diffusion of such media among teachers and groups of adult learners, is also of great importance. This can be in part tackled by the development of a media centre at national level providing the breadth of professional expertise required to produce and operate a full range of media systems. It must be recognised that exclusive concentration of such effort in what is likely to be an urban setting may mean that, first, what is produced may not be applicable to detached local situations in the rural areas and secondly, the problems of ensuring an adequate supply of materials for potential users are increased because of difficulties of distance, transport and distribution. There would seem therefore to be a case for the development of additional media centres at regional or local levels with a

more limited capability relating specifically to local needs and possibly even involving operational personnel in the production of simpler learning and teaching materials.

COMMUNITY EDUCATION

9. Community education in rural areas should seek to impart the motivation and skills necessary to raise general living standards. It usually involves programmes related to better housing, improved health and hygiene, improved care of children from birth and through their early years, the understanding of the nutritional values of both traditional and newly introduced foods, the development of kitchen gardens and small animal keeping, simple accounting and book-keeping, business and management practices to ensure a working partnership in local development programmes through clubs, societies, local committees and co-operatives.

10. Adult educational activities of this nature can make a substantial contribution towards building-up attitudes favourable to rural development and establishing the necessary support knowledge which can help to promote modernisation. Education alone is, however, limited in what it can achieve in practical terms. If such adult education programmes are to produce real returns, then they must be launched in conjunction with and in support of comprehensive programmes for the development of rural communities including in particular the development of basic rural infrastructure - such as feeder roads, markets, water supplies - and other services, for example, agricultural extension and advisory services to rural industries and businesses. The function of adult education for community improvement thus becomes to enable the community to understand and co-operate with the whole range of development activities which are focussed upon it and to assist these activities in attaining their objectives.

11. There are some areas of activity in relation to community education which are of special importance and which demand particular attention. These are literacy work, technical and vocational training and education in family planning.

(a) Literacy

12. Universal literacy is the ultimate aim of national educational policies. The necessity for literacy lies in the greater understanding which a literate community has of political and constitutional processes and in the general improvement consequent

upon literacy in the quality of a nation's human resources and ultimately therefore in its economic development. Universal literacy may ultimately be attained through the gradual spread of elementary formal schooling. Short-term expedients are possible outside the school system in order to make literate all age groups in communities without fully developed elementary education systems. The mass literacy campaign can yield acceptable results, if pursued with thoroughness and enthusiasm over a long enough period, and if backed up with comprehensive support measures, particularly the supply on a very large scale of adequate reading materials for new literates. It should, however, be recognised that an all-out drive for literacy in this way can be very costly in terms of the material and human resources required to push it through to a useful conclusion and often requires the highest political priority and support. Otherwise campaigns may lose their impetus, dwindle in their appeal to potential participants and very often fail to maintain the gains achieved in the early stages of their operation.

13. More recently the selective and intensive work-oriented approach to literacy has emerged, emphasising the particular relationship between literacy and productivity in specific tasks. Its focus is very specifically on facilitating and improving the performance of precise categories of employment. Its impact on whole communities can therefore be limited. Recognising this, and in order to meet the immediate priority of raising overall levels of living in rural areas, there is need for a broader approach to literacy work whereby literacy programmes are built into comprehensive programmes for the education and training of rural communities. Such a strategy would recognise that the new, more selective approach taken by the current Experimental World Literacy Programme of Unesco is more useful in satisfying specific short-term needs of special sectors of rural communities and that, in particular, the practical and vocational bias within the Experimental World Programme is a feature to be encouraged and one which might enable a realistic appraisal to be made of the contribution of literacy to the overall process of development. It is important, however, that a functional literacy component within any integrated rural development programme should also be viewed in relation to the needs of rural communities for social, cultural and economic education as well as for the improvement of vocational skills. A further special contribution which literacy programmes can make in furthering the development of rural communities lies in the area of motivation. It is particularly important that rural people should recognise and co-operate with the process

of change that is going on around them. Literacy might assist in stimulating this motivation.

14. The effectiveness of such literacy work within integrated rural development programmes will not be seen merely in the numbers who are enabled to read and write but in the recognisable and permanent improvements in the patterns of life and standards of living of the rural communities at whom such programmes are directed.

(b) Technical and vocational training

15. To promote and further the various processes of development in rural areas, there must be a general improvement in the level of technical skills of rural people. This is especially applicable to the vast majority of the rural population who are still, and who for many years will be, engaged in agriculture. It also applies to various other craft and service occupations already existing to some degree in some rural communities which must expand and diversify as development proceeds. Generally, adult education and training programmes which seek to raise the level of skill of rural communities should as a first step focus upon whatever existing skills there are and improve and upgrade these so that rural people can themselves make a continuing and practical contribution towards the development of their communities. At the same time attitudes of receptivity and sympathy towards change are created which are essential for the success of development programmes.

16. The attitudes and understandings of instructors and leaders are also very important to the success of such programmes. Efforts to communicate with and transfer skills to rural communities require in the trainer/communicator a special understanding of the sensitivity and psychology of rural society, especially rural society at an early stage of social and economic development. Programmes for training instructors or project leaders should therefore be concerned with more than technical matters. In particular, training programmes should seek to promote in instructors the necessary qualities of sympathy and understanding of the rural communities at whom programmes are directed. A vocational or technical training programme should include non-technical elements to ensure that the community understands and supports the programme.

(c) Education in family planning

17. The importance of controlling the rate of population growth in countries seeking to accelerate the rate of economic and social development was emphasised. A slower rate of population growth would diminish a tendency already apparent in many countries for the benefits of development programmes to be neutralised by population increases. In special terms, the hazards to the mental and physical well-being of women resulting from over-frequent child-birth are becoming increasingly recognised. Modern approaches to family planning should therefore be promoted as widely as possible, particularly among rural communities where the mass of the population still in most cases lives and where popular understanding of the arguments for and the techniques of family planning can be expected to be least.

18. The process of spreading information and understanding among rural communities of the purposes and practices of family planning are often regarded as purely technical matters and therefore the special province of health services. To enable what is fundamentally an exercise in communication and motivation to take place effectively, it should be recognised that the adult educator must also play a part alongside health service personnel.

19. The educator can be expected to take particular account of the value systems and deep-rooted religious beliefs of the people at whom a campaign may be directed as well as various other social obstacles which may impair the effectiveness of programmes, for example political factors. The political factor illustrates the need for a vigorous expression of sympathy and support from governments for family planning so that programmes can operate in a favourable atmosphere at least at the national level.

EDUCATIONAL MEDIA

20. The special value of various forms of learning and teaching media in adult education work in rural areas was recognised. There are two main categories, each with its own particular value. First, simple media are especially useful in face-to-face teaching situations or as supporting materials to direct communication with adult learners. In this category fall wall charts, flip-charts, flannelgraphs, posters, illustrated leaflets and simple reading materials (as follow-up to literacy programmes). The special merit of such media is that they are comparatively cheap to

produce, can draw heavily on local materials and the local situation, and may be produced by operational staff, given the necessary training and available production facilities. Recognising this, all personnel who are in educational communication with adult communities - agricultural extension workers, community development and social workers, as well as conventional adult education personnel - should receive in their training courses basic instruction in the contribution that educational media can make to their work and in the techniques for the preparation of the simpler forms of these. To enable this element of initial training to be realised in operational situations, the necessary basic facilities for the production of media would have to be provided at local levels. One possibility might be profitably explored. Selected local schools, in recognition of the need for working links between school and community might develop such a capacity and make the facilities available to everyone concerned in education activities in the widest sense.

21. The second category of educational media - the mass media - pose a different set of problems and demand different approaches both in operation and in training. One of the main features of rural life in most countries in recent years has been the rapid spread of low-cost transistor radios. Those planning adult education programmes should recognise this situation and shape their plans so as to derive the maximum benefit from this situation. More sophisticated mass communication media have already become an important factor in certain countries. Television might, it was felt, make a very valuable impact on rural communities if problems of costs, transmission and maintenance can be overcome. The operation of the modern media of mass communication is a very professional business, requiring special skills and expertise. A less than professional approach to the preparation and operation of these media can easily diminish their effectiveness. Also the costs of, for example, television are likely to be so high that care must be taken from the beginning to assess whether the programmes are effectively attaining the ends sought.

CONTINUOUS ASSESSMENT AND EVALUATION

22. Programmes of adult education directed towards rural communities including the techniques and methods used must be kept under constant review so that modifications can be made in their mode of operation with the least possible delay in order to make them more effective in the attainment of their goals. Provision for the systematic scrutiny of the operation and impact of on-going programmes should thus be built in to

the operational structure of any adult education programme.

23. Evaluation is an equally necessary, although possibly more complicated, activity which seeks to discover precisely whether an adult education programme has attained its long-term goals and what the returns, both in social and economic terms, are from such a programme. The fundamental contribution which evaluation can make to the planning of adult education can be seen, for example, in relation to the argument for the inclusion of an adult education component in a comprehensive rural development programme. Scientific evaluation ought to be able to express in concrete terms to policy-makers and planners the dividend from such a strategy. Similarly, evaluation is essential to indicate to policy-makers the comparative benefits of a selective work-oriented functional literacy programme and, say, the traditional campaign approach.

24. Both continuous assessment and terminal evaluation require the special expertise of professionally trained personnel skilled in social research methodology. In addition, there is special value in involving in such activities personnel who have direct operational experience with programmes and who have detailed knowledge of the social setting in which the programme may be functioning.

THE ROLE OF WOMEN

25. There is an increasing and welcome trend for the full participation of rural women in programmes of adult education and training for rural development. This is expressing itself in many instances in terms of educational programmes in various areas of special interest to women, to equip them to play their special part as well as to share with men in the progress of their communities. It is important, however, to ensure the continued development of this trend by promoting the participation of women on equal terms with men in the light of their common abilities and aptitudes in all aspects of adult education work in rural areas, particularly in teaching and instruction, in the training of teachers and instructors, and extension work of various forms, in planning and administration, and in action research and evaluation. The objective of such a policy is the mobilisation of the joint capacities of men and women in the service of their communities so as to make the fullest use of the special qualities of every individual.

26. Adult education has for too long been the poor relation of the education business. It is, however, increasingly becoming recognised that in relation to the special situation of communities undergoing rapid change - and the rural areas of developing countries fall very clearly into this category - adult education programmes have a crucial role to play in creating basic understanding of and support for the process of change. A further element necessary to the success of development programmes is the identification and training of local leaders. Again adult education has a central part to play in this process. The quality of leadership has been repeatedly recognised as a major factor accounting for the success or failure of rural development programmes.

27. It must therefore be generally recognised that adult education in the context of social change and development is a support agent for economic, social and political planning, serving all specialised agencies or departments of government. The need in many countries is for the development of an instrument, whether an inter-ministerial co-ordinating committee or, possibly, statutory body, which would include representation from all relevant government departments and other agencies, which would assess how an educational or a communication component can effectively be built into all programmes concerned with the social and economic improvement and development of adult communities.

CHAPTER 5

Education and Training for Agricultural Development

1. Rural development involves the mobilisation and development of the whole range of resources in rural areas within the broader context of national, economic, social, cultural and political advancement, to the ultimate end of improving human living standards. Since agriculture will be for many years to come the basic occupation of the vast majority of the population in developing countries, the improvement of agricultural productivity merits a high priority in national economic planning. The improvement of agriculture, however, is not simply a matter of grafting science and technology on to existing systems of land use. It depends on the active and willing participation of millions of farmers, farm women and other rural people. Agricultural change and development require the mobilisation of human resources through such means as education and technical training, through the provision of cash incentives, and through the creation of the infrastructure essential to a modern agricultural industry - markets, credit, processing facilities and, above all, fair and stable prices for agricultural produce.

2. Agricultural education and training are key elements in the whole process of agricultural change and the achievement of rising levels of rural prosperity. It can function efficiently only if national systems of education as a whole are geared effectively to the needs of development. For this to be realised, changes in the existing systems will almost certainly be needed as will flexibility in planning procedures, to allow for a steady process of adaptation in response to identified needs. And agricultural education and training can succeed in their objectives only when integrated into an overall development programme including incentives, infrastructure, marketing, etc. Such an integrated programme provides the only real hope for rural progress in present conditions of limited resources and great and urgent needs.

TRAINING FOR PRACTISING FARMERS

3. Appropriate training programmes must be developed for farmers at different stages in development, from the illiterate farmer in a subsistence-based system, through the farmer in transitional systems moving towards a cash economy and the

small-scale farmer engaged in specialised types of agricultural production (dairying, mixed farming, horticulture or plantation crops) to the large-scale farmer and rancher. Training can be effective only if the motivation is provided to which farmers will respond. Identifying and meeting the needs of the particular community requires trainers familiar with and acceptable to the people among whom they work. A concentrated approach with the co-operation of the mass media and involving the co-ordinated efforts of all interested organisations may prove in some cases to be the most effective method of operation. This may necessitate the limiting of effort to these specific areas where local traditional attitudes towards farming activities are known to be changing. In these circumstances the process of change can be assisted through demonstrations by farmers on their own farms, the provision of immediate incentives such as marketing facilities, and approaches to family or village groups rather than to individuals. The appropriate means for inducing farmers to experiment with new methods will vary. Sometimes the women of the locality will respond more readily to the challenge to become innovators than will their menfolk, In other cases, the approach to new agricultural practices may best be made through a discussion of the health needs of the community. Once a response to new ideas is evident, short residential courses for local farmers should be provided to reinforce particular themes .

4. Much depends on establishing confidence. The teaching staff must be accepted by the community and the familiar gap between the institutional and the field situation bridged. The selection of suitable staff is vital to the success of the operation and there seems to be a good case for the use of multi-purpose rather than specialist staff in the early stages of a programme among subsistence farmers. This general rule may be varied when activities are undertaken in areas where there exists already a proportion of farmers following more advanced practices. In general, the multi-purpose worker is likely to achieve more at the village level than the single-purpose specialist.

5. The most important characteristic of the good multi-purpose worker is that of maturity and ability to inspire confidence, which in largely traditional societies may well be more important than his depth of technical knowledge. Indeed, highly trained field workers posted to areas of subsistence farming where results will not come quickly can easily become discontented and seek to move elsewhere. On the other hand, inadequate technical training may result in the field worker finding difficulty in identifying the agricultural problems of the area,

so that all multi-purpose workers should be given frequent on-the-job and in-service training to keep them up to date with new techniques. If, as an alternative to the single worker, a team approach is employed, using specialist staff of various disciplines who meet regularly to exchange views, then the number of multi-purpose workers can be reduced. As subsistence gives way to a cash economy, more specialist staff, their numbers governed by the economy of the country and the potential of the area, will be required to back up the multi-purpose worker. At the same time, the necessary infrastructure must be built up in phase with the development of the area; roads, markets and other services must be provided.

THE ROLE OF WOMEN IN RURAL DEVELOPMENT

6. Innovation may often prove more acceptable to women rather than men in a particular area. At the subsistence level, men and women tend to work closely together to make the most of the limited resources available to them. It is, therefore, appropriate to provide training for men and women together in these circumstances. Women because of their important role in agriculture in many circumstances, need to be taught those skills, including basic agricultural skills, which are generally regarded as appropriate for men. They should not be left to acquire these skills informally, as happens frequently at present. In Ghana, for example, women attend farm institutes with their menfolk and learn the techniques of vegetable production as well as the fundamentals of home economics.

7. At the transitional stage, when the farmer is moving towards a cash economy, and in farm settlements, there can be a much less close identification of interests between men and women. This implies a vital need to train women for independent and specialised activities to ensure the provision of enough food in appropriate variety for their families. As farming develops in scale and complexity training should be available to assist farm women to adapt to the changing circumstances and undertake their new and more burdensome semi-independent role.

FARM SETTLEMENTS

8. Farm settlements inevitably involve heavy capital investment. Suggested projects must therefore be fully investigated and planned before implementation; in particular settlements should as far as possible be established in response to a request by farmers and not be forced on them. Settlements

may be of various types, for example emergency settlements, for practising farmers forced off their land by flood or other natural disaster; consolidated settlements, for farmers whose lands were previously fragmented; co-operative farm settlements; settlements for young people without previous experience as farmers; and settlements in which young people work alongside older farmers.

9. A settlement of whatever type involves the creation of a new community. The first problem to be faced is how to help settlement members to live together. This can be assisted by the provision of the basic social services. As well as agricultural training, instruction in simple budgeting, accounting and the use of credit must be given, and also information on the basic rules of health. Nor should the cultural needs of the settlers be overlooked when the development and training programme is prepared. The fate of any settlement scheme rests on a recognition by the settlers that success or failure depends on them individually and collectively, and not on government or other external authorities.

10. Associated with the settlement there must be someone competent to evaluate its activities, preferably someone experienced in social research methodology with an understanding of agro-business. It has been established that a successful businessman who engages in agriculture often shows better returns than a trained agriculturalist who lacks business experience, so that the appointment of an effective evaluator sensitive to the needs of agro-business is of prime importance. Universities can fulfil a useful role by investigating the agro-business principles appropriate to various communities.

THE EXTENSION WORKER

11. The term "extension worker" may be understood as comprising all those agents active in agriculture, home economics and community development who have direct access in an advisory capacity to the farming community.

(a) Initial selection of extension workers

12. Those responsible for the recruitment of potential extension workers must have a clear understanding of the type of student required, and Ministries of Agriculture should play an active role in the preparation of recruitment publicity and the selection of candidates. Official statements should emphasise the attractive career prospects for young people entering agricultural extension work, and governments should ensure that

terms of service are such as to convince potential entrants of the validity of these statements by establishing good salary scales and career ladders which enable a competent employee to rise to the top of his chosen profession without the hindrance of artificial barriers. In the selection of students a wide range of characteristics should be taken into account over and above their academic records. This implies the compilation of as full a profile as possible of each applicant. The process of selection might be assisted were candidates to spend a period of two or three months working under supervision in extension activities. The lack of continuity of staff and high rate of resignations cause concern in many countries; much research is necessary into the underlying causes for this wastage, and selection procedures, whether by examination or recommendation, must be designed to attract those candidates most likely to find the service congenial and rewarding, and remain in it.

13. Discrimination should not be exercised against potential trainees from urban backgrounds. In practice it is likely that very few such candidates will present themselves - in Uganda, for example, only 2% of diploma level staff are of urban origin.

14. The selection of female staff to work at village level may necessitate recruitment from the immediate area. It is unlikely in any case that appropriate candidates will be available under the age of 20 years. Where possible, as is the practice in Uganda, female staff at all levels should enjoy equality with male staff in salaries and conditions of service.

(b) Training in extension techniques

15. Close co-operation must be ensured between those institutions providing formal training and the government departments employing the extension workers. Feedback to the institutions enables appropriate revisions to be made to the courses of training.

16. Initial training must include some familiarisation with the rudiments of social psychology, the learning processes of adults and basic communication skills and techniques, as well as the elements of food science and human nutrition. To this background there should be added instruction in sound agricultural practices (including storage methods) and business management. Students must learn the importance of a study of the social and political aspects of the environment when considering the best means of introducing concepts unfamiliar to the local population such as co-operatives or self-help.

17. In-service training programmes for all extension

workers are essential to progressive and effective development activities. Some in-service training might be carried out on a regional basis, with several countries bringing workers together for short periods to exchange their experiences. Within each country in-service training should be co-ordinated and formalised by all those government agencies involved. Finance should be made available for formal and regular in-service training to be provided for all extension workers annually. The content of the courses should be prepared in consultation with participants, so ensuring relevance to their needs, reinforcing their confidence in their employers and providing the workers with experience useful to them in planning their own future field programmes.

(c) Supporting services

18. Effective extension work relies heavily on a range of supporting services, responsibility for which is usually divided among a number of government departments. Agricultural development work cannot be postponed until all the desirable supporting services have been organised but it will often be found impossible to undertake activities on any large scale before such basic services as the supply of seeds and fertilisers, credit (loans and subsidies), feeder roads and transport are provided, and adequate housing and office accommodation for the extension worker. Other essential services to be developed in conjunction with agricultural activities include co-operatives and marketing systems, processing and storage facilities, crop insurance, social services (health, education, water supplies), the preparation of learning and teaching materials, information and guidance. Finally, the extension worker must feel himself backed by continuous research and evaluation, the results of which are communicated to him regularly by the mass media (especially radio and printed materials) and in-service courses.

INTERMEDIATE LEVEL TECHNICIANS

19. Technicians play a vital role in support of agricultural development programmes, through their work in laboratories, research and experimental stations, animal health departments, inoculations, quarantine and other aspects of disease control, A.I., etc. processing establishments (hides and skins, tea and coffee factories, co-operatives), agricultural engineering workshops, and in survey work. A wide range of such technicians is required to keep the agricultural services operating each specialisation - veterinary, forestry, agriculture - has its own staff, and it is most desirable that a mutual understanding

should be established between these specialists by providing a common basic training for them in the same institutions as the multi-purpose extension workers. An added advantage of this system would be gained from the concentration of training in a limited number of well-founded institutions (with a capacity of about 500 students) rather than its dispersal over a larger number of inferior centres. Commercial interests should be given every encouragement to participate in the work of these institutions.

20. With the exception of the laboratory technicians, for whom a full course of specialised training should be provided separately, all technicians should follow an initial one-year course of basic training common to them and the extension workers. In the second year of a two-year course they would receive training in their specialities, and this would be continued by in-service courses and on-the-job training.

AGRICULTURAL INSTRUCTORS

(a) Existing instructors

21. A large number of teachers of agriculture serving at present in agricultural colleges and farmer training institutions have undergone no training as teachers. Were universities able to provide courses of from six weeks to three months during their vacations to remedy this situation it would be beneficial to the teachers and their students, and also to the university, whose staff would thus be brought into direct contact with the intermediate level teachers. The award of certificates would be an added inducement to the teachers to offer themselves for the courses. It might be that one of the international organisations such as Unesco or FAO would assist in the provision of these urgently needed courses.

(b) Instructors in training

22. Courses leading to a degree in agriculture do not include any guidance on the teaching of agriculture and it is highly desirable that a further course in teaching methods should be followed by all agricultural graduates who will work in colleges or institutes. Regular in-service courses which teachers from colleges or institutes would attend together with teachers of agriculture from secondary schools would facilitate co-operation and an understanding of each other's work.

AGRICULTURAL SCIENTISTS

23. Men and women graduates entering the professional grades in agricultural research, teaching and administration, or in related areas of commerce and industry, form a group of specialists whose training should be highly selective yet flexible enough to enable them to respond to the needs of a rapidly changing society. Indeed, more emphasis should be laid on the study of applied economics and the social sciences in their courses so as to ensure that these scientists have a broad view of current problems and possible methods of tackling them. Opinions vary as to whether the university is the most appropriate institution for this training since the rigid discipline approach of past years is no longer adequate. Instead an integrated approach is needed. On the other hand, the essence of the course is to induce the student to think for himself and respond to unfamiliar situations with confidence and expertise, characteristics which the university is probably best able to inculcate. Encouragement should, therefore, be given to all agricultural faculties and institutions to develop an integrated approach to the discipline.

24. Since students at this level should be inspired towards following their interests into further studies and research beyond the first degree level, it is inappropriate for undue emphasis to be laid on the first degree final examination. Continuous assessment during the whole period of undergraduate study would both provide a better indication of a student's ability, and also encourage him to regard the period after his graduation as an integral part of his overall training. This approach implies, however, the provision of programmes of post-graduate study where a student can spend at least one year specialising in the area of his interest.

POST-INSTITUTIONAL TRAINING

25. When formal training is completed, at whatever level, from that of the multi-purpose extension worker to agricultural scientist, in-service training and on-the-job training must start. At the higher level, research institutes employing young graduates should be located whenever possible close to institutions of higher learning so that assistance from experts of the highest calibre is most easily obtainable. The most critical point in the career of any young man or woman comes immediately after they leave the training institution and begin work, when they begin to apply in practice what they have acquired in training.

situations. During this early period they will inevitably make mistakes and go through times of depression and a sense of failure. It is at this time that they are most in need of kindly and sympathetic guidance and support from older and more experienced colleagues. The responsibilities of supervising such newly qualified staff should be given to persons capable of continuing the process of training. The vital aspect of building up a competent, contented and progressively-minded agricultural staff at all levels has been much neglected in the past, to the detriment of many programmes.

NATIONAL COUNCILS OF AGRICULTURAL EDUCATION AND AGRICULTURAL RESEARCH

26. National councils of agricultural education or agricultural research depend for their effectiveness on the interest and activities of the members which they attract. Councils, therefore, should have a wide representation of interested ministries, research institutes, and all levels of agricultural education, without becoming unwieldy in numbers. They should be able to meet at least twice a year, preferably outside the capital city at various educational institutions so that members can see a cross-section of agricultural teaching situations.

27. National councils of agricultural research being advisory bodies only, cannot ensure that their recommendations become policy, but if they improve their status until they earn the same respect as bodies such as medical research councils, then they can anticipate that their influence will lead to positive results.

AGRICULTURE IN SCHOOLS

28. Children in primary schools cannot be trained for a career in agriculture and should not be given vocational training in agriculture as part of their school curriculum. A general introduction to rural life through environmental studies may positively influence their attitudes in some measure. At the age of 15 or 16 years, prevocational training becomes appropriate through a programme designed to help the pupils to appreciate the potential of farming and related occupations.

29. At secondary school level, agriculture must be handled as a topic of real concern to students and not relegated to the status of one or more examination subject. An enquiry might usefully be undertaken into the teaching of agriculture in secondary schools in some developing countries. This would seek to identify particular schools which have been most

successful in teaching the subject in order to define the circumstances and methods which lead to success. The results of such an enquiry could be of great benefit to many member countries.

30. Practical agriculture has been used too often in the schools as a form of punishment, when, for instance, a pupil is instructed to weed a portion of the school garden as a penalty for unpunctuality. This can only develop a negative attitude and should be roundly condemned.

31. It is not easy to remedy past defects in the treatment of agriculture in schools nor to alter entrenched attitudes, yet agriculture is fundamental to developing countries and improved methods of teaching agriculture in both schools and teacher training institutions must be sought in the light of recent changes and developments. A comprehensive reappraisal of curriculum content and teaching methods in schools and, even more urgent, agricultural training institutions, should be undertaken. As part of this project, fellowship awards should be sought to facilitate the production of agricultural textbooks for use at different levels.

32. Interest in farming might be stimulated among young people, especially post-primary and intermediate school students, by the establishment of national or community service programmes in which they could participate as volunteers. Finance and help in the co-ordination of such programmes might well be available from international sources.

PROJECTION OF THE ROLE OF AGRICULTURE IN NATIONAL DEVELOPMENT

33. The need is widely recognised to achieve an intelligent and sympathetic recognition of the importance of the rural sector to national development on the part of the population as a whole but particularly on the part of senior government officials and political leaders. Institutions of agricultural education can play their part by such means as providing special lectures and short courses for influential citizens as well as by arranging agricultural shows and open days at field stations and farms. Senior civil servants and government leaders, through the provision of courses and visits, should be drawn into the habit of seeking on appropriate occasions the advice and assistance of agricultural bodies. Professional associations should endeavour to achieve a wide representation among their members and co-operate with universities, voluntary organisations and other bodies in the promotion of conferences and seminars designed to educate and co-ordinate.

34. A new approach is needed to educate the population as a whole to the importance of agriculture and to an appreciation of the fact that most development plans and economies are entirely dependent in the last resort on agriculture. Urban dwellers must be drawn to the understanding that they are closely linked to the rural areas and that their continued economic well-being is dependent on the development of the rural areas, not least because development in rural areas will influence and relieve the pressures caused by immigration into the towns from the countryside.

KEYNOTE ADDRESS

EDUCATION IN RURAL AREAS

by R.K.A. Gardiner, Executive Secretary,
United Nations Economic Commission for Africa

1. This is not the first time that our countries - the under-developed parts of the Commonwealth - have had an opportunity to consider the importance of rural education or education in rural areas. In the 1920s the example of the Jean's Schools in America was brought to the attention of African countries by the Phelps-Stokes Education Commission and Professor Victor Murray wrote his very thoughtful book about education in Africa entitled, "School in the Bush". In more recent years economic planners have been stressing the importance of agricultural and home extension services as part of the overall development effort. Our modest response has taken the form of Community Development activities. It seems to me that the latest independent African initiative has been taken by Tanzania in the effort of the government and the people of that country to implement the Arusha Declaration. The problems which face us are not new or peculiar. In industrially advanced countries rural poverty and backwardness constitute isolated spots in a relatively prosperous areas are the exception.

2. The economics of most of the developing countries are likely to remain predominantly agrarian and raw-material producing for some time, and, since two-thirds or more of the total population earn their living from the land, the highest priority should be given to developing the rural economy and improving the level of living of the inhabitants of the rural areas. The attainment of even this modest goal will depend upon the development of human resources - from high-level managerial and organizational skills down to the factory hand and the worker of the field. The single most important component of any human resources development programme is the education and training of human minds and hands.

3. If education is to help satisfy some of the current pressing needs of society, it must be deliberately designed as an instrument of economic and social growth. This means that greater emphasis will have to be placed on the investment function of education without totally neglecting what may be described as its consumption function. We have not always defined precisely the objectives of our educational systems for rural areas and, perhaps, we have been able to defend this weakness by arguing that a national educational system is an organic unity. There is, however, no reason why the focusing of attention on the specific needs of the rural economy and the rural population should affect this unity, though it does imply a shift of resources and emphasis.

4. A programme for raising the level of living of the rural population would need to be approached in a comprehensive and integrated manner in contrast to the ad hoc methods of the past. Even to achieve the narrow goal of an increase in the volume of physical production in the rural areas, governments would have to be committed to a number of ancillary measures, because economic development is a complex process involving many inter-dependent variables. Although the proportionate influence exerted by each of these variables on the development process can only be determined rightly within a particular context, we know that the absence of one or other of them in the total mix, does affect the achievement of set goals. For example, the establishment of new industries calls for power supply, transport and communications, credit and marketing facilities, improvement in health and environmental conditions, nutrition, housing, vocational training, and general intellectual and cultural stimulation. Mr. Arthur Hopcraft seems to have caught the problem well when he writes, "The poor countries have neither the material resources nor the human skills in sufficient quantity to carry through some of the policies they begin. People who were bitter in landless poverty, find themselves just as poor on land holdings which they cannot manage, because the instruction and cash credit have not caught up with the politics. All over the poor world young people with education they cannot use, because there are no jobs for them, are beginning to look a more dangerous problem than illiteracy." The evidence of rural poverty and unemployment, together with the unwillingness of youth and able-bodied adults to remain in rural areas under existing conditions, the increase in migration to the already overcrowded towns and cities, and the growing problem of the unemployed school-leaver with little or no training for practical work, show up the failure of education to prepare citizens for useful adult life. The only mitigating factor is that the failure may not entirely be placed at

the door of the educationists .

5. There is a definite relationship between education, income expectation and vocational preferences. Rural employment is notorious for low income returns and children from rural areas cannot be accused of irrational behaviour if they seek better-paid jobs elsewhere. The expansion of employment opportunities has taken place mostly in urban areas, ports, transport centres, and such enclaves as mining communities. Transport systems in underdeveloped countries may be described as penetration routes for the evacuation of raw materials and the distribution of limited quantities of consumer goods. To stem the rural exodus to the overcrowded capital cities, it would be necessary to develop a series of intermediate towns with a modicum of urban amenities to act, in some sense, as social, cultural and economic focal centres for the surrounding countryside. There have been sporadic attempts to institute a more practical form of education related to agricultural and handicraft pursuits but these have never been seriously implemented and the problems inherent in them have not been sufficiently studied. The reasons given are, to say the least, conflicting:

- (1) That dependent peoples preferred to copy the educational patterns of metropolitan countries, and
- (2) That the colonizing powers deliberately held back technical and scientific training from the subject peoples.

These arguments are irrelevant clichés. But it may be admitted that many of the leaders in developing countries had no opportunity to see the kinds of occupation in which the majority of workers and peasants in the industrialized countries were employed and the vocational training they received. Consequently, the educational systems in countries like ours are not yet development-orientated.

6. A practical educational policy cannot be formulated in a vacuum. A nation which advocates such policies must be committed to development. It must above all aim at linking up the different parts of its territory to form a national economy. At present, most developing countries with patches of active areas cannot be described as national economies even though all the progressive pockets are contained in one nation-state. The size of the national market or the national economy is a very important factor in economic development.

7. Assuming that the need to develop a national economy is accepted, then one role of education will be to equip the growing generation with new skills and a new outlook. Much is made of the conservation of the peasant psychology. A poor peasant can ill-afford to take risks, but if care is taken to ensure that new methods and techniques produce positive results, the peasant will accept them and put them into practice. People can and do change, if given the right incentives, and a programme of job training must be matched by the generation of appropriate jobs.

8. This attitude to the development role of education emphasizes the utilitarian aspects and, in the economic circumstance of Africa today, this is not a bad thing. We have to improve the production of capital and consumer goods and our material welfare depends upon how well we can do this. We cannot help being utilitarian in our outlook, for we can only exchange foods and services that have economic value and this is precisely what the transformation of subsistence economies to market economies means. This is not to say that the aesthetic, moral, cultural and religious values of education are to be neglected. Some people hold the view that practical vocational training is devoid of any cultural value. Of this, I am not convinced, but I am sure of the fact that Africa's development will be served by men whose minds can grasp the laws of nature and whose hands can re-fashion its raw materials to minister to human ends.

9. It is important that education should be viewed as a continuous, life-long process, embracing the young as well as the adult population. A psychological climate must be created to make it necessary and possible for all members of the community to participate in the development effort. I am not suggesting that age-old customs and traditions should be abandoned or swept away, but there is the greatest need for a reappraisal of the codes and standards which have conditioned and still condition our actions. Everything must be done to ensure that the communal system which is universal in Africa is not abused. But there is need for a spirit of independence and self-reliance and a willingness to take risks. A system which shelters all indiscriminately can only guarantee equality in poverty.

10. It is necessary to question our present arrangements for the allocation of resources. On what age-group should our limited resources be spent? It might be argued that concentration on vocational and on-the-job training for adults might yield more immediate economic returns than investment in primary schools.

Some authorities have suggested postponing the compulsory entry of children into the first grade to about the age of 8 or 9 so that at the terminal stage of primary school - 15 or 16 - school leavers would be sufficiently mature to utilize their pre-vocational training in productive work. Indeed, the present systems which concentrate on spreading primary education are partly responsible for the wholesale unemployment among school-leavers. The psychological damage which this does is not fully appreciated. Children today do not speak of 'passing' the Standard 7 examination or of having 'obtained the secondary school-leaving Certificate.' Rather they say they have 'failed Common Entrance' or 'failed to secure admission to the University.' By this process we are in fact rearing a nation of failures, since only a minority still gain admission to the University. For economic and psychological reasons, we have to think in terms of investment in an educational complex.

11. Is there such a thing as rural education? The only reasonable answer to this question is that it is a matter of emphasis. Educational services provided in rural areas should be comprehensive in scope, comprising programmes from primary school levels to participation in communal activities such as women's institutes, farmers' clubs and extension work. It should also provide opportunities for attending rurally located high-level institutions engaged in teaching and research in specific rural problems. This implies that careful attention will be paid to curricula and syllabuses. Nowhere in the current educational system in developing countries is there as much attention paid to food production, farm management, marketing and cooperatives, science and its application, mechanical skills, etc., as is done in more prosperous and industrially advanced countries. Too much insistence cannot be placed on the need for the standards of teaching and learning in rural area to be as good as those which obtain in the best urban institutions. Equality in the quality of education should not be confused with identity of curriculum content. The student in a rural school is not a prisoner to his rural environment. At any stage he should be able to transfer to an urban secondary institution; rurally trained science teachers, or nurses, or artisans, ought to be able to work efficiently in urban concerns, and even more important, ought to be able to continue studies in a university or technical institution. So long as the rural population feel caught in a vicious circle of rural poverty, rural education, low income and continuing poverty, most of its members will seek to escape. This is the crux of the problem.

12. It seems to me that we have been unduly preoccupied by the exodus from the rural areas. This exodus is only a symptom.

Unless employment opportunities and prosperity are relatively evenly spread, we cannot prevent people from moving in search of better conditions of life. Indeed it would amount to a denial of their fundamental human right to attempt to do so.

OUTLINE OF A STRUCTURE OF EDUCATION IN RURAL AREAS

by R.K.A. Gardiner, Executive Secretary,
United Nations Economic Commission for Africa

1. For your consideration, I am circulating a supplementary document to this address. It contains suggestions for a modified structure of education for rural areas which is briefly as follows: as regards formal education, a primary cycle of seven years (comprising two sub-cycles of 4 years and 3 years successively) is suggested. The first sub-cycle aims at teaching basic communication skills and number operations; the second at practical, prevocational education related to agricultural, rural constructional and manufacturing activities, which will enable school-leavers to engage in productive employment and receive further training on the job.
2. Some authorities have suggested postponing the entry of children into the first grade to about the age of eight or nine so that at the terminal stage of the primary school, they are fifteen or sixteen, and therefore mature enough to utilize the prevocational training in productive work. You may wish to discuss this.
3. A junior secondary sub-cycle of 3 years and a senior sub-cycle of 2 years, offering a diversified curriculum in comprehensive rural schools is suggested. Technical, vocational, commercial and home science courses based on rurally relevant syllabuses, with emphasis on practical accomplishments are suggested. The proportion of primary school certificated pupils to be allowed into the next secondary cycle will have to be carefully worked out in relation to the resources of the country, its planned economic growth and manpower requirements, the absorptive capacity of the labour market for varying skills (which includes, of course, the supply of teachers and intake into post-secondary education).

Rural post-secondary tertiary level facilities, offering flexible programmes of instruction and training should be provided, with emphasis on the applied sciences and arts, and undertaking problem-orientated research related to rural development. It is also suggested that an extensive system of non-formal education be organized for the out-of-school youth, the adult active labour force, and women.

A. Primary level - Duration 7 years

- (i) The primary cycle extends over seven years, and comprises two sub-cycles of 4 years and 3 years. The first sub-cycle of four years (lower primary) is intended essentially to achieve a minimum level of literacy, including elementary number skills. It may be regarded as a preparation for the next sub-level of primary education (senior primary), and in cases where this is terminal its objective is also to prepare the mind to be receptive to new ideas. Educational attainment at this level does not prepare one for much more than unskilled labour, It will be noted that the duration, content and objectives of this sub-level are the same for the town and country child.
- (ii) The second sub-cycle of three years (senior primary) is common to all town children and the objective is to provide a general education, with emphasis on the further acquisition of language and number skills. In so far as the country child is concerned, there are two streams of educational experience offered:
 - (a) a small percentage (which is a matter for political decision) of children will pursue the same general education course as urban children in preparation mainly for an academic (or grammar school type) secondary education or secondary commercial education;
 - (b) the great majority of rural children will receive a practical type of prevocational education in rural farm schools, concentrating upon activities related to farming operations, rural handicrafts, and home-craft (for the girls), though instruction in

language and number skills will not be neglected. The objective of this sub-cycle is to orient the mind of the child to a knowledge of the rural environment and rural activities in which he is likely to find the source of his livelihood. The sub-cycle is a preparation for the vocational education and training of the next secondary cycle, but it is more than likely that it will be terminal for many a youngster at the age of 13 or 14 (especially girls), in which case, further training will have to take place on the job. It is hoped that the methods of instruction and the content of the course will be sufficiently interesting to prevent the alienation of the rural child from his environment, and stimulate him to exploit the economic possibilities of small or large scale farming (perhaps through co-operatives).

In terms of occupational fitness this level of educational attainment may be regarded as the minimum for employment as drivers, junior shop assistants, messengers, postmen, petty repairmen, semi-skilled factory machine operators, apprentices, tailors, seamstresses, junior agricultural assistants, etc.

B. Secondary level - Duration 5 years

- (i) The secondary cycle extends over 5 years, and comprises two sub-cycles of 3 years and 2 years. It should be noted that the end of the secondary stage is reached after twelve years from the admission of the child into the first grade. There are many developed countries whose stock of educated manpower was built upon a 12-year primary-secondary cycle, and at this stage of economic development it should also prove adequate for the needs and resources of African countries. The savings effected by a one-year reduction in the 13-year primary-secondary cycle adopted in some African countries, following the practice in industrialized countries,

could be diverted to other educational purposes. It is important for African educational development to examine critically the need to adhere to traditional cycles or duration of successive stages of education. What is important is not the length of a course but the relevance of its content to the local situation.

- (ii) The first sub-cycle of three years (junior secondary) is common to both the urban and rural sub-system. It represents the end of 10 years of schooling, and a big fall off in school enrolment beyond this stage, when young people enter the labour market (if they had commenced at the age of five or six). A diversified curriculum is offered in the urban and rural sub-systems. In the urban sector there are the usual general education, commercial, technical, home science, and vocational(trades) streams, which can be designed to be terminal for those who would wish to leave school and receive on-the-job training. In the rural sector, pupils completing the upper primary level (general or prevocational farm schools) have three broad optional streams of education with a technical/vocational bias. If comprehensive schools are set up, as I would propose, then a commercial stream may be added to these options. Some boys will enter the junior agricultural school stream to learn the theory and practice of agriculture (crop and animal production), and the related sciences, plus some language and literature; others more inclined towards engineering and constructional activity will enter the rural technical/vocational (trades) school and learn such things as engineering drawing, wood and metal work, brick-laying, etc.; and, others, clerical skills. In many ways the skills learnt in the rural technical/vocational junior high schools are applicable in urban industrial employment, if the growth in industries does exert a pull on the skilled rural labour force. Therefore, there is not much advantage for the rural youth to seek this kind of education and training in the urban system when it is readily available in the rural system.

However, if the occasion should arise, junior secondary rural trades graduates will qualify to follow appropriate courses at the senior level in the urban system. On the other hand, urban secondary certificated school pupils may also be able to utilize their education and training in the rural economy.

Girls, in general, will follow the junior home science courses, in the rural areas, and this should qualify them to enter a nursing school or a teachers training institute exactly in the same way as urban girls; but some would also enter the commercial stream.

In terms of occupational fitness, the junior secondary level of educational attainment may be regarded as the minimum for employment as sales assistants, junior agricultural extension workers, clerical assistants, machine operators, craftsmen and journeymen, policemen, small farm operators, etc.

- (iii) The next sub-cycle (senior secondary) is of 2 years duration, and takes the student to the matriculation or university qualifying entrance stage, i.e. the end of the high school stage. The same diversified curricula are offered as continuation of the junior secondary school. Graduates of the senior secondary school would constitute the core of the supply of the middle level manpower, and thus the courses are designed to be terminal at this sub-level, both in the urban and rural system. At the same time, the completion of the courses at this level would qualify for further academic, professional, scientific and technical education and training at the tertiary level.

In terms of occupational fitness this level of education would overlap with the post-secondary undergraduate level of studies, and may be regarded as a minimum attainment for positions carrying a fair degree of individual responsibility as technicians, supervisors and foremen, nurses, stenographers, office machine operators,

salesmen, sub-professional assistants, production engineers, draughtsmen, laboratory assistants, clerks, etc. In the rural sectors they could also be trained in management science to take charge of farming operations and small-scale rural industries.

C. Tertiary level - Duration 1-6 years, or more

- (i) The tertiary cycle, ranging from 1-6 years or more, provides for progression from the secondary graduate level to a wide variety of education and training in the pure and applied sciences and arts. The terminal courses may also range from one-year to three-year diplomas of technical institutes in certain professional and technological studies and in applied sciences with undergraduate status; and from three-to-six-year degree courses at universities.
- (ii) An important feature of the proposal is to eliminate the dichotomy that exists in the status between the kind of academic studies undertaken at traditional university-type institutions, and the kind of studies and training undertaken in the applied sciences and technology at advanced polytechnics, institutes or colleges of technology. The tendency - a carry over from the pre-industrial past - is to regard the practical and applied studies as being somewhat inferior to the so-called "pure", "theoretical" studies. African countries which are trying to develop their economies and societies as rapidly as possible by the application of modern science and technology cannot be hampered by this artificial status division between the "pure" and the "applied", the "mental" and the "manual". Hence the proposal is to follow a uniform practice of awarding "certificates", "diplomas", and "degrees" irrespective of whether the tertiary level courses completed are in the "academic" or "applied" fields. Secondly, the proposals provide, in particular for transfers from the "academic" to "applied" courses, and vice versa, depending upon the growing interests and aptitude of the

individual for specialization. Thirdly, the proposals also provide for continuation of specialist studies and training for research in university-type institutions (academic or technological) from the undergraduate institutes, e.g. technical institutes, agricultural institutes rural engineering institutes and teacher -training institutes. Fourthly, the proposals allow for mobility from the rural institutes to the urban advanced universities, in the appropriate field of specialization. For example, if the educational objective is to enable the rural population to throw up scientists or technologists whose area of interest continues to be in the development of rural economic and social activities, opportunity is provided for them to proceed from the agricultural institute or rural engineering institute to an academic type of university or a technological university. This assumes concurrence between the educational institutions of course credits, which is not impossible if the educators would take an integral view of education and national development needs, and are less tradition-bound. It is also feasible to establish completely autonomous rural universities when developments justify this, with the focus on rural development needs and problems.

- (iii) Another feature of the proposals for coherent parallel sub-systems of education is the provision made for teacher-training institutions both in the urban and the rural sectors, thus ensuring a supply of teachers, whose minds are adjusted to the rural environment, for the rural system of schools, colleges and institutes. The same applies to the training of rural nurses and social workers in the agricultural institute or the teacher training institute. There need be no hard and fast lines of institutional separation in the early stages, at least of the training of agricultural production specialists, agricultural extension workers, community development workers, nurses and social workers for there is much to be said for taking an integral and inter-

disciplinary view of the development of human resources.

- (iv) Both the agricultural and rural engineering institutes will provide a variety of one-year, two-year and three-year diploma level courses in accordance with the high-level and middle-level skill requirements of the rural development plan. It is intended that the attention given to the basic agricultural sciences, as distinct from their applications to production, will encourage some young men and women to continue their studies with a view to engaging in pure or applied research of relevance to agricultural production, e.g. plant and animal genetics, plant and animal pathology, the conservation and utilization of soil and water resources, plant and animal pests, preservation, etc. Similarly the rural engineering institute could provide engineering courses (civil, mechanical, electrical) of relevance to rural agricultural production as well as for the industrial processing of agricultural products. However, the needs of rapid development suggest a sharing of the curriculum time between the classroom/laboratory and the field or workshop. The field and workshop assignments can be made a real life experience if the students are allocated for appropriate periods in production enterprises, very much along the lines in which teachers, nurses, doctors, lawyers and accountants, for example, are trained.

D. Adult Education

Arrangements for (i) part-time education, and (ii) adult education programmes, especially functional literacy programmes, for those who are employed. Continuing education services should be available in the rural sector, and reinforced through the use of mass communication media (radio, television, films, newspapers, etc.). The emphasis of adult education will be on vocational training, on upgrading skills, and on creating receptivity to change. Farmer training

centres, offering full-time courses of 2-12 months duration for producing farmers should be established.

Implementation

4. The reorganization of the rural sub-system of education so that it may become a realistic system, oriented to development needs and priorities is a long-term programme which should be, for each country, preceded by detailed surveys, studies, planning and preparation of administrative and teaching personnel. It is important that we should proceed cautiously, step by step, lest the whole programme founders through insufficient understanding and appreciation of the new goals set for rural education by the community at large and the educationists. It is exceptionally difficult to bring about a conceptual change in educational practice modelled for generations on alien systems, and the resistance to change affects parents as well as the professional themselves who are products of the archaic system. Perhaps, what we ought to do first is to stimulate a dialogue on our university and teacher-training campuses on this concept of development education, of examinations and standards of achievement, of the alleged antinomy between the cultural and vocational in education, and so on. The curriculum of teacher education is not complete without a course on development education. It is paradoxical that such courses are more readily available in developed countries than in the universities of the developing countries.

5. The bottleneck in changing an educational system is not so much money as the lack of a suitably prepared teaching force. We often make the mistake of trying to introduce changes in educational practice without having taken the necessary steps to retrain the existing teachers in terms of content, attitudes and capabilities, and to ensure the adequate preparation of the future supply of teachers. It appears to me that because the development of the rural areas has not had the kind of attention it should have had, the theory and practice of rural education itself tended to be neglected. This state of affairs would have to be remedied first by the establishment in rural areas of teacher-training institutes, staffed by teacher-educators of high calibre who will train teachers for the special needs of integrated rural development and will also promote and undertake research into the specific problems of rural

education. Organisationally, I think these teacher-training institutions should be incorporated within the framework of the rural agricultural/engineering colleges or institutes. Pilot projects of this kind should be established in selected areas before expanding the system. Since the emphasis in rural education, at this stage of the socio-economic development of most developing countries, would be on practical, work-oriented training in the farms, workshops, offices, clinics, laboratories and homes, we would need a large corps of instructors and demonstrators of vocational subjects or skills. The gross shortage of teachers of practical trade courses is likely to be the main constraint to the development of the rural education programme. The urban technical and vocational schools and the industries themselves are competing for the services of such trained personnel. Sufficient experience has been gained in the last World War and since then in the industrially-advanced countries, on short-intensive training of personnel in manual, mechanical and technical skills. The highest priority should be given to this part of the programme.

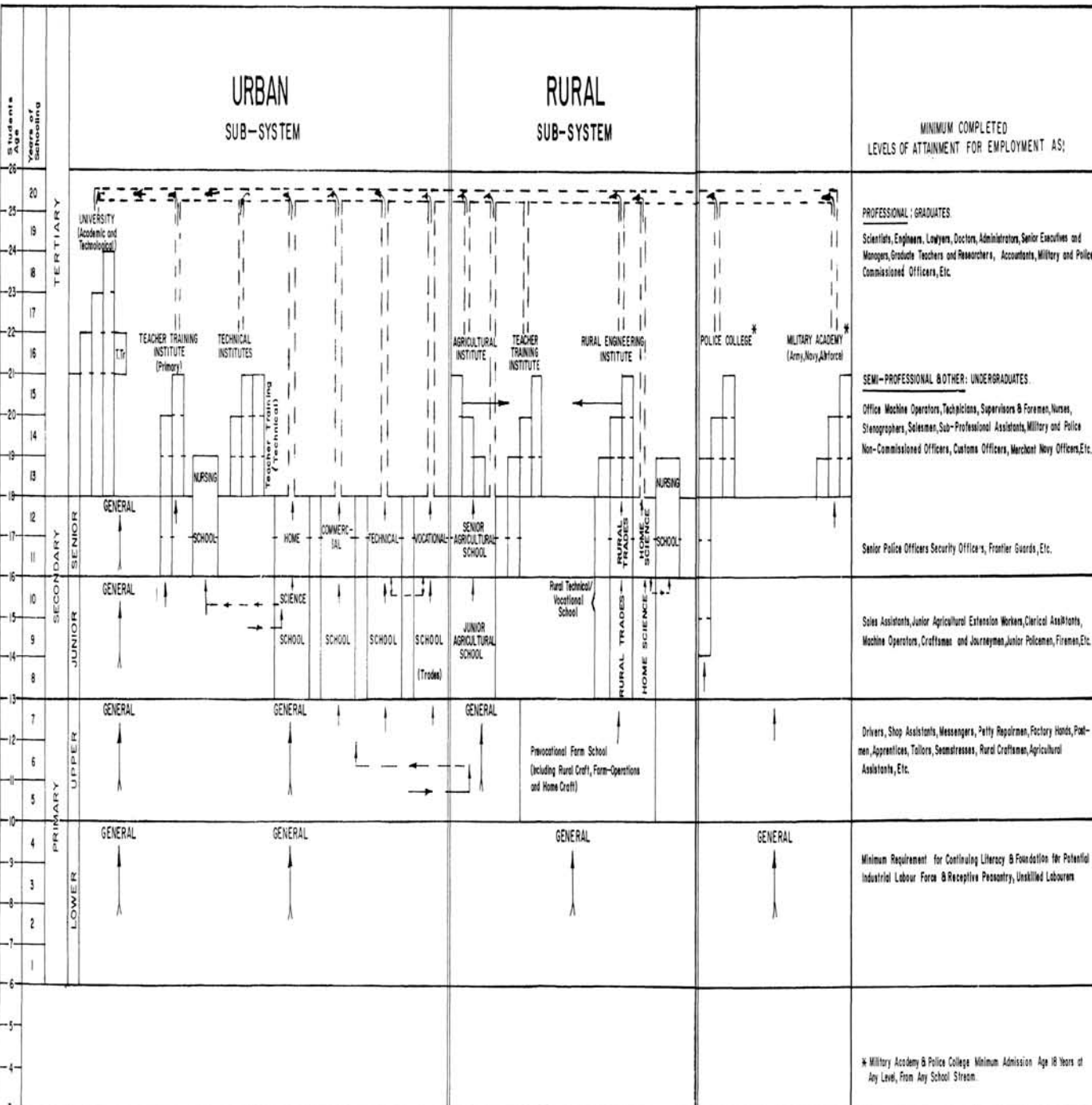
6. Rural secondary schools should be organised on the lines of comprehensive schools offering a variety of courses. One might also look into the possibilities of devising a core curriculum exposing boys to both agriculture and mechanical arts, the girls to home science and agriculture or clerical skills. This is a complex operation full of problems, especially of location and accessibility to rural students. They would have to be established for their success in some central location such as rural towns, or village complexes planned for rapid urban development. We see in this instance alone how important it is to co-ordinate the educational development programme with other social and economic development programmes. This suggests the early establishment of co-ordinating machinery at local, rural, and national levels.

7. I also think that the management of secondary and tertiary education institutions should be closely associated, as partners in development, with the design supervision and evaluation of integrated rural development projects. In this way, the educational institution will get to know whether it is turning out the type and quality of manpower skills required and whether or not its educational content and methods are having the anticipated impact on individual motivations and attitudes.

8. What I have left for my last point is, perhaps, the most feasible area of educational action; and this is the development of non-formal educational services for the school-leavers who have left without any working skills and for the actively employed adults, men and women. Firstly, functional literacy classes should be started for farmers and industrial workers, men and women. Extension work - both agricultural and industrial - will have its best effect only if it is directed to a literate population. Some countries are finding that training of active farmers - men and women - at farmers' centres, for short periods yields immediate results in the way of increased farm production, which is the demonstration effect on which rural development can be brought about more quickly. The young school-leavers may also be enrolled at these centres and taught agricultural vocational skills, including some mechanical skills. In this field of action, the mass media of communication (news-papers, radio, films, television) also offer great possibilities for imparting techniques and general information, and for changing attitudes.

9. In conclusion, I might, perhaps, be allowed to observe that unless the people themselves are motivated ideologically and take to development as a religion committing themselves to effort and sacrifice for a future life of abundance for themselves and their children, the results attending any scheme of education or economic progress are likely to be meagre.

EDUCATIONAL SYSTEM



THE SCHOOL AND THE RURAL ENVIRONMENT

by Professor L.J. Lewis

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1. "We are fumbling around in education because we know so little about the future and do not know enough about the past." However pertinent or otherwise these words of Robert Ulrich were in 1947 they are certainly very relevant to the educational issues of school education in all those countries which are seeking to develop their education systems in the confident belief that education is the keystone to accelerated socio-economic development. In that belief during the present decade enormous efforts have been made to multiply and diversify the provision of school education and some striking efforts have been made to relate the curriculum more specifically to the presumed needs of the country. Much has been said about the need and many attempts have been made to relate the educational effort to manpower requirements. Much has been written about the importance of cultural considerations and about education for change. But the most optimistic observer of the results of the celebration and the action taken can hardly claim that there is much to be optimistic about. The education provided is still criticised as too bookish, the pleas that education should be directed in such a manner as to stay the drift from the land are still to be heard with disturbing persistence. Remarks made towards the end of the last century about the inadequacies of the educational effort were echoed and re-echoed in twenties, the thirties and the forties of this century and are still commonplace in the reports of commissions, committees, consultants and of many of those who with little or no justification set themselves up as judges of and commentators on the educational scene. What then are the facts, what the problems and along what paths lie the prospects of constructive advance?

2. The situation in the primary schools can quickly be described. In all essentials they are little different now from what they were twenty-five years ago. Few schools have been built to designs based upon analysis of the functions which go on inside them. In too many instances they are little more than rectangular boxes, with the minimum of furniture and equipment.

Their maintenance is dependent upon inadequate financial provision which has to be supplemented by local voluntary effort. Pupils still lack the necessary minimum equipment in the form of textbooks and reading materials, The content of the syllabuses reflect the subject-orientated structure inherited very largely from the British tradition of the nineteenth century.

Whatever may be objectives as defined in official statements, the work of the schools is dominated by the interests of the minority who will proceed to secondary education, namely success in the selection examinations for admission to the secondary school. The situation is better in a few schools, for instance demonstration schools attached to training colleges, international schools serving special interests, schools supported by industrial interests.

3. With few exceptions the teachers engaged in the primary schools are ill equipped both in academic knowledge, practical and professional skills for the tasks they are expected to carry out. A considerable proportion of them have had no professional training. Such supervision as they may receive is spasmodic, unsystematic and frequently non-constructive. The inspector's visit is still too often regarded as a visitation to be feared rather than as an opportunity for getting professional help. For the younger and better qualified teachers the reactionary attitudes of headmasters and school managers too often have a suffocating effect. Even where the resources of the mass media have been introduced the lack of attention to the conditions of reception, the lack of, and the inadequacy of teacher preparation for responding to the new resources vitiates the development that might be expected.

4. Despite the fact that the schools in many cases have now become local authority schools or are controlled by the central government, the participation of the local community in the affairs of the school is, with few exceptions, limited to finding supplementary sources of income or to providing voluntary labour. The attempts on the part of administrations to inform the public about the policy and objectives are perfunctory, negligible or mis-directed. Anxiety about the drift from the land has resulted in persistent demands that the curriculum of the rural schools should be redesigned in order to prevent the drift. Over the last fifty years many efforts have been made to provide an education which will keep the young people on the land. School gardens, school farms, environmentally based syllabuses, agricultural science as a school certificate subject, post-primary land settlement projects, all these approaches have been attempted, modified, dropped, reintroduced, and for the most part with disappointingly

poor results. From Buxton's concept of "the Bible and the Plough" through the Phelps-Stokes Commission concept of adaptation to President Nyerere's "education for self reliance" and the stream of memoranda and reports emanating from official sources, the theory of education being related to the socio-economic environment has been consistently expressed. Attempts at putting the theories into practice have not been lacking. There were, it is true, the early efforts of the White Fathers at Bagamoyo, the Scottish Missionaries at Calabar, the adoption of the Jeannes Schools concept in Central Africa, and, currently, Van Rensburg's highly individual efforts in Botswana to relate the school to the community.

5. The still popular myth that the education provided is too bookish and is based on a non-practical curriculum is not easily sustained when the facts are organised. It would be easy to review the past efforts from country to country and to produce an impressive catalogue of experiments and projects which were intended to relate education to the environment. Such a catalogue, however, would be little more than grist for a sterile polemical mill. But what would be important would be to discover the parent and pupil responses. For most of the communities in touch with the school system the purpose of education was, and still is, to gain salaried employment for their children on leaving school. Among the arguments used with effect by Bishop Shanahan in Nigeria to convince villagers of the value of education, was that European business and government had given rise to new opportunities for Africans as clerks and interpreters. But apart from such propaganda the high cash value of education was unmistakably clear to people as trade and administration impinged upon their daily lives. As European administrations took more effective control the link between education and opportunities for employment became more clear. The administrators needed men who could read and write, the missions needed teachers and clergy, businesses needed accountants, produce buyers and salesmen. The idea of education as an investment was recognised and pursued by Africans long before the economists made it a feature in the theory of education for development. With the concept of education as an investment clearly established in the minds of parents, the response to the form of education provided was, and still is, adjusted to what appears to be the best investment for the success of the family and the individual. The hard facts, were, that a literary education was more likely to be fruitful than a manual, vocational or agricultural education. The dignity of labour has little meaning if the rewards are deemed to be inadequate. Even when the changing economic conditions

have debased the currency of the literary education as, for instance, when a primary school leaving certificate is no longer a sufficient qualification for employment in the clerical or semi-clerical sectors, the belief in the link between certificate and job persists. The shortage of the desirable jobs does not of itself lead to farming becoming an acceptable alternative; for the individual there is always the possibility that he will be the lucky one to gain a place in the salary earning sector of society. To the significance of public opinion in this respect neither educationists, administrators, nor politicians have given serious attention. However wise we might be in identifying the components that make up an adequate education, unless that adequacy is recognised, understood and accepted by the public the response to what is provided will put the best of projects into jeopardy.

6. Apart from the possible mutual advantage to be gained from certain kinds of education as opposed to others, people recognise that some kinds of education provided greater opportunity of exercising power and authority. Education provides a man with the means of exploiting others as well as being of service. The farmers who cannot check the price lists are at the mercy of the produce buyer's agent. The man who is dependent upon someone else to interpret the printed instructions or regulations is at the mercy of dishonest officials. Administration is a more powerful field of influence than is a professional service career. In societies undergoing rapid economic, social and political change, aspirations are influenced by such considerations. If any kind of education gives advantages over other kinds of education in this way, then the shrewdest and ablest will seek ways and means of getting the education they deem appropriate.

7. The lesson that we have to learn from history in this respect, if we will, is that planning the provision, content and organisation of education to satisfy any overall objective without regard for the actualities of the socio-economic conditions, and without full appreciation of the purposes of education as understood by the mass of the people, is likely to prove ineffective. It may well be that the objectives and the plans for meeting them are wisely chosen, but of themselves they will not necessarily lead to success. In every case it is essential to accompany any educational reform with a programme of community education.

8. But to turn to our more immediate concern, namely, the formal school system in the rural community, it is necessary for us to examine what is involved with special attention

to agricultural development. In doing so it must be recognised that agricultural development is but one element in the over-all development. The movement from subsistence farming through market farming to industrialised agriculture is linked to the rate of development from a peasant economy to an industrial economy. This is a process which in past developments has been characterised by agricultural change following industrial change. In Western countries it is a process which has been going on over three centuries and which can be expressed in generalised terms as Malassis (1) has done by reference to population movement from agricultural to industrial employment. In the eighteenth century in Europe 80% of the population were engaged in agriculture and 20% in non-agricultural activities. In the nineteenth century the distribution became 50% agricultural and 50% non-agricultural activities, in the early part of the twentieth century the proportions were 20% in agriculture and 80% in non-agricultural activities, and currently 10% are engaged in agriculture and 90% in non-agricultural activities. It is unlikely that the rate of change will be anything like so prolonged in Africa, for apart from the political determination to accelerate development, the increasing integration of national and international economics provides a further accelerating force.

9. This means that education must be a process of educating for mobility. The belief that the purpose of the curriculum in the rural schools, whether primary or secondary, is to educate for rural living and that the provision of such education will help to stabilise the population is a fallacy. Industrialisation of agriculture and increasing industrialisation of the processing of the natural resources will continue to stimulate mobility and will make the need of a good general education for all increasingly important. Increasing industrialisation will, however, make it even more imperative that all must understand the nature of the natural environment and man's dependence upon the conservation of the land and its wise use of food production. From this point of view I would suggest that any policy which is based upon the idea that children in rural communities should learn agricultural skills as an integral part of their general education is a mistake. What passes for agricultural education in the primary school results neither in effective farming practice, nor in understanding of agriculture as an essential part of the economy.

10. Agriculture as a way of life, outside subsistence farming, requires someone who wants to buy the farm products, someone through whom the products can be sold, and someone who will produce the crops and animal products. In other words, in so

(1) L. Malassis, 'Development Economique et Industrialisation de l'Agriculture', *Economique Appliquee*, Archives de L'ISEA, Vol. XXI, 1968, p.4.

far as agriculture has a place in the primary school curriculum, it should involve providing knowledge and an understanding of agriculture as an activity demanding the co-operation of people with a variety of skills. I suggest that the primary school pupil who leaves school with the understanding that this approach offers is more likely to have some confidence in farming as a way of life than does the school leaver whose agricultural education has consisted of inadequate exercises in school gardening and watered down theories about plant physiology, rotating crops and the use of fertilizers.

11. Learning the basic skills of gardening and farming in a rural community is almost certainly better done in the traditional way of participation in the family activities than in the intermittent attempts of school farming. In so far as the school has a contribution to make, it is better made by co-operating with the family in their gardening and farming than by separate "school farming". If, with the support and co-operation of the family, pupils can be encouraged to carry out under supervision projects involving improved practices on family land and keep appropriate records from the initiation of the project through to the harvesting and sale of the produce, they are much more likely to appreciate problems and possibilities of farming developments. Furthermore such a procedure is much more likely to bring about fruitful relations between school and the community than is obtained from what, at present in most instances, passes for agricultural education. But the effectiveness of this or any other approach in giving 'agriculture' a place in the curriculum of the rural school will depend upon the competence of the teacher as a teacher and as a public relations officer. Furthermore, it will depend upon the readiness of the education officers, school managers, headmasters and the other teachers to collaborate and relate the rest of the school activities to the rhythm of the seasons. Too often the present organization of the school year and the school timetables militates against such collaboration. Instead of rural studies being the poor relation of the other subjects of the school curriculum, it must be recognised as an activity in which school, home and community come together. Instead of the teacher responsible for rural studies being regarded as a person of dubious qualifications and status, he must be so trained and equipped that he commands respect by the importance of the impact of his work on the parents as well as on the pupils. Instead of parent-associations meetings being somewhat artificial gatherings on the occasion of prize givings or school concerts, or occasions merely

to persuade parents help meet school deficits, school-parent relations should be built on the reality of parents and teachers sharing in the education of the children. In this sphere both have something to give which is directly pertinent to the life of the local community. Since farming is the backbone of rural life, it is of course important that children should be acquainted with the realities of current practice and the natural rhythm of the farming year. But, it is more important that they should come to an understanding of the requirements for agricultural development than to master those farming practices presently in use but soon to be put out of date. This presents a dilemma not easy to resolve. Indeed it cannot be resolved by the school alone.

12. The rural school programme must be linked with the farm development programme for the adults. The starting point for this element of integration lies not in the school itself but in the education of the farmers. It is essential that "farmer education" should take place where the farmers are, that is to say on their farms, and in their home villages. It must be directed to the farmers' current interests and needs, that is, how to increase and improve crop and livestock production, how to improve marketing and the margin between costs and returns.

13. Whatever specific unit of demonstration or instruction is being undertaken in the local community, there should be a counterpart programme at the appropriate time in the school. An example will illustrate my meaning. When the campaign was launched in Ghana to eradicate the swollen shoot disease and to encourage cocoa farmers to adopt spraying techniques to control capsid bugs and other carriers of disease to the cocoa trees, a programme was devised for both the primary and secondary schools. Two broadsheets were prepared which provided lesson material dealing with all aspects of the cocoa industry, its history, geography, economy and the appropriate elements of the botany of the cocoa plant. After the adult campaign was launched the schools were instructed to make a special feature of the study of the cocoa industry for one week. In planning the material for the primary and secondary levels attention was paid to the relative maturity of the pupils. At a time when the whole adult community was being approached on the subject by every available means of communication, and with attention to the particular interests of the different sectors of the community, in the schools the topic was dealt with in such a manner as to bring out the relevance of the cocoa industry to the survival and growth of the society. It provided a common

area of education for the young and the old. The occurrence of such national events are not frequent, but when they do occur there needs to be a corporate effort between the interested departments. At the local level such events are more common. Where agriculture or forestry extension services are systematically identifying projects for local programmes the education authorities should be apprized of them and collaborative activities should be planned and executed.

14. Turning from the primary school to the secondary school the issues are somewhat different. And here it is necessary to differentiate between the day secondary school in the rural areas and the boarding schools. The degree of school and local community co-operation possible where the school is a day school is different from that possible where the school is a boarding institution. In the former the majority of the pupils are likely to be from local families. In the latter, the majority of pupils are likely to be from families living outside the range of daily contact with the school. Therefore, there cannot be the same degree of co-operation between the school, home and neighbourhood in respect of the boarding school as there can be in respect of the day school. The home-farm pupil project approach suggested for use in primary schools cannot be effectively organised in the boarding schools.

15. But certain factors are common to day and boarding secondary schools in rural areas. They are concerned with the teaching of more systematised bodies of knowledge than are the primary schools. In the upper levels there is the beginning of specialisation, leading towards the first stages of vocational education. For those who are likely to go on to some form of further education the choice of subjects for study is in part determined by entry qualification requirements. For those who consider the possibilities of professional training in agriculture, the appropriate specialisation in the secondary school is not agriculture but the natural sciences and mathematics. In so far as the secondary school curriculum should include consideration of agriculture and the rural environment it should be an extension of general education about agriculture and the cognate subjects. This element of general education should be common for all in the first stages of secondary education. Whereas in the day secondary schools the home-farm project approach may still be possible for those who are considering agriculture as a possible way of life, this is not so in the case of the rural boarding school. For the boarding school the project approach involves the provision of facilities

for individual activities integrated with the school farm as a productive unit of the school plant. This is also necessary because school holidays frequently cut across vital procedures in the rhythm of husbandry.

16. For both the primary and the secondary school it is of the first importance to remember that a proper acquaintance with agricultural practice and analysis of selected experiences in connection with its development are likely to be more fruitful than ill-conceived attempts at comprehensive coverage of a watered down agriculture syllabus. Secondly, it must be recognised that laying foundations to both theory and practice of agriculture, and that is all schools can attempt, is a very different thing from providing vocational and professional training in agriculture. Many past failures and disappointments are due to the fact that school programmes have been pale imitations of vocational and professional training schemes. The weakness here has derived from the training the teachers have or have not received.

17. So far our considerations have been focused on the agricultural component of the rural environment and school practice in relation to it. The school-community relationship has been touched upon and also the agricultural content. But there are other aspects of the school in the rural environment which deserve attention.

18. One matter of serious import that affects the rural primary school is that selection for admission to secondary schools is determined by examinations which completely ignore the rural environment and any element of the school syllabus which reflects the rural environment and agriculture. With the best will in the world neither pupils, teachers nor parents are likely to take seriously the teaching of knowledge and skills which are seen to be totally irrelevant to satisfying the aspirations which dominate their interests at the first critical point in the careers of the children. However, to treat it as an examination subject is unlikely to improve the situation. Rather it will reduce agriculture to yet another rote-learning exercise, with the contents confined to the examinable data, presented in a way likely to produce good examination results.

19. This stricture applies with equal force to attempts at localising social studies. So long as selection for admission to secondary education is necessary and so long as the selection is based solely on examination performance, limited to certain skills and a body of knowledge which put local environmental

studies and activities at a discount, pupils, parents and teachers will give little heed to exhortations, syllabuses and even instructions to relate education to the environment.

20. The school in most communities is still seen to be a means of escaping from the rural environment and not as an institution to assist in changing the environment.

21. One of the ways suggested for integrating the school more fully into the local community is to make the village or district the focal point of all educational effort. This is an attractive idea which has had its counterpart in other situations. The primary school in Britain in the first three decades of this century was so used, evening classes for adults, local recreational and entertainment activities being organised in the local school buildings. In the Cambridge Village Colleges this idea was more fully developed. But the effectiveness of this line of approach is dependent upon the capacity and readiness of the people to respond to it. It also requires provision of furnishings and equipment appropriate to the needs of the different users, a provision that may prove too burdensome for many budgets. Even when such multi-purpose use of the local school is adopted it will not necessarily lead to the school functioning any better as an institution for bringing old and younger nearer to an understanding of each other or of the demands and opportunities of the changing society.

22. If the school is to become a more satisfactory social institution, equipping the young with the knowledge and skills for the morrow, whilst helping to maintain relative equilibrium between the past and the present, it must be realised that the teachers and the adult members of the community must understand what education and social change is about.

23. In these terms the reference to the word 'teacher' includes the teacher in the classroom responsible for the education of the children, the agricultural extension officer, health worker and any other professional workers concerned with adult education.

24. When the work of all these people is seen to be part of a single process, that of educating the community for change, and when their separate trainings are co-ordinated or at least based upon those elements of objectives that are held in common, and when machinery exists to ensure co-ordination of effort whenever it is appropriate, then the concept of the school integrated into the community will become feasible.

25. If this all too condensed an assessment of past experience and current needs is valid, then we must be prepared to experiment in new ways with our school and adult education programmes. It will not lead to any miraculous panacea for the ills, nor immediately solve the problems that beset us. Progress, at least initially, will be slow. There have been attempts in the past to co-ordinate the training of different types of worker, but they have added up to little more than a sharing of facilities and some sharing of instruction. Furthermore, this joint training should have been followed by allocating teams made up from people trained together, to a district or a community with a specific programme to be pursued in co-operation. The working out of such programmes will have many problems and complications, but could be attempted if there is the faith, will, and determination to pursue such projects.

26. An immediately practicable attack on the problem would be to select a district which by its geographical and human unity would lend itself to a team approach. The administrative service and educational authorities, together with the local representative bodies, would first have to identify items in the local development programme which possessed common and parallel elements and then determine what measures would have to be taken in respect of the content of the programme for the different sectors of the community. Thereafter, the methods of communication most appropriate for each sector should be chosen, the timing of the several operations determined, and the ways of effective co-operation should be assessed. Such a project would involve a good deal of collaboration at different levels in the community. It might well be necessary to conduct short training courses to ensure that the participants in the different sectors know the facts and skills to be taught and the techniques of instruction the particular communications require. The local school might well be the focal point of the work. The concept of the school as a service centre enunciated by Mrs, Helen Coppen in her paper Educational Media for the Development of Rural Education (Conference Document CRE (70) A/4) is particularly relevant to such a project.

27. Any significant extension of the approach suggested here would call for radical changes in the training programmes. It would also call for re-orientation in the approach to curriculum reform and development in the schools and give more point to the demands for systematic in-service training for teachers. The functions of the inspectorate and school supervisors would have to be reviewed.

28. I suspect that at this point, if I have succeeded in holding your attention, many of you may have decided that this is revolutionary nonsense, or remembering my professional status, that I am engaged upon ivory-towered speculations. To which I would reply that after fifty years of good intentions, and, for the most part, abortive attempts to relate the school and the community, there may be some justification in a revolution. In fact there is nothing very revolutionary in any of it. Many of the past efforts have had one or more elements of this approach in them. What has been lacking in the past has been a consistently co-operative effort over a long enough period. Eight things are required:

- (a) There must be a clear understanding of the nature of the school as a social institution which is influenced by and in turn influences the other social institutions. This means that the educational policy and the programme for implementing it cannot be treated in isolation if it is to make its appropriate contribution to socio-economic development.
- (b) Effective integration of the school as an institution with the other local social institutions will involve positive social education of the adult members of the community.
- (c) There must be much more flexibility in the structure and the process of formal education and it must be much more informed by the specific educational efforts in local development.
- (d) All the people involved in the education process, administrators, teachers, and the local adult community, must co-ordinate their efforts. This will involve re-thinking the training programmes of teachers, extension workers and the like.
- (e) If the school is to become community centred it will be necessary to rethink the design and equipment of the school.
- (f) The significance of the rural environment and the fundamental character of agriculture is the first priority in the education programme in the school but it must be accepted that vocational training is not appropriate to general education at either the primary or the secondary level.

- (g) A project approach to an integrated programme in selected districts is probably the most useful immediate step that can be taken to bring about an understanding of how best to integrate the school and the rural community.
- (h) Any attempt to carry out such a programme will involve re-examination of the content and methods of the education provided, and of ancillary matters such as selection for further education and supervisory activities.

29. These reflections have been concerned with the problems of the school in the rural environment. But it must be recognised that they apply too, albeit in a different fashion, to the urban environment. All children should learn about the growth of plants and animals, how food is produced and marketed. All need to have a general understanding of how agriculture, industry and the social services are interlinked, All communities need to be involved in the educational process of the community both for the young and the old. And it must be clearly understood that the machinery of education is only as effective as are the executive agents. These are the teachers, whether in the classroom, the farm demonstration unit, the health clinic or the discussion group in the market place or under a tree.

30. The past record of partial attempts and failure to integrate the school with the community and to relate the education provided to the interests of the rural communities suggests that development efforts need to be re-orientated. If as is suggested, ignorance of critically important factors have prejudiced success in the past, then it is clear that particular types of study, investigation and pilot projects are necessary.

31. In the past there has been failure to appraise correctly in advance the responses particular projects and measures were likely to elicit. These responses can be assessed only in the light of all the interrelated factors, social and economic as well as environmental.

32. In the past the incentives provided have not been related to the aspirations of the people for their children. Furthermore insufficient attention has been given to the qualifications, skills, knowledge and the attitudes of the people involved when attempting to relate the school to the community and the environment.

33. There is need for research to identify the constraints, social, administrative, economic and professional that have inhibited past and current attempts to relate the school and the community.
34. The training and education of all concerned must be such that they become characteristically receptive to change.
35. Much more effort must be made to establish a habit of co-operation, by harnessing the 'sense of community' characteristic of African society to the service and the exploitation of the new institutions.
36. A solution to the problems of mobilizing, training and utilizing the human resources in the community must be found and ways discovered of inspiring an effective team approach to the education of the adults and children in the community.
37. And not least in importance is the need for conviction on the part of all concerned for a concerted and persistent effort based upon an appreciation of the role of the school as providing (1) a general education, (2) understanding of the fundamental values upon which the stability of society is dependent, and(3) the dependence upon the land and the links between agriculture and industry.
38. In order to bring about these necessary changes, there must be an end to departmental rivalries, so that planning and executive action can be integrated at ministerial, regional and district levels. At the same time the adult community itself will have to be educated to respond with understanding co-operation.
39. Crucial to the success of such a plan to change the rural school is the training of the teachers in the schools and the extension workers, in agriculture, forestry, the health services, community development and social welfare.

OUT-OF-SCHOOL EDUCATION AND TRAINING OF YOUNG
PEOPLE

by Archibald Callaway,

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I. PLANNING EDUCATION IN A WIDER CONTEXT

1. During the past two decades in developing nations throughout the Commonwealth, much emphasis has been placed on expanding and improving formal education systems. In many countries primary education facilities have been widely extended into rural areas where no schools existed before. More secondary schools and technical institutions have been established. New universities have been created. This achievement has been an exciting one in giving the opportunity for modern education to many more children and young people and in creating the high-level manpower needed to plan and to put into operation hopes for quickened social and economic development.

2. Yet the expansion of formal education has in itself contributed to the growth of new social tensions: particularly that of widespread unemployment amongst school leavers. In many countries it is the rising number of jobless primary school leavers who present the most urgent problem, but in some cases secondary school leavers and university graduates have increasing difficulty in finding work that matches their educational qualification and their aspirations.

3. With such emphasis on formal education, an area relatively neglected has been out-of-school education and training or, as it is often called, non-formal education - that is the array of learning activities going on outside schools and universities. These include programmes of literacy for youth and adults who have had little or no formal schooling; apprenticing and on-the-job training; in-service training and continuing education for those with professional qualifications; extension programmes for agriculture and small-scale industries; and a

wide range of educative services designed to encourage community development.

4. While attention has been given to specific types (by governments, voluntary agencies, and U.N. Specialized Agencies), little attempt has been made to look at out-of-school education as a whole - to discern its dynamics in meeting needs of changing societies, to see its complementary links with formal education at all levels, and thus to bring it within a comprehensive strategy of educational planning.

5. To some extent, new perspectives on formal education have revealed the importance of out-of-school learning processes. For example, efficient performance in specific occupations requires differing proportions of formal education, specialized training, and experience. The contributions to this long-term educational process by schools and universities, on the one hand, and by programmes of out-of-school education, on the other, need to be more closely examined. New priorities may well emerge.

6. Again, investment in out-of-school education is a substitute for, or an extension of, investment in conventional schooling. Thus, certain problems in the use of resources and of curriculum within formal education cannot be adequately dealt with unless there is more understanding of the objectives, the content, as well as the costs and returns, of these other types of education.

7. Consideration of out-of-school education is particularly vital for educational planning in the developing nations of the Commonwealth. Here, rising populations against backgrounds of low average economic productivity, poor general health, ineffective communications, often marked ethnic differences, present special problems. Out-of-school educational arrangements have often arisen in piecemeal fashion to meet these problems, such as to provide literacy courses for those who have had little or no classroom experience. Organizers of community development have set up educative services as a means of awakening groups of people to the possibilities of self-help. Since these developing nations have particularly scarce resources of finance and of teaching and administrative abilities, action is urgently required that can lead to improved balances among public and private investments in education of all kinds, geared to national objectives for development. At least the more important kinds of out-of-school education should then be brought within the

procedures of national educational planning.

Types of out-of-school education and training

8. Meaningful typologies of different kinds of out-of-school education and training can be achieved. This should be our first task. They depend, however, on the purpose in mind and may be constructed by alternative criteria and procedures. Categories could be created, for example, according to the occupational groupings of those who receive the education (whether administrators, teachers, other professionals, workers, self-employed, etc.); by duration of the education process (short or long courses, continuous or sporadic); by material taught (general, civic, technical); or according to whether the learning substitutes for, or extends, courses in formal schools.

9. For present purposes, three categories are used:

- A. Preparation for occupations;
- B. On-the-job training;
- C. Education for community improvement.

10. Programmes under these three categories are directed towards young people who have completed primary schooling, those who are "dropouts", and those who have never been to school at all. With rising populations the difficulty of finding finance for meeting capital and recurrent costs for more schools many developing nations are finding it difficult to reach the objectives of universal primary education. For example, in tropical Africa as a whole, more than 60 per cent of today's school-age children receive no formal education at all. They gain education, of course, in the traditional manner. While growing up they learn the values and responsible behaviour sanctioned by their communities and they get specialized vocational training through customary apprenticeship patterns. But this is not an education leading to emphatic social and economic change. The first question is: what types of modern out-of-school education can best supplement the traditional learning which these children receive in their homes and villages?

11. Where formal education has been established, new problems emerge: the impact of modern schooling within the setting of customary work and social life in villages, stepped-up migration of youth from rural areas to towns and cities, the aspirations of these job-seeking school leavers. The second

question is: what part can out-of-school educative activities take in providing skills to enable youth, who would otherwise be unemployed, to take up existing jobs or, much more important, otherwise to self-create new jobs?

12. In rural areas (and in towns and cities,too) group activities - such as youth clubs, young farmers' clubs, apprentice guilds - promote leadership, awareness of civic responsibility, and may be slanted towards vocational improvement. How can these group activities be spread more widely?

13. In the last decade, to meet the problem of large numbers of unemployed and relatively untrained youth, programmes for national youth service have been started in countries of Africa, Asia, and Latin America, mainly for rural areas. These provide general, civic and technical education while allowing for organized contributions by youth to national development through community services, chiefly in rural areas. What are the costs and returns of these programmes compared with alternative ways of achieving the same results?

14. Finally, there are the educative services in rural areas devoted to the creation and improvement of community programmes for social and economic development. While these are directed mainly towards adults, young people participate at certain levels and of course benefit from the enhanced community life. These programmes may be run by the participants themselves; by local or central governments, voluntary organisations, or by combinations of these. They include training in planning and carrying out projects such as building market stalls, community meeting halls, access roads, maternity clinics. For women, there may be instruction in health, sanitation, nutrition and child care. This non-formal education for community development has evolved from the obvious fact that since no government can provide the amenities so sorely needed by local communities, economies in the spread of available resources can be achieved through programmes which step up local enthusiasm and organisation for self-help and which permit a closer, creative alliance between local communities and governments.

OUT-OF-SCHOOL EDUCATION AND TRAINING FOR YOUNG PEOPLE

A. PREPARATION FOR OCCUPATIONS

- courses for those with little or no formal schooling literacy and numeracy, civic and vocational education.
- courses which extend general or pre-vocational schooling (post-primary or post-secondary instruction in non-official secretarial schools and technical workshops; military technical training; pre-work training provided by commercial firms or voluntary organisations; correspondence courses).

B. ON-THE-JOB TRAINING

- training for young women in poultry-raising, growing vegetables and other crops considered suitable for women, processing agricultural products.
- apprenticeship training in low - or intermediate - productivity enterprises (in crafts and small business located in towns and cities, such as carpentry, mechanics, tailoring, building trades, printing).
- apprenticeship training in high-productivity enterprises (in agriculture, industry and services, run by governments or private concerns).
- courses for junior workers, usually short-term, which extend pre-vocational education and/or apprentice training.

C. EDUCATION FOR COMMUNITY IMPROVEMENT

- group activities out of school (youth clubs, young farmers' clubs, apprentice guilds which - in addition to social objectives - promote leadership and awareness of civic responsibility and may also be aimed towards vocational improvement).

- national youth service programmes (providing general, civic, or technical education while allowing for organised, disciplined contributions by youth to national development through community services, chiefly in rural areas; for example, Ceylon, Agricultural Development Corps; Guyana, Youth Corps; India, National Cadet Corps; Kenya, National Youth Service; Malawi, Young Pioneers).
- educative services to encourage self-help for communities (provided by governments or voluntary organisations working through central village authorities or groups based on kinship, religious affiliation, or occupations; includes training in planning and execution of projects, such as market stalls, community halls, access roads, maternity homes and clinics).

Characteristics of out-of-school education and training

15. (1) The diverse types of non-formal education do not comprise a "system" but rather a set of "sub-systems" that complement the systems of formal education.
- (2) For national educational planners, the boundary is a shifting one between what may now be considered as formal education and these many complementary types.
- (3) Responsibility for the running of out-of-school educational programmes is diffuse, consisting of public control (by central or local governments, statutory corporations, military establishments), private control (by firms, voluntary associations), or combinations of these.
- (4) Some non-formal educational institutions are closely disciplined with regular timings for instruction and with modern technology, equipment, and texts. Others are less well disciplined, irregular, and less modern in out-look and performance.
- (5) The relative emphasis on theory and practice differs in the varied programmes of out-of-school education. So, too, the ages at which people are involved as learners, the length of courses, and whether classrooms are used. Almost all are based on voluntary attendance (an exception perhaps being military technical training).

(6) Documentation on enrolments, teachers' and leaders' credentials, successes of those involved in learning, and costs, is scarce.

(7) Teachers may be specifically trained for their tasks (as, for example, of functional literacy) or have only professional qualifications that do not include training as teachers (field officers of agricultural extension).

(8) Investment in particular types of out-of-school education may have more pronounced effects on economic productivity and social change in the short run (for example, courses in training while working) than is the case with formal schooling. Opportunities for such education, however, may fluctuate (for example, with private firms where on-the-job training may depend on the state of business activities).

(9) Most kinds of out-of-school education are directly functional to the needs of economic and social development.

II. TRAINING OF YOUNG PEOPLE FOR RURAL DEVELOPMENT

16. Development societies today are in a state of profound disequilibrium. The distribution of public goods (roads, water supplies, hospitals) markedly favours the urban areas. The few high productivity, high-wage establishments stand out incongruously against the background of the myriads of low-productivity, low-income family farms and small-scale economic units in trading, transport, and crafts. The returns to economic effort in urban areas are out of alignment with those for rural areas. Similarly, there is an extreme difference in income between those who have secondary or higher education and those who have only primary or no classroom education. Clearly, drastic price (including wage and salary) adjustments are being called for.

17. Economies are developing neither at the rates nor in the direction needed to provide suitable training and work for the millions of young people now coming to maturity. Even one per cent less in attainable economic growth - making possible more widespread, immediate economic opportunities for the yearly influx of young aspirants to the labour force - may prove a small price to pay for social stability, especially if this makes good long-term economic sense. Children born today are primary school pupils of the 1970s, young workers of the 1980s, adults of the 1990s. Thirty years, to the year 2000, is not too

long when planning human resource development. With these perspectives, planning for rural development must take place.

18. Getting underway a sustained movement for rural development depends on many inter-related improvements: in techniques of production and marketing, in credit provision, in transport, possibly in land tenure and consolidation of holdings, and, above all, in management and organisation of resources. Some of these changes may result directly from market forces: for example, from the rise in price of a particular product. Others may be encouraged by government policies, such as subsidized fertilizers or credit facilities. But it is rural people themselves - by grasping new incentives, by gaining new knowledge and putting it into practice - who make the greatest contribution in this drive towards rural improvement.

19. How do farm families learn new methods? They emulate neighbours who have adopted a new variety of seedling or a new procedure in marketing. At social meetings or in local markets, they find out who has good yields of high-quality yams or maize and what led to this result. They may travel to another area or to a neighbouring country where they see more advanced, more profitable, ways of doing certain operations. Through the aggressive salesmanship of a commercial firm, they may learn about the value of fertilizers or insecticides. They listen to radio talks in local languages put on by agricultural extension. They may observe government demonstration plots to take part in classes which explain the new techniques involved. Like practical people anywhere they don't usually bother about new ideas unless they can see some definite payoff: a higher money income, better living conditions, a more appetizing diet, or less back-breaking work to gain the same results.

20. Whether rural people take up new ideas quickly or slowly depends on the particular environments. Among Commonwealth nations there is a great variety in social and economic conditions. Even within one nation there may be many environments. Different natural resources mean contrasts in wealth and poverty; some areas have cash crops, plentiful land or mineral wealth; while others have only subsistence farming and perhaps a shortage of fertile land. Different groups of rural people vary in their traditions, their ways of living, their initiatives and their responses to incentives.

21. While most developing countries are trying to improve the performances of adult farmers and other rural producers through agricultural extension and community development projects, it is generally assumed that widespread rural transformation can be hastened by investing in the education and the training in specific skills of the generation of young people.

22. In recent years, emphasis has been placed on expanding primary education as a means of achieving literacy among youth and for promoting the flexibility necessary for social and economic development. At the same time, some specialised post-primary courses (still mainly experimental) have been set up to train young people in modern practices of farming, in skills required in rural crafts and small industries, and in management techniques for these farms and small firms.

23. It is true, of course, that primary schooling with perhaps some extra training in skills cannot be said to equip young people for full-scale control of resources in the rural areas, either as farmers or as small-scale entrepreneurs. They do not have the maturity. They will have to put in further years gaining experience under supervision on the family farm or as apprentices with rural master craftsmen. After that they have ahead of them thirty or forty years of productive working life. Thus, such basic education and training in skills for rural youth must be counted as a long-term investment, the results from which may be delayed for quite a long period.

24. In many areas, however, the experience of primary schooling has meant (at least in the short run) that youths reject rural life and migrate to cities in the hope of finding wage-paid jobs. This is understandable. Movement of peoples, including school leavers, to major towns and cities in search of better opportunities may indicate alertness and be a sign of progress. But the presence of rural school leavers who remain for long periods in urban areas without jobs is an alarming commentary on the difficulty of tackling rural development in a sufficiently realistic way.

25. This widespread unemployment among school leavers - at the same time as literate people are needed in pushing ahead with rural advancement - obviously doesn't make sense. What kinds of specialised training and what kinds of incentives then should be given to rural school leavers to encourage them to settle in home areas and to use their newly-won literacy and skills in improving agriculture and community life?

Upgrading skills for youth who have never been to school

26. Young people who are growing up are exposed to either one or both of two distinct learning processes: the first comprises the various traditional forms of learning; the second, the disciplines of modern classroom education. Traditional learning through a variety of means, passes on from one generation to another the values and skills of the older societies. Modern classroom education has existed for varying periods in different nations of the Commonwealth. Both learning processes play their part in transmitting cultural values and knowledge and in preparing youth for undertaking their life vocations.

27. At present in the developing nations of the Commonwealth, percentages of children gaining formal primary education vary widely. A number of countries have more than 80 per cent of school-age children in classrooms, some less than 20 per cent. Clearly, any appraisal of the specialized training needs of youth for rural development must take into account all youth - schooled and unschooled, young men and young women - and the varied processes of learning, both in the classroom and out.

28. The overwhelming proportion of youth in developing nations grow up in rural areas. They are the sons and daughters of farmers, fishermen, craftsmen, traders. The characteristic form of rural enterprise is the self-employed family unit: the farm, the craft or artisan workshop, the stall in the market, the small-scale unit processing farm products, the small transport business. Boys and girls who do not have the opportunity of attending primary schools usually become "economically active" by the time they are seven years old. In fact, for many children the transition from helping with duties inside the family and beginning to work purposefully is imperceptible. They learn on the job by taking on more difficult tasks. They may follow the occupations of their parents or they may be apprenticed to relatives to diversify their training.

29. The variety and strength of these enterprises in particular villages and townships in the rural areas depends, of course, on cultural elements, but even more on the level of local money incomes. According to locality, young apprentices are found spending long hours in markets, in workshops, on building sites, in motor parks. They learn to make clay bricks and concrete blocks, to build houses and to repair cars and trucks.

They acquire the techniques of working with wood (carvers, carpenters), with metals (blacksmiths, tinsmiths, goldsmiths), with leather (shoe and sandal makers, tanners), with cloth (tailors, seamstresses), with raffia and cane (hat, chair and mat makers).

30. The distinction is sometimes made that these learning processes are static, passing on only traditional skills, while modern education and training alone provide the dynamic necessary to transform societies. Such a sharp contrast is misleading, particularly when it can be easily shown that new techniques and new skills are being infused through this apprenticeship system. What is clear, however, is that parents and masters cannot teach skills to their children or their apprentices which they do not themselves possess.

31. It follows, therefore, that any assistance to raise the technical performance of adults - for example, through agricultural extension or through technical assistance given by visitation or through short courses - will eventually help these young learners. This is an indirect means of helping youth: to raise the skills of fathers and masters is to help sons and apprentices. Add to this can be such direct means as short courses for young men in certain technical lines or particular aspects of farm work, or for young women in poultry-keeping or sewing.

32. Similarly, experiments in introducing "functional literacy" for adults with the objective of combining instruction in literacy and help in heightening productivity in a particular line of work can also have meaning for unschooled youth, either by taking them later as adults or by extending the programme to younger people.

School leavers and rural occupations

33. Vocational training for rural school leavers must necessarily differ from that for unschooled youth. Because of six to eight years in the classroom and of aspirations linked with acquiring literacy, school leavers have - in some measure - lost the continuity of rural life. They may not have learned the traditional skills which the unschooled youth in their age group have likely mastered through constant practice. In any case, school leavers want to apply themselves to something (however vague in their minds) more modern. Although they may be well aware that wage-paid jobs are scarce in the cities, they do not

see any models for building a life's work in their home areas. The problem of helping rural school leavers, then, is not only to provide vocational training but an associated plan in helping to get them established in rural occupations. Eventually, patterns will emerge which school leavers will recognise as the steps for successful careers.

34. Where vocational training has a known outcome with wage-paid jobs in modern rural establishments, there has been considerable success. On completing their courses, the trainees may become tractor drivers, mechanics, or technicians on large plantations or in modern processing industries for farm products. But where training is given without being tied to specific jobs with the intention that trainees find opportunities within traditional family farming and other rural small-scale enterprises, there has been only limited success.

35. Post-primary vocational training for rural occupations may be classified into two main types: (1) A course of instruction in farm or technical training for one or two years (with or without later help in settlement), (2) Training on the job either on farms or in workshops, supplemented by assistance from extension workers through regular visits or by short courses of a few months' duration on specific production processes.

36. An example of low-cost farm training takes place in the northern states of Nigeria where mature school leavers from farm families with available land attend farm institutes for one growing season. Their course includes one-third classroom instruction and two-thirds field work on the more modern processes for crops best suited to the particular area. After their training, the young farmers settle on their home land with supervision from local authorities and assistance with seeds, fertilizer, and in some cases credit for a bull and plough.

37. In Midwestern Nigeria groups of school leavers have settled on contiguous plots on unused land allocated near their villages. Here, agricultural extension has provided advice on improved seedlings and methods of planting, as well as making small monthly payments on the pioneer farms to assist the youth while they wait for their tree crops to come to production. These modest settlements show signs of success because they are not breaking the continuity of social life with the villages to which the youth belong and yet they offer a means for young school leavers to get sustained help from agricultural extension while they tackle common problems together in improved farming.

38. Beginnings have been made in many countries in providing training for rural youth both through vocational courses and through extension help for those trying to establish themselves. In some areas, voluntary agencies contribute such training side by side with government services. Because of shortage of funds and of qualified instructors, the choice of the type of training to be set up depends on whether the objective is to help "the few" intensively at relatively high cost or to help "the many" with less thoroughness but at lower cost for each individual.

39. In summary, rural small-scale industries (with training on the job for apprentices), producing goods and services for farms and households, must be given new impetus. More low-cost programmes for making improved farmers of rural school leavers need to be set going. There is a danger that the concentration of resources of finance and manpower in establishing expensive land settlement schemes divert planners, administrators and technicians from the far more urgent task of getting the masses of rural youth into useful local employment. Big settlements, which estrange youth from their cultural setting and create "centres of privilege" lead to many sociological problems. Better, therefore, to devote more drive towards projects that are high in self-help and low in public cost, that can be proliferated. Work along with and spread the "nuclear efforts" of many small projects. Self-help community projects also need strong encouragement with, in some instances, help in planning and provision of materials by local authorities.

III. YOUTH ACTIVITIES OF A SOCIAL AND CULTURAL NATURE

40. Every nation has a wide variety of institutions and programmes promoting the welfare of young people. Some of these derive from traditional life and social organization, such as a dance group formed by a particular age-set of young women to perform at local festivals. Others are contemporary modifications of traditional associations: for example, savings clubs among city youth based on clan relationships. Others still are comparatively modern in origin and purpose, perhaps related to schools or churches or mosques. Some have international or regional affiliations, such as Boy Scouts, Girl Guides, YMCA, YWCA.

41. The objectives of these associations vary widely, but they have certain effects in common: they foster a feeling of belonging to a group, give a sense of direction and purpose, provide experience for youth in organizing their own activities, develop discipline and a heightened sense of self-respect. Some clubs encourage the improvement of domestic skills for women, such as homemaking, child care, sewing, knowledge of hygiene and nutrition; of occupational skills for young men, such as young farmers' and young fisherman's clubs; of abilities in sports, such as swimming or football groups.

42. Some of these clubs provide badges for identification or as proof of special achievement. Sometimes uniforms are part of the show, or a particular article of clothing (perhaps a hat or head scarf) worn by all members. Competitions of various kinds may be part of the activities which stimulate higher performance.

43. All of these clubs for youth are important and need further emphasis, particularly in those rural areas where traditional forms of recreation and association have disappeared and no new forms have taken their place and in cities where so many young people are displaced from their home communities. They are significant for boys and girls in their early teens (from 13 to 15) as well as for older youth. Those organizations which are relatively low-cost may need encouragement to become self-perpetuating and self-multiplying. They are worthy of the extra administrative attention from voluntary organizations and from governments.

44. These programmes can be of considerable benefit to growing boys and girls in moulding their attitudes to work and training and thus stepping up performances in development

IV. THE EDUCATION AND TRAINING OF YOUNG PEOPLE FOR NATIONAL DEVELOPMENT THROUGH NATIONAL YOUTH ORGANIZATIONS

45. In response to urgent local situations, many Commonwealth nations have set going special training and work programmes for youth. Largely a phenomenon of the 1960's these programmes have come into being as experimental and exploratory measures in time of great national need and represent a distinct break with customary methods of meeting the needs of youth for civic education and specialized training. They are administered separately from systems of formal education. And they don't have much in common with the familiar boys' and girls' clubs. Most of these national youth services programmes provide facilities whereby trainees can make a disciplined contribution to national development through work projects which may take a few months or stretch over a period of one or even two years. In others, the service to the community arises from leadership, chiefly in rural areas, after a period devoted mainly to training. Almost all the programmes are rural oriented. A few only cater for young women.

Examples are: Ceylon, Agricultural Development Corps; Guyana, Youth Corps; India, Bharat Yuvak Samaj, National Cadet Corps; Kenya National Youth Service; Malawi, Young Pioneers; Zambia, Youth Service.

46. Why are these special programmes considered necessary? One commanding reason is the existence of jobless youth, particularly school leavers. Another and related reason is dissatisfaction with the capacity of usual classroom education to produce well-disciplined youth, devoted to the nation's cause, who can demonstrate a new spirit towards work and society. Again: those who receive higher education paid for largely by the masses of the people should in turn learn at first hand, through some form of community service, the nation's problems of illiteracy, poor health, and lack of development.

47. These explanations were given in response to questions posed for a meeting on national youth service programmes held in 1968 by the I.L.O. in Denmark.

Ceylon: "The sheer magnitude of unemployment among youth justifies the need to create additional employment opportunities to contain the problem until such time as a long-term solution can be effected through development plans."

Guyana: "About 20 per cent of the working force is unemployed; school leavers who represent a high proportion of the jobless, are out-competed in the employment market by adults with families; the result is the creation of 'social rebels' and delinquency."

Zambia: "There is need for an agrarian revolution. The rate at which our youth can be absorbed into the agrarian society depends on the ability of the rural economy to produce a monetary return equivalent to wage-earning in urban areas. We still have a problem of how to take a young man whose contact with urban life has inflated his desire for the things that only money can buy, and re-integrate him into an agrarian society which still lives at a depressed economic level not far above subsistence."

48. For Commonwealth nations as a whole, it is probable that the total youth in national service of these kinds is not greatly in excess of 100,000. Leaving aside the university students, community service, what is the validity of helping limited numbers at considerable cost in public funds within training-service or training-service-settlement programmes? One answer is that service youth later become demonstrators or initiators; they provide leadership in their communities. They set an example that make follow-up policies, designed to help others, easier. The vast numbers of youth will then have a set of models of what can be aimed for.

49. One great difficulty, however, in general statements about national youth service programmes is their diversity. A meaningful typology would be difficult to achieve and probably

of no significance when completed. Differences exist in age and education on entry; in the length of education/training and service periods; in methods of civic education and training; in the style of community service; in arrangements, if any, for settlement later. Kenya's highly-capitalised scheme--with heavy earth-moving equipment, stone crushers, large trucks, and with substantive training courses for creating mechanics, masons, drivers, clerks--is of a different magnitude, for example, from more modest schemes elsewhere.

50. These special youth programmes provide a supplement to other training in rural skills in the countries concerned. The difficulty, however, in evaluating the experiences involved is that far too little time has passed to enable realistic assessments to be made. Many of these programmes were hastily set up in emergency conditions to help meet the problems created by unemployment among school leavers and the exceptional flow of rural young people to the cities. Because of the urgency, the plans often started off large-scale with no time taken for pilot experiments.

51. On economic grounds, many of these programmes are open to criticism for their high public cost and their diversion of scarce capital and administrative talent from more urgent development tasks. From the point of view of the youth concerned, there is difficulty in offering the specialization and rewards for work which help to spur self-improvement. And certain questions are still open: What happens to youth once their courses of training and work within the service have finished? Have the conditions of these camps or special schools made them better able to meet the competition of the job market? Are those from rural families more or less willing to undertake farming or other work in rural areas? Only after some of these answers are known can the effectiveness of these programmes be realistically evaluated. Against these economic appraisals should be weighed the less measurable social gains of improved personal discipline and attitudes towards society and of practical expressions of patriotism.

52. At the present stage, much is known about benefits, or hoped-for benefits, of national youth service programmes. These private and social benefits should now be related to the costs of alternative ways of achieving the same, or better, results.

V THE NEED FOR, AND THE PRACTICE OF, ACTION
RESEARCH AND EVALUATION

53. (1) To identify and classify processes of education outside formal schools and universities and to examine their explicit and implicit objectives.

(2) To reveal the links existing between these types of non-formal education and formal classroom learning, the needs of employment, the directions of social change.

(3) To evaluate the benefits in relation to the costs of these processes of out-of-school education and training in their transmitting of basic knowledge, technical skills, and attitudes towards work and society.

(4) To discover how the components of general education, pre-vocational education, and vocational training for meeting national requirements for specific occupations should most usefully be divided among formal education, specialized training, and on-the-job training arrangements.

(5) To find ways by which out-of-school education and training can help the transition from school to work (thereby reducing the numbers of unemployed youth).

(6) To look into administrative arrangements for various types of out-of-school education and training in order to find ways for integrating related efforts.

(7) To examine the supply and training of instructors and leaders for out-of-school educational activities.

(8) To look into methods and materials for bringing non-formal education to masses of people, such as chain processes (those who can read, teach others), radio, printed materials in local languages.

(9) To assess the value of international exchange of experience in particular lines of out-of-school education and the priorities for international aid.

VI. CONCLUSION

54. In the developing nations of the Commonwealth today, only about five per cent of the labour force hold steady, wage-paid employment within modern establishments. The overwhelming proportions of the working populations live in rural areas and work within low-yielding family farms and small-scale non-farm enterprises. Economic progress is bringing about an expansion of modern industries, but their employment absorption for many years will remain low compared with the total employable population. This is one reason why efforts are being made to create a more progressive rural economy and thus provide more productive and rewarding opportunities for both adults and youth.

55. One of the central factors in achieving rural transformation is the spreading of ideas and techniques among rural producers. In designing programmes for bringing education (and training in specific skills) to rural families, education must be considered in its wider context--not only as formal classroom learning but also as including the many educative influences that modern communications can bring to rural producers, especially through government extension, short courses, and other services. Radio talks in local languages, film strips illustrating new techniques, mobile film units providing new insights--all of these have a part in directing a new energy into rural life.

56. The major issues of education planning for the rural areas are: determining the total of the nation's resources that can be used for rural education as a whole; distributing this total among the various types of education for both youth and adults; and finding out the most efficient ways for obtaining the highest pay-off from the different methods used. Direct investment in the education and training of rural boys and girls must be balanced with investment in the education of their parents. This total spending on education must also be balanced with other investments in the rural economy such as providing subsidized fertilizers or building roads, bridges, markets.

57. Within this context, the significance of out-of-school education and training of young people--complementary to formal schooling--will be seen as paramount for the years ahead.

ADULT EDUCATION AT ALL LEVELS

by

SHRIMATI LAKSHMI MENON

1. Education for rural communities, including food production and preservation, health and nutrition education, family planning and education in child care, elementary bookkeeping, community leadership.

2. We talk of education for rural communities on the assumption that their needs are different from those of urban areas. To a large extent this has been the bane of our programmes - programmes devised by urban planners for rural people. It is true there is vast disparity in the progress and development of these areas; but these differences are being gradually and irrevocably minimised by easy communication and the need to increase our food production. The tendency among rural communities in India is not to maintain the semi-isolation in which they live and their special characteristics, but fall in line with urban ways. That is why the cream of the rural population desert their village homes to seek opportunities of education and employment in urban areas. A totally different kind of education-craft oriented basic education - was evolved and tried in the late thirties and early forties in India on the crest of the national struggle for freedom. It met with temporary success and died a natural death when it was abandoned in preference to the much-maligned existing system.

3. The purpose of any educational system should not be to perpetuate differences among groups and communities but forge ever-growing bonds of unity and understanding among them. The moment the rural community feels that it is offered a different kind of education it is bound to think it must be something inferior designed to keep it in perpetual bondage. "Are our children always to plough the land while your children are trained to rule us" asked an angry rural youth to the urban leader pleading for the Basic system of education. It is necessary, therefore, that any system of education planned for rural communities should take into account the sensitiveness of people who are denied the essentials of life enjoyed by their counterparts in the cities. Hence rural education should be so framed and administered that the purpose of unity and the need for integration are kept in focus.

4. Far from regarding rural India as different from urban India, I would rather think of it as the under-developed part of a rapidly developing country. Just as developed nations offer various kinds of aid to bring backward countries into line with them so also states should so devise their plans for education that rural areas and communities may reach the desired parity.

5. The next important question is why do we want adult education for rural communities. We are told that in 1960 there were 740 million adult illiterates or 39.3% of the total adult population of the world, and that in 1970 their number will go up to 800 millions. A good proportion of this group belongs to India. Our literacy figures reveal that there is a vast difference in the rates of literacy in urban and rural areas as well as for men and women. 76% of India's population over the age of 5 are illiterate. Of this 60% are males and 87% females. Literacy rate has gone up from 19.1% in 1951 to 27.4% in 1961. While it has gone up from 34.6% to 47% in urban areas, in the rural areas it was only from 12.1% to 19%. As far as female literacy is concerned the rise is from 7.9% in 1951 to 12.8% in 1961. The census of 1971 may reveal further progress but it is very doubtful whether the gap will be narrowed to any considerable extent as the progress is likely to be neutralised by growth of population. As it is we find that while the number of literates has gone up from 60 million in 1951 to 103 millions in 1961, illiterates also have gone up from 249 to 269 millions. This of course does not take notice of the vast numbers, in some places as high as 60% of the first year, of those enrolled who drop out and lapse into illiteracy for want of reading material or interest in keeping up the ability to read and write. It is against this rather depressing background that we have to view the problem of adult education for rural communities.

6. The second reason why we want adult education for rural communities is that India is committed to democracy. In a democracy it is necessary that important decisions and policies must have people's support to be effectively implemented. They must also be made an integral part of an enthusiastic national venture for better living. This is not possible today. People's enthusiasm cools when they realise that it is a tiny minority of 1% or 2% which determines our social policies, economic programmes and political beliefs.

7. In almost all the developing countries the attainment of political freedom is identified with the achievement of economic prosperity. Economic prosperity is not possible unless people

are educated to grasp the problems confronting them and find solutions for them.

8. These policies and programmes, however well-intentioned, however clearly formulated, however conducive to public good, will feel fail to rouse the enthusiasm of the people if they are not intelligently informed about their implications in daily struggle for living. Today, our government have to struggle with difficulties such as lack of understanding, conservatism and resistance in the form of unwillingness to co-operate. The magnitude of the problem as well as the difficulty of finding a solution may well be imagined.

9. Thirdly we have to take into account the limited resources for educational expansion in developing countries like India. The argument whether priority should be given to industrialisation, food production or education is not valid as all the three are equally important and closely related. Agricultural improvement demands better techniques and scientific knowledge and these can be had more easily with adult education. Political stability, economic development and social progress are so inter-related that without education and training in citizenship it is not possible to achieve any one of them. Lack of adequate financial resources to meet heavy educational demand insists that alternative programmes should be initiated to meet the problem. Moreover there is the feeling that mere literacy is not enough to produce the social revolution. So the only alternative to formal education is adult or social education. Thus it is obvious that our belief in adult education is the result of our own educational needs and attachment to democratic principles. It is estimated that nearly 80% of our population live in rural India. The central purpose of our education in rural areas will be, in the words of a planner " to create a burning desire to change their old times outlook and arouse enthusiasm in them for new knowledge and new ways of life". In other words rural communities should be motivated to accept change - a desire for better living conditions, a will to achieve them and confidence in their power to achieve the desired goals.

10. Adult education was re-christened social education to express the idea that people need more than anything a social orientation, a habit of citizenship which put the needs of citizenship above individual interests. In other words it is an attempt to harmonise individual urges with social aspirations.

11. In a sense India is still a primitive country as the problem of food still forms our main concern. Prof. Rostov has divided the process of modernisation into five stages. We are still in the first stage of traditional society. A few of us may have reached the second stage, namely, the pre-condition of take-off stage. By means of adult education we have to draw the rural communities out of their traditional milieu and complete the pre-condition of take-off stage so that we may reach the take off stage namely as self-generating, self-reliant economy.

12. Since food production has been the main, perhaps the only, concern of our rural communities, the task of adult education at that level would be to concentrate on it primarily with a look at the future. Food production can never be an isolated activity in an organised civilised society as it depends on various other factors. A knowledge regarding seeds, new high yielding strains, scientific agricultural techniques and practices which are conducive to higher yields, preservation and storage of food grains, use of fertilisers and pesticides, research on the use of chemical fertilisers and a host of other activities have become imperative for efficient agricultural operations. To paraphrase Napoleon's dictum it will not be incorrect to say that a nation moves on its stomach before it can stand or walk. Hence the overwhelming importance of agriculture in the education programme of rural communities. In order to awaken the people it is the women who have to be awakened; once they are on the move, the household moves, the village moves, the country moves to bring about this much indeed awakening.

13. To meet the situation of food production and effect the necessary social changes for that purpose in the traditional society, the Community Development programme was launched in 1952. The basic programme of adult education had to be built up round agriculture, food production and preservation, health, diet, nutrition etc. Strangely enough, at the initial stages there was no idea of including women in the programme. Soon it was revealed that any attempt towards improvement of community living has to take women along with it. To bring about this much needed awakening, a large number of women workers, gram sevikas, was needed. In 1955-56 the Ministry of Food and Agriculture established 27 Home Science wings all over India as integral parts of agricultural Extension Training Centres. In each of these wings 20 gram sevika trainees had to undergo training for a year. The course includes, family foods, nutrition, clothing for families, mother and child care, housing, management of the home, health, sanitation, handicrafts, cottage

industries, agriculture including dairy farming, poultry or bee-keeping etc. After training they live in the villages and work with rural homes to effect desirable changes in the way of living. The main objective is to raise the standard of living through improved use of available resources. In the rural areas as well as in urban areas, more so in rural areas, inadequacies of diet are not always due to poverty. Very often it is due to ignorance, custom and caste and tribal prejudices. Certain castes have strict tabus about food. Meat eaters may not eat certain kinds of meat because of religious tabus. Thus the Hindus may not eat beef nor Muslims pork. There is prejudice against poultry. Most farmers in rural areas do not eat the vegetables they grow for the market. Among certain tribes milk is tabu and now it is given as medicated beverage. Urban areas, where people are educated enough to understand the unreasonableness of these, are fast giving up these restrictions. Methods of cooking also leave much to be desired and the village worker has to instruct the women the need to preserve the nutrient in the food by scientific handling. Protein deficiency in our national diet has been a source of considerable anxiety. Even among the well-to-do and the educated, there is considerable reluctance to abandon traditional ways and prejudices which stand in the way of dietetic changes. For example, it is estimated that the per capita availability of protein in India is about 71.5 grammes while the average protein consumption is only about 51 grammes.

14. Dr. Parpia in an article in F.A.O. estimates that almost 24 million tons of food grains were lost in handling and storage out of India's current production of 95.6 million tons. Waste control measures can halve this loss and modern and more scientific methods can eliminate 10% of the waste. Heavy losses occur at different stages of food handling, processing, storage and distribution and consumption. And 70% of the food is stored and consumed in rural India and this is where control measures for the prevention of losses should have the maximum impact. Unfortunately literacy and knowledge of modern science are extremely limited in rural areas and adult education with large female participation seems to be the only solution to the problems of waste, bag storage and handling of food grains.

15. Community Development programme failed to produce the expected result for three reasons: (1) It is generally noticed that rural programmes must have an economic significance to be accepted by rural communities. Rural response to a programme from women depends on its usefulness to them. For instance, in Orissa it was difficult to get women to participate in Community

Development programmes. Female literacy is hardly 4.5%. After years of Community Development very little could be done for women and children. Mahila Samitis too failed because women were in seclusion. But when help was needed for pregnant women and nursing mothers the response was immediate. The natural sympathy for the expectant mother was exploited and an expanded programme of nutrition was possible. Today there are over 1600 Mahila Samitis with 16,600 members who run craft and literacy centres etc. It is always difficult to persuade rural communities, especially rural women, to accept health and adult education programmes without an economic content. A successful economic programme gives them a sense of achievement and gives tangible shape to their concern for general welfare. I have seen this among illiterate women Panchayat members, whose sense of responsibility has a healthy influence on village life and institutions.

(2) Whether it is literacy, family planning or community development, the programme would succeed if initiated by the persons concerned. In other words there must be motivation when people know what they need, and devise plans to satisfy it they rise above their own interests. This they will never do if imposed upon from above. It is here that we have to seek the help of voluntary organisations and activate them with substantial assistance. It is the voluntary organisation that pioneers new experiments; acts as an advanced guard. Administration consolidates, universalises and standardises the ventures of faith. Thousands of social welfare legislative enactments all over the civilised world bear witness to this fact.

(3) Any programme which ignores women is bound to fail. Their role in rural communities is overwhelmingly important. They are associated with agriculture in all its processes; besides, they have the important task of running the home, rearing the children and harmonising conflicting opinions and attitudes. We have to think of her as a composite of various roles as housewife, farmer, worker in the field, daily wage earner, cottage or small scale industry worker, self-labourer, unemployed or underemployed individual. And no social change can be dreamed of without the co-operation of women to abrogate the time-honoured customs which perpetuate social injustice and economic backwardness, sustain beliefs which make the acceptance of new ideas and rational thinking altogether difficult. Thus we come to the conclusion (1) that any programme of adult education for rural areas, be it social or political, must have an economic content of immediate interest and advantage; (2) the

programme should as far as possible be initiated by the people concerned to meet an urgent and felt need, and (3) women should be associated with these in all fields of activity. Rural community life should be viewed as an integrated whole and community activities should be regarded as common activities of all persons.

16. Although since 1955 women are being employed as Gram sevikas, craft teachers, health visitors and midwives, their impact has been very much limited as they are regarded as a new set of officers sent by the government. The motivation to raise the standard of living or fight social evils or initiate programmes for social change is yet to be developed. This can come only as the result of education and the realisation that a better life is possible through new techniques and new knowledge. The thick walls of prejudice will yield only to a multi-pronged attack as the foundations lie deep in the traditions, beliefs and faith of generations of men and women. All the same a silent revolution is taking place. Rural communities are no longer isolated units. The radio, the story-teller, the political propagandist, the election campaigns have begun. The first step to walk the mile has been taken but many more steps are needed to reach the goal. Here we pause for a minute to see what happens to the village when its isolation is broken by a new road, or a bus transport which links it with the world. Life changes, people begin to travel to work in nearby towns. They see new things, officials and tradesmen, entrepreneurs and others come into the village, a primary health centre appears, a doctor visits, newspapers are delivered, manufactured articles come, politicians come seeking votes, radio, refrigeration, electricity - all these undermine traditional values by introducing new kinds of music, drama, new political beliefs.

VOCATIONAL TRAINING APPROPRIATE TO RURAL COMMUNITIES

17. Rural communities have their traditional arts and crafts which have made these communities basically self-sufficient. Spinning and weaving, pottery, utensils for daily use in the home and for worship, woodwork, agricultural implements etc. were made locally and consumed locally. Rural crafts flourished in the past because of the local need. Rural arts and crafts provided a rich experience of self-expression and creativity. They gave the craftsman a sense and pride of achievement, self-confidence, mastery of techniques - the craftsman shared his

tools with others, people of different creeds learnt to work together, to appreciate the strength and tolerate the weakness of one another - co-operation naturally generates tolerance and a spirit of understanding so essential for social harmony. Today machine-made goods have taken the place of handicrafts and traditional skills do not receive much encouragement. Articles which were in daily use once upon a time have become or are fast becoming curios for the visiting tourists. Bell metal, brass and copper utensils are now used for decoration in the homes of the wealthy and cheap and ugly factory-made things have taken their place even in the rural homes.

18. When we talk of vocational training appropriate to rural communities we are unconsciously committing ourselves to two things. (1) We assume that rural communities are likely to remain rural for all time and (2) there are certain vocations which are fundamentally rural and special training is necessary to develop and increase their competence. These assumptions are the result of our habit of regarding rural communities as somewhat different and therefore claiming different treatment. The vocations we associate with rural communities are those which have been practised from time immemorial and which need improved techniques and training to be economically remunerative and effective. The object of vocational training in rural areas should be twofold. It should awaken the community to a sense of self-reliance and it should increase the competence in the practice of traditional arts and crafts by means of modern techniques. Rural industries are in the doldrums as they are unable to compete with factory-made goods. Unless rural development takes place rapidly and in a planned manner there is little hope of training rural youth for the vocations. Today most of the persons employed in rural work come from cities just as most of the persons employed in urban areas have rural background. It is a two way traffic in which the disadvantage is all on the rural side. The deserted village is not a new phenomenon, vocational training is needed to arrest the influx of rural population to urban areas abandoning their heritage, literally for a mess of potage. The reason is not far to seek.

19. What pushes the rural youth to the city is not merely the desire for change of residence. He feels that the only way to compensate the denials he has to face by living in the village is to migrate to the city where he expects to find new opportunities of education and employment which are not available in his own community, Hence it is necessary that the vocations chosen for training should be both remuneratively attractive and

psychologically satisfying. They must lessen the pull towards the cities. Financially and otherwise cities offer attractive prospects and since money has become the measure of all values and it is more plentiful in the cities than in rural communities the pull towards the cities is undeniably strong and irresistible. Normally craftsmen receive little encouragement from their clientele who are now no more his immediate neighbours and whose needs they are not familiar with. When the village craftsman shows some originality or genius his talents are exploited by middlemen who make capital out of his poverty and ignorance of the world at large. The modern craze for curios, the possession of which is also a status symbol, has not helped the rural craftsman as much as the middleman who by advancing him capital keeps him in perpetual bondage. There is a great spurt in the trade in handicrafts and unless marketing facilities are organised on a co-operative basis the present exploitation will continue and any training to increase the competence of the rural craftsman will not help him much.

20. Dissemination of knowledge regarding market conditions will be of considerable help. Forums like the farmers' forum with discussions on the scope and value of rural industries, the need to improve by training, by the adaptation of modern techniques, will remedy some of the existing disadvantages. Such a programme will necessarily mitigate the evils of divided families, urban slums, overcrowding and all other ancillary problems. Rural talent is suppressed by poverty and exploited by the urban middleman. In order to benefit by training, poverty has to be eradicated and in order to eradicate poverty vocational competence has to be increased. Training should help vocational mobility, and with the rapid spread of technical knowledge change of occupation should be easily possible. The rural community is governed by a system of personal relationships based on vocation which is the caste system. Technical competence should help to break this hide-bound system and also break the barrier between rural and urban India.

CULTURAL AND INTELLECTUAL NEEDS OF RURAL COMMUNITIES:

21. In India rural communities live in an atmosphere of rich cultural tradition and intellectual poverty. This tradition is characterised by tolerance, faith and understanding. It expresses itself in the observance of festivals, social events, pilgrimages, baths in the sacred rivers, visits to places of

worship. Differences in religious beliefs hardly count. Folk dance, song and drama, bhajan mandlis and story telling based on the epics recall the great national events, acts of courage and sacrifice, fearlessness in doing what is right, protection of the weak by the strong, reminding the listeners the duties of leaders, the discipline of the followers, the need for obedience, tolerance and a thousand other things without which it will not be possible for different people following different faiths to live together. Religion supplies both spiritual guidance and intellectual pabulum. Activities be they dance drama or pilgrimages, are group activities. They offer an outlet for rural talent, provide recreation for the community and also endeavour to inculcate the values of tolerance, truth, faith, etc. These traditions deserve to be preserved and saved from the influx of crude and vulgar films and literature which are fast moving towards our rural areas. There is also the danger that soon participants will become mere spectators.

22. Community life anywhere is controlled by social tradition and cultural inheritance. The accumulated skills, knowledge and wisdom are passed from generation to generation, not through books or formal education but through the art of living. Although great improvements are made in the art of living by the perpetuation of skills and crafts and have enabled the communities to overcome the limitations of environment, today they are faced with the challenge of science and technology which rural communities must meet.

23. In the rural community departure from custom is usually looked upon as a social crime; yet the custom may not be good for healthy development or progress, e.g. child marriage, seclusion of women. They may also have been the result of mistaken judgment or perpetuation of something which has no meaning today like dowry, ostentatious wedding lasting for days, funerals. Social customs are the result of social living and perpetuate the harmful and the helpful together. Even today ethics have a great hold on rural communities and leadership belongs to him who is honest, sincere and selfless. These values are being assailed by the emphasis on physical well-being as the ultimate goal of life and the elimination of poverty as the panacea for all social ills. In this process there is the lurking danger of urban corruption setting in and the soul being lost.

24. Before the invasion of government and technology in rural areas the communities were not only self-sufficient but their personal, social, religious, educational and aesthetic

needs were integrated. There was general participation. Group activities formed the life of the community. Government intervention has not been all to the good and to the extent government intervenes, community life is impoverished.

25. Today, more than at any other time in the history of mankind, no community can live in isolation uninfluenced by external contacts and pressures. But these need not necessarily lead to the fading of community identity. Introduction of mechanised agriculture, opportunities for vocational training, pursuit of the ideal of universal literacy, will rouse the intellectual curiosity and needs of the rural people. Provision of libraries, vigyan mandirs, rural institutes, can be combined with the revival and encouragement of healthy social and cultural traditions of the communities. Many people feel that the rural communities should not be judged by the affluent standards of the cities and the values they share and hold dear should by no means be allowed to decay. A great community is not a vision or realisation of material wealth. Important as it is, it is not the vision of community living together and the realisation that man does not live by bread alone, that have made people and communities great. There must be scope for the cultivation of the spirit. Let us not mistake contentment for placidity or appreciation of moral values for conservatism. What is needed now and forever is not the vain search for change of circumstances which draws people away from their home and country to centres of power, corruption and luxury but an endeavour to achieve a change of spirit and attitude.

26. Cultural disintegration is always marked by a decline in the number of group activities. It is said that "people do not live together simply to be together, they live together to do some something together". Benjamin Franklin put it differently "It is hard for an empty sack to stand upright". The self-reliance and autonomy of community can be maintained when they are knit together by common needs and common participation in group activities. In our rural communities there is still the attitude of general sharing of opportunity and responsibility encouraged now by the establishment of Panchayati Raj. The feeling of interdependence makes co-operation a necessity and men may thus rise above their own selves. It is said that human nature does not change but when nations and men accept the same goals, the same rules and the same institutions, their behaviour towards each other is bound to change. In the thousands of communities living in India a change of behaviour is indicated as a result of the impact of modern technology. Adult education must see to it

that the culture of the cities does not lead to the disintegration and ruin of the culture of the rural communities. Preservation of aesthetic and moral values should go a hand in hand with the development of technical competence and vocational training.

THE ROLE OF LITERACY IN RURAL COMMUNITIES

27. Literacy is often regarded as the sixth sense as it opens up the vast field of education and self-development. Illiteracy generates feeling of inferiority and militates against social equality on the foundation of which the edifice of local government is built. Literacy helps adults to acquire vocational skills and professional competence. Earlier I referred to the impossibility of achieving total literacy in the immediate future; yet without it exchange of experience, knowledge by study and the continuous process of self-education will be very difficult. Studies have proved the correlation between modernisation with access to the media of communication. They have shown that access to the printed page and radio have helped to develop modern attitudes. They have also shown that attitudes that are highly meaningful to people are seldom changed by the mass media alone. An experiment conducted in India to measure the adoption by farmers of new agricultural practices proved that mass media may produce action in some, may not in others. It needed media plus ability to read and personal discussion.

28. In India as well as in other countries similarly placed several attempts are made by means of conscription for literacy and through voluntary agencies to spread literacy in rural areas. I have in my mind the efforts made in Iran and Indonesia, where through government efforts by conscription and through voluntary efforts respectively, literacy is boosted up and target dates are fixed for the total elimination of illiteracy. Employers and trade unionists would do well to follow the example of countries like Guatemala to see that their members are made literate without the help of the State. In Mali we are told that more than 2000 volunteers from all walks of life, teachers, young people, women, trade unionists and soldiers have been engaged in literacy work. In India there was a spurt of voluntary activities in this direction during the late thirties and although even now there are organisations doing literacy work there is no nation-wide effort to reach total literacy. It is a self evident fact that literacy programmes help to boost production both on the farm and in the factory. Literacy programmes have helped farmers to understand modern techniques of agricultural production. Ability to

read figures on the weighing machine, the labels on the tools, posters regarding seeds and fertilizers, has led to economy both in management and greater efficiency and increase in production. For parents the ability to sign their names, record birth dates, read letters sent by their children, know what their children are reading, remove the inferiority complex which has been responsible for many of our social ills.

29. Nobody regards literacy as an end in itself. It is a means not only to self-development but also a means of eradicating social injustice. Can there be a greater deprivation than the denial of education which in my opinion is the worst form of discrimination? We are told that in India even those who have had a year or two of schooling lapse into illiteracy for want of follow-up literacy work. In certain areas the lapse is as high as 60% within one year of enrolment. Libraries, community centres, reading rooms, radio clubs and listening groups are meant to help the literate to remain literate. Community Development blocks, Home Science Extension wings etc. concentrate more on adult education for better agricultural development and raising the standard of living, than on literacy work.

30. It is necessary to remember that no learning takes place in the absence of motivation. Motivation comes only when learning is purposeful. The moment the rural community feels that literacy is helpful in improving its prospects it will opt for it without any external pressure. Once in Bihar when I asked a farmer why he had donated land for a school his reply was characteristic. Said he: "I am illiterate and I do not know the difference between a ten rupee and a hundred rupee note and I have been cheated many times. I do not want my son to be cheated in the same way hence I gave land to build a school."

31. Today various organisations, adult education societies, other voluntary organisations and individuals do literacy work. Even after receiving literacy certificates there is a likelihood of lapse into illiteracy if facilities and opportunities are not easily available for follow up work.

32. There is growing realisation that literacy for women is more important and imperative than for men. A change in the values of life and goals for the coming generation could be brought about effectively through the mothers in home. Ignorance and illiteracy of women constitute one of the major obstacles to social progress. Therefore "the problem of achievement of literacy is the first step not only to civilised life in general but

a very urgent and a very important step for economic development".

33. Rapid industrialisation and independence have revolutionised the status of women in India. Women are sharing responsibilities in all fields of national life and endeavour. This means increasing need for education. Progress of women's education has been very slow and the disparity between boys and girls in the matter of literacy reflects the extent of prejudice and discrimination that still exist in our rural areas. However a new realisation is growing that girls' education is closely related to their role as mothers and citizens and the task of training the rising generation.

EDUCATION AND TRAINING FOR AGRICULTURAL
DEVELOPMENT

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1. The role and importance of agriculture, even in many of the highly industrialized countries of the world, is almost universally recognized. In most of the developing countries, its place and importance in the life, progress and future prosperity of their peoples is unique. The vast majority of these people live in rural areas deriving their livelihood from the cultivation of crops and the keeping of livestock. Yet others are engaged in the closely related activities of forestry and fishing. The growing towns and industries are dependent upon agricultural production for their food supplies and the raw materials which form the basis of many manufacturing processes and local trade and commerce. Foreign exchange earnings from international trade derive very largely from the exports of agricultural products by the developing countries to the advanced industrial countries of the world. Even the development of local industrial enterprises hinges largely upon an expansion of local and nearby markets and this again depends in the main upon increasing the purchasing capacity of rural people. The improvement of nutrition standards, the spread of better educational and social services are all closely linked to a steady rise in rural and urban family incomes. And these are, to a large extent, dependent upon a steady and sustained growth in agricultural productivity.

2. We do not always realize how complex and interdependent are these many factors. As visitors to a new country we may be impressed by the modern airport, splendid buildings, roads, shops and facilities of the capital city. We may not at first appreciate the enormously difficult problems faced by the government and people in grappling with the problems of development as a whole; problems of unemployed and under-employed young people for whom the rate of expansion of employment opportunities is totally inadequate; problems of creating the essential infrastructure of a modern agricultural economy in the rural areas; problems of limited finance and trained manpower for rapid and effective development. We learn to appreciate, when we begin to study some of these problems, how complex they

are; that, important as it is, education alone cannot solve them. It must operate in conjunction with many other factors in a "team approach" to development. We begin to realize also that there can be "no satisfactory growth of modern towns and cities alongside poverty stricken rural communities based upon the hazards and miserable returns of subsistence agriculture" (1). We appreciate the essential connection between agricultural prosperity and the expansion of industry and commerce; the interdependence of rural and urban development. These facts of life have important practical implications for each one of us. We are forced to appreciate the fact that success within the sector or rural development, within which we work, is largely dependent upon successful implementation of other and complementary sectors of the whole development complex. We cannot, therefore, hope to succeed unless we can become, conceptually and in a practical manner, good and useful members of a team. It is the team or integrated approach which offers the prospect of real and sustained progress.

3. Agricultural development is itself a very complex process, more especially in parts of the world where the predominant pattern is one of peasant subsistence agriculture and the transition to a modern farming economy involves many social, economic and technical problems. There is little point in encouraging thousands of small farms to expand and intensify their agricultural production if roads and communications are non-existent and there are no markets to absorb such increased production at prices which offer them a reasonable cash return. Thus the creation of a modern agricultural economy involves a whole range of essential "inputs" if the transition from subsistence is to be achieved without social disruption and recurring crises. From the agricultural viewpoint alone, it is necessary to establish an organizational and institutional structure appropriate to initiate and sustain the complex processes of agricultural development. A basic need may well be the establishment of systems of land tenure which provide the farmer with the necessary incentive to invest in the improvement of his land. He has other essential needs: available credit, a marketing system for his production, farm requisites and supplies, the development of a co-operative system through which the smaller producers can derive the benefits of larger scale enterprises. Agricultural services, which include research, education and training, field advisory and other technical services, are all essential to progress and modernization. The creation and development of all these elements is a lengthy, expensive and slow business. Priorities have to be established and each

country will pursue the development of this structure in accordance with its policy, available resources, circumstances and needs. However, in a world in which nations are becoming increasingly dependent upon each other, there is a need for national agricultural policies to harmonize with regional and international ones. It is to begin to meet such needs, both in the short and longer term, that FAO has undertaken the preparation of its Indicative World Plan for Agricultural Development.

4. Perhaps the most important single result of the experience of the first UN Development Decade - the 1960s - is the realization of the central importance of the human factor in the whole process of change and development. In the field of agricultural development this has special significance because in many of the countries with which we are specially concerned the "human factor" involves millions of farm families eking out a bare livelihood at subsistence level. Many of these rural people are illiterate; they are under-nourished; their resources are minimal. And yet it is upon them, their capacity to respond to such opportunities of education and training and of technical advice and help as may be offered to them, that much of the world's future progress depends. Agricultural change and development cannot be imposed from above; the desire for such change and the endeavour for its achievement have to be generated within the rural family and community.

AGENTS OF AGRICULTURAL CHANGE: THE EXTENSION SERVICES

5. In the complex process of agricultural change and development the central factor is the farmer - the producer. He is the person who is called upon to accept and put into practice new concepts of the management and use of his resources, to adopt new techniques of crop and animal production, to work harder and more effectively, and to adapt himself and his enterprise to the conditions and requirements of a modern agricultural economy. The farmer, however, neither lives nor works as an isolated individual. He is the head of a farm family in which the womenfolk have a crucial role to play. In many rural areas the farm family is but an element in a close-knit rural community.

6. Agricultural research involves the application of science and technology to all aspects of agricultural production. Through

patient and systematic work in the laboratory and the experiment station new high yielding varieties of crops and more productive livestock are evolved, serious pests and diseases are brought under control, advances in engineering are brought to the service of agriculture, many ways and means of increasing the productivity and profitability of farming are studied and tested. As well tried results become available the problem still remains of getting improvements accepted by the farmer and the farming community at large. It is for this purpose that agricultural extension services have been developed in most countries. The extension worker, at farm or village level, forms the most important link in the chain of communication between the research worker and the farmer. It will be apparent, therefore, that the extension staff of the agricultural services have an extraordinarily important role to play in the whole process of agricultural improvement. In areas of peasant subsistence agriculture they are faced with immense difficulties in their task of initiating change and introducing new ideas and practices in a conservative and tradition-bound society. In order to achieve anything they must first win the confidence of the farmer and be able to demonstrate convincingly that the adoption of new practices is worthwhile. It will be clear that to undertake these responsible duties the extension worker requires good training and strong support. He needs to have sufficient education and training to understand the reasons underlying the improvements he advocates and to explain and demonstrate them to the farmer. He should also be capable of understanding the peculiar problems of the farmer and communicating these back to the research worker. The duties of the extension worker therefore imply considerable skill and responsibility and call for human qualities of a high order. The agricultural advisory or extension services of many of the advanced countries play an extremely important part in the steady improvement of farming efficiency. How can such services be strengthened to give similar service to farming improvement in the developing countries?

7. This, like many other problems, will require time and much effort to solve. In the first place, there is an urgent need for the training of considerable numbers of young people - both men and women - for this kind of work. It seems paradoxical that the man who deals directly with the farmer is the poorest educated and the lowest paid in the whole of the agricultural services. If he is to play an effective part in agricultural development in the future it is necessary to recruit young people of good educational standard, train them well and offer them career prospects through which they can take pride in their

profession and through periodic in-service training progressively increase their skill and usefulness. Secondly, it is necessary to establish an extension service, adequately supervised, in which the individual worker has a manageable farm population with which to deal. A target now being set in a number of developing countries is one extension worker per thousand farm families. In areas of intensive development the proportion will need to be considerably higher - perhaps one to 200 or 250 farm families. Finally, the extension worker cannot work in isolation and without the help of other supporting services. His work must essentially be a part of the "package" which includes such things as the provision of credit, seeds and fertilizers, and other essential services to which reference has already been made. It is, of course, essential that those who train for work amongst farmers should be people who will be happy to live and work in rural areas and who will develop a sympathetic understanding of rural people. They need also to have a love of farming and to develop practical skills in the management of crops and livestock. Without assets such as these it is difficult to see how they can be successful in bringing about change in agriculture.

FUNCTIONAL LITERACY RELATED TO AGRICULTURAL DEVELOPMENT

8. In many of the developing countries where agriculture is the basis of life there are still large portions of the population which are illiterate. Even for the young it may be many years before universal primary education becomes feasible. Thus a high proportion of farmers and their families are illiterate and yet the need for agricultural development is imperative. Can the efforts of adult literacy campaigns and other forms of literacy work amongst such people, which have been undertaken for many years, be reoriented and strengthened to serve the needs of farming improvement and rural development? Can literacy work itself be invested with a new sense of purpose if it is more specifically and in a thoroughly practical manner, geared to serving the immediate problems and needs of the farmer and his family?

9. There seems little doubt that functional literacy, operating as one of the integral factors of agricultural improvement, should serve an extremely important need. Modern agriculture, even in its simplest aspects, requires the imparting of some technical knowledge for which the printed word serves a most

useful purpose. The planting of new varieties of seed and the associated use of fertilizers or sprays for disease and pest control may well require simple printed instructions to supplement advice of extension workers. Simple records become essential when sales and purchases, and possibly credit, are involved in an increasingly sophisticated agriculture. The local co-operative will issue receipts for produce delivered. It becomes necessary to be able to understand weights and measures if the farmer is not to run the risk of being continually cheated. Thus there is, in situations like these, not only a need for widespread literacy work but a demand by the community faced as it is by new situations and new needs.

10. Here, then, is a great opportunity for linking in a very practical manner the needs for economic and social development in rural communities with the work of adult literacy. There are already, in several developing countries, large scale projects undertaken with the support of the UN Development Programme in what is described as Work Oriented Literacy Projects. In order to succeed they require very substantial support for much of the work is undertaken on a voluntary basis. They need a constant flow of appropriate simple literature, well illustrated, in the appropriate language or dialect. Agricultural education institutions as well as agricultural extension services and farmer training centres have, because of their practical understanding of the problems of farming improvement, essential contributions to make in all work of this character. It may be that voluntary service in such adult literacy work in rural areas is one way in which the enthusiasm and energy of educated young people may be put to good and positive use. Certainly such work can also be strengthened and supported by the radio and television services which are now being developed. The application of functional literacy to agricultural development is of quite recent origin. There is a need for careful evaluation of the experiments now under way in various countries. As with other aspects discussed in this paper a very great deal will depend on the effective integration of this work with the other components of agricultural development. There is no longer room for isolated and unco-ordinated efforts where needs are great and resources limited.

THE PLACE OF INSTITUTIONALISED FARMER TRAINING

11. In traditional societies, agricultural systems and practices represent the accumulated experience, knowledge and skills gained in the cultivation of crops and the keeping of livestock over many generations within the environmental conditions in

which each community lived. Agricultural lore and skills were passed from father to son and mother to daughter as they grew up and worked together in home and field, as season succeeded season. The influences of western education and other factors of change have tended to weaken these processes through which the family and society ensured the continuation of the systems of farming essential to their survival. At the same time the urgent need for agricultural improvement has created a situation where education and training are increasingly called upon to serve farming development. In many situations the pace of change is such that the meagre resources of the extension services require to be supplemented by institutional training in order to cope with urgent needs. This is the context within which many of the farmer training institutions of the past two decades have grown up. In some cases, notably in the Far East, they tend to be linked to farmers' associations. Elsewhere, they have been established by ministries of agriculture and in some cases by non-governmental organizations. What is their function and where do they fit in to the broader pattern of agricultural and rural development?

12. In earlier days a good deal of farmer training was devoted to offering one or two-year courses of a thoroughly practical nature to young men who had passed through primary school and who, it was hoped, would make farming their career. Many "farm schools" were established with this objective in view. In general the results have been disappointing in so far as the great majority of those who passed through these schools sought employment outside agriculture. This is hardly surprising when one considers the poor and uncertain returns in the areas of subsistence agriculture where most of these schools were situated. Education and training, of any kind, offered the main hope of escape from the drudgery and pathetically small cash returns of peasant subsistence farming. Gradually the idea began to take hold of devoting at least a part of this training effort to people who were already in farming, to adult farmers and farm women. Instead of these lengthy, and hence expensive, courses for relatively few young men, the new Farmer Training Centres catered for a series of short residential courses for quite large groups of farmers and others. In the countries of East and Central Africa these Farmer Training Centres or District Farm Institutes have become, over the past 10 years or so, an important feature of agricultural development work.

13. Farmer Training Centres, with residential capacity of between 30 and 40 and up to 100, have mostly been set up in areas

or districts where a rapid move towards more intensive farming and the introduction of high value cash crops and livestock enterprises bring an immediate need for more intensive and specific training. The introduction of farm planning in Kenya, together with the expansion of small-holder tea, coffee and pyrethrum production are examples of the kind of situation in which this short course residential farmer training became both necessary and useful. Large numbers of small farmers began to invest money in the fencing, lay-out and improvement of their holdings once they had acquired title following the processes of land consolidation and registration. Having grown up as subsistence cultivators they were now becoming cash farmers and were in need of instruction not only upon the technical aspects of new crops on high value livestock but even more importantly the elements of farm management. Thus both the need for short course instruction as well as a demand from farmers themselves arose as a direct consequence of the government policy for the intensification and development of African farming in Kenya in the 1950s and early 60s. In neighbouring countries development of farmer training institutions has proceeded along somewhat different lines according to their policies, needs and circumstances. The fact that an expansion of such institutions, with the ultimate goal of one training centre to serve each district, is envisaged in the development plans of several of these countries provides sufficient evidence as to their potential importance in agricultural and rural development.

14. Commencing as farmer training institutions, it was not long before courses for farmers' wives were offered and, in fact, proved very popular. It is seldom possible for farmers and their wives to leave their homes for a week's course at the same time and they therefore attend separately. Special courses given by trained women instructors are now given to farmers' wives not only in improved agriculture but in such subjects as nutrition, home improvement, hygiene and the like. Many courses are now arranged for local leaders, for young people responsible for organizing Young Farmers' Clubs in Uganda and the 4-K Clubs of Kenya and similar organizations elsewhere. These institutions are also increasingly being used for in-service training courses for local field staff in many of the services concerned with rural development. Thus there is a marked tendency to expand the functions of these farmer training institutions so that they can cater for a wide range of short course training needs connected with agricultural, home and rural community development. The terms District Development Centres and District Training Centres sometimes employed describe

rather well the broader role which many of these institutions are beginning to assume.

15. What special advantages do these institutions offer in comparison with the less formal types of extension work? In the first place it must be emphasized that they are not a substitute for extension services; they are essentially an integral part of these whereby intensive short course training supplements the activities of district extension services. Both are complementary in the sense that they have but a single objective: the improvement of farming and the farm family within the broader context of rural and national development. These training centres, when adequately staffed with good facilities can achieve very important results in their residential short courses. Through good teaching, supported by the use of many educational aids as well as practical demonstrations, the principles and practices of modern farming, home improvement, better nutrition, organization of young people's clubs can be most effectively introduced and taught to respective groups. Often it is an entirely novel experience for forty or fifty practising farmers to find themselves together for a whole week in pleasant surroundings with good accommodation and catering, attending a well arranged course which has direct and practical relevance to their own problems. They can, at any point, ask questions or join in discussion. They can stimulate each other. Often a study tour visiting farms similar to their own but in a different area acts as a powerful incentive for them to try new methods or improve existing ones when they return home. Women are at least as keen as men and the fact that both men and women from the same home attend courses can generate a great enthusiasm for the improvement of home and farm. At these courses farmers are often taught by more experienced agriculturalists than the village extension worker. They may well visit experiment stations where specialists working on specific crops and animal production problems explain what they are doing and what practical implications for improved farming they hope to achieve. Thus there can be the opportunity for the exchange of ideas and experience between the farmer, the extension specialist and the research worker. Finally, there are the regular in-service training courses now being given to field staff enabling them to meet, to discuss their problems and to bring themselves up to date. Thus though a 40-bed training centre offering a series of one-week or 10-day or shorter courses may only have a through-put of 800 to 1000 persons each year, the total effect and the total number of people influenced may be many times these figures. The development of these training centres for short

course work has already indicated their important potential contribution to agricultural and rural development. What now requires to be done is to exploit this new approach through better staff selection and training, improvement of teaching methods and materials, and more adequate support for these institutions which cater for the most important category of all - the farmer, farm family and rural community.

EDUCATION AND TRAINING OF AGRICULTURAL TECHNICIANS

16. Within the broad structure of agricultural education and training it is common to recognize three principal levels: higher agricultural education; intermediate agricultural education and training; and vocational training for farming and related occupations. Interpretation of these levels differs widely and up to the present there is no universally accepted system of classification. Intermediate agricultural education and training usually embraces a wide range of education and technical training separated at the upper levels from university level education and professional training and tending to merge at the lower level with various kinds of vocational training. The main purpose and objectives of intermediate agricultural education and training are quite clear. These centre around the training of skilled agricultural technicians for a wide range of technical jobs within farming itself, in the agricultural services essential to a modern agricultural industry, in research, teaching and in agricultural commerce and industry. Without the efficient services of large numbers of skilled technicians modern agriculture cannot exist. It is the shortage of skilled technicians, properly trained and supported which is probably the most serious barrier to agricultural progress in many countries today. It is commonly stated that research has already provided the answers to many of the technical problems of agricultural development; the major limiting factor is the ability to apply these results in improved farming systems and practices. This is precisely where the skilled technician comes in. He is concerned with practical application; his is the task of translating the findings of research into systems and practices which are sound and economically viable. His work is essentially complementary to that of the agricultural and veterinary scientist. Farm machinery may be invented and developed by the professional engineer but it does not require the services of so skilled and costly a person for its operation, repair and maintenance. This is the work of the technician, and there will be several or many technicians to every qualified engineer. Within the agricultural services, university trained agricultural scientists, teachers,

specialists of many kinds and senior administrators are needed for a wide range of professional duties. It is, however, the technician from the intermediate agricultural training institutions who is required to undertake much of the skilled practical work at farm, workshop and field level. The majority of agricultural extension staff are essentially technicians who themselves must be able to perform and demonstrate effectively the various skills of modern farming. They will work as laboratory and field assistants at agricultural research institutions, they will perform large numbers of inoculations of cattle and poultry under the supervision of a professional veterinarian. They will service and maintain irrigation schemes under the supervision of an engineer.

17. It follows from what has been said that the kinds of education and technical training required to produce these skilled technicians must differ greatly from that given in the universities. It must have a very marked practical orientation. Indeed, a significant proportion of such training needs to be undertaken within the agricultural industry itself. In many countries today intermediate agricultural education is not properly geared to these objectives. It tends to be the pale shadows of university education with great emphasis upon theoretical learning and distinct weakness as regards essential training in managerial and practical skills. It is often far too closely geared to the narrow requirements of the civil services and far too remote from the actual needs, present and future, of a developing farming industry. Not infrequently, the patterns of intermediate agricultural education and training of developing countries are still largely copies of those of the advanced countries from which they were originally drawn, with curricula, textbooks and examination systems designed and developed for totally different environmental, economic and social conditions. These, then, are some of the problems requiring urgent attention if the education and training of agricultural technicians is to make an effective and practical contribution to the development and modernization of agriculture.

HIGHER AGRICULTURAL EDUCATION

18. The university as the top of the whole educational structure occupies a position of great importance and responsibility. In many countries it enjoys a position of prestige and its teachers often have an important influence upon public opinion and affairs far beyond the confines of the university. It is thus appropriate that agriculture and the agricultural

sciences should be adequately represented and play an important role in the life, thought, research and teaching of the university. In developing countries where agriculture is the basis of life and nearly all development it is appropriate that agriculture should be one of the central foundations of the university's work. This principle was first put into practical effect in America where, commencing with the Morrill Act of 1862, Land Grant Colleges were established in rural areas of all states for the development of studies in agriculture, mechanical sciences and home economics. Many of these colleges have become renowned universities and the basis of their work has expanded into many scientific and technological fields. However the fact remains that the purpose of their establishment was to serve the improvement of rural life through the application of science and technology to agricultural development through the medium of the university. The agricultural universities of India provide a modern example of the application of similar principles and the new University of Mauritius is being built around its Faculty of Agriculture. These examples are quoted because they illustrate the importance, within the context of economic and social development, placed upon agriculture within the university. There are many other examples where faculties of agriculture and related disciplines are very strongly developed within the university system and make essential contributions, through their research and teaching, to agricultural development.

19. It is through higher agricultural education that the professional cadres required for agricultural research, teaching, administration, industry and many specialized duties are educated and trained. The curriculum of such education is essentially based upon the sciences, both basic and applied. The university is much more concerned in the development of intellectual capacity than in teaching practical skills although the latter may often be a pre-requisite of university entrance requirements. The university student should gain an enormous amount from life and work in the university community in addition to whatever technical and professional training he receives. His subsequent duties will involve the exercise of leadership and other qualities which are largely developed outside the lecture theatre and laboratory. It is therefore necessary to achieve an appropriate "balance" in higher agricultural education between educative processes and influences and the more formal aspects of professional and technical training.

20. Many problems face those concerned in the planning and development of higher agricultural education. The breadth of scientific disciplines related to agriculture and the constant expansion of knowledge within these disciplines pose many difficult problems in the designing and adaptation of first degree structures and curricula. For rather similar reasons higher agricultural education and related disciplines are expensive both in terms of capital investment in teaching and research facilities and in recurrent costs. Staff: student ratios are inevitably high if really satisfactory teaching of students is to be achieved. An active programme of research is the life blood of good university teaching and in agriculture this implies extremely close ties and working relationships between higher agricultural education and agricultural research. It is equally necessary that those engaged in teaching and research at this level should be constantly aware of the situation and needs of the farmer and this, again, indicates the need for close ties with the field extension services. It is certain that in a rapidly changing agricultural situation an increasing demand will arise for the provision of regular specialized in-service training courses in many fields and an effective response to this need poses both a challenge and an opportunity to universities. Finally, it is necessary to stress that agricultural education and training, at all levels, can only be effective if developed as a fully integrated structure with the various elements complementing and supporting each other. In this regard, the university with its special position and the relative privileges it enjoys has an enormous contribution to make in terms of leadership, inspiration and support to all levels of agricultural education and training.

THE CONTRIBUTION OF EDUCATED AND TRAINED RURAL WOMEN TO AGRICULTURAL DEVELOPMENT

21. Considering the profound influence of the woman in the home, the enormously important role women have played in the production of tropical food crops, and their potential contribution to rural development, it is remarkable what limited attention has been given so far, in many countries, to the education and training of girls and women as a direct contribution to rural development. It would in no way be overstating the case to say that this aspect is one of the key elements in the balanced and effective mobilization of human resources for agricultural and rural development. Past neglect in this sector needs to be made good as rapidly as possible. Girls' education, especially in the basic sciences, needs to be made as good as

that offered to boys. Opportunities must be created for the education and training of girls and women in the various fields of food and agriculture, at all levels, to enable them to give effective service in these and related aspects of rural development. It is a matter for some satisfaction that in the countries of East Africa, girls are now undertaking courses both at intermediate and university levels in agriculture, in home economics and in other related disciplines. Already all the District Farm Institutes of Uganda - fifteen of them - are staffed by male Principals and women Vice-Principals, the latter all having equivalent technical qualifications. No doubt some other examples might be quoted. But these are just beginnings; the full potential has yet to be developed through education and training and the creation of appropriate employment opportunities. In the same manner in which far more attention needs to be given to the individual farmer in enabling him to emerge from a subsistence economy, so must equal attention be devoted to farm and rural women since neither the family nor the community as a whole can advance in a satisfactory way, unless women can be enabled to make their full and appropriate contribution to the process of social and economic change.

CONCLUSION

22. This paper is concerned with the contribution of education and training to agricultural development. It has special reference to the many developing countries where agriculture is the central fact of life. Experience of the past few decades suggests that in the approach to agricultural development, especially in countries of predominantly peasant subsistence agriculture, far too little attention has been given to the importance of the farmer, the farm family and the rural community, as key factors in the whole process of change and improvement. The desire for change and the will to achieve progress cannot be imposed from above; they have to be generated from within. It follows that education and technical training are fundamental elements in the process of mobilizing the human resources of agricultural and rural development. The different levels of agricultural education and training together with the related activities in extension and functional literacy are briefly considered in the context of agricultural development. It is emphasized that together they may be regarded as one of the "inputs" of rural development. There are other equally important factors and inputs and it is impossible to achieve steady and sustained progress without their support. More attention therefore is being paid to what is sometimes described as the "integrated" or

"package" approach to farming improvement and rural development. These considerations inevitably lead to the conclusion of the vital importance of team work and a team approach to these problems. Not only must the team involve those agencies, government or private, responsible for the various rural services; it must surely involve the people themselves - local leaders, farmers and rural women. This need lends special importance to education and training devoted to the farmer and farm family in order that they may develop the capacity to help themselves and to create farming systems, a rural society and rural economy of which they may be proud and which makes its full contribution to national development and prosperity. No longer can we treat agriculture and the rural community as the poor relations of progress and development; in many countries they must be given the most dynamic treatment and high priority if the future of their society is to be assured.

References

- (1) UN Economic and Social Council: Report of the Secretary-General to the 43rd Session on Development and Utilization of Human Resources in Developing Countries. May 1967.

F.B. Wilson: Education and Training for Rural Development in Africa. F.A.O., Rome. June 1968.

Jon Moris: Farmer Training as a Strategy of Rural Development. A Chapter in Education, Employment and Rural Development. Report of the Kericho (Kenya) Conference. 1966. University College, Nairobi.

K.C. Naik: A History of Agricultural Universities. Educational, Research and Extension Concepts for Indian Agriculture. USAID Mission to India. 1968.

F.A.O.: Towards a Strategy for Agricultural Development. Freedom From Hunger Campaign. Basic Study No. 21. 1969.

SWANENG HILL SCHOOL

by Patrick Van Rensburg

Professor Lewis referred in his paper to my "highly individual efforts in Botswana to relate the school to the community". Perhaps the most effective contribution I can make to this conference will be to tell the story of the work done by my collaborators and myself. From this will emerge an account of the situation I live and work in, the problems we have had to face, our reactions to them, and the solutions we have attempted. Everyone here will recognise from this account situations and problems familiar to them, and each can judge for himself the relevance and validity of my responses, assessments and attempted solutions.

2. At the end of 1961, I was an exile from South Africa, without a passport and with an uncertain future. After acquiring a new citizenship and a passport in Britain in early 1962, I travelled with my wife overland through Africa to Botswana. There, awaiting permission to start a small secondary school, we found teaching jobs in a primary school, paid on the local primary school salary scale. The population was then half a million and there were only six secondary schools with a total enrolment of about 1,500. There were 60,000 in primary schools and we learnt something of the competition for secondary places. The per capita income is not much more than £30 and the country is heavily grant-aided in meeting recurrent costs.

3. In late 1962 we obtained a piece of land from the tribe on which to build and we searched desperately for funds. In December we found £500 and we organised a work camp to build one small classroom and a hut for my wife and me to live in. In February, 1963 we admitted the first 28 pupils who applied. At my suggestion, the pupils elected a head boy and a head girl, and during the first week the head boy came to ask me if I could provide them with a sportsfield. I pointed out how little money we had left after building our first buildings and buying desks and chairs for them. To spend money on a sportsfield would leave very little for running the school. The students considered this and decided to give themselves a sportsfield. It was an important first lesson for them and for me in allocation of resources and it also established from the outset a tradition of voluntary manual work in the school.

4. Before we started building the school neither my wife nor I had any real knowledge about education and development. Apart from our brief service in the primary school, neither of us had

had previous teaching experience anywhere. In the years that followed, we developed many ideas, not all of them new, but all of them relevant, I think, to the situation in which we were working. All that I know about education I had to learn on the spot, and while teaching and building a school. I was able to assess the methods, content and purposes of education about which I was learning in the light of the needs of the people amongst whom I was working. I had also to worry about the costs of building and of running the school.

5. The problems that I was encountering as a teacher, building his school in an emerging country, were representative - in a tiny way - of the problems encountered by the country itself. I soon came to realise the important interaction between education and development.

6. The policies of our school began evolving in response to specific experiences. When the first buildings were erected at the school with the aid of a multi-racial workcamp from South Africa, I was enormously impressed with their enthusiasm, but I confess that this enthusiasm was not matched by technical competence. When the students cleared their own sportsfield it needed hard work but little technical competence, but when they came to carry their voluntary work later into building classrooms, they were restricted to the labouring jobs, like digging foundation trenches and mixing concrete and mortar. Some of the students wanted to learn how to build so that they could complete a building by themselves. At that moment we were lucky to get the services - as a volunteer - of a man of wide practical ability and experience. He began teaching the theory and practice of building construction. It was a first step, taken then not fully consciously of all the later implications and considerations, towards diversification of the curriculum. It has also meant that our students have since built entirely by themselves three science laboratories and a large school hall - and that they participated in constructing a number of other buildings. They still did the labouring jobs - indeed, they helped build quite a large dam on the school site - but they could manage - with supervision - the more skilled artisanship too. Voluntary work had come to represent a real saving in costs. It was possible to demonstrate that this saving helped the school to grow more rapidly than it would otherwise have done. Money saved was spent on new classrooms, on buying equipment and on hiring more volunteer teachers (local secondary teachers are almost not available even now). Donor agencies were impressed by the element of self-help that this voluntary work represented and responded with financial aid.

7. During the early years one fact impinged very strongly on my consciousness. I was having to turn away young people looking for a place in the school. At the beginning of each school year, every headmaster is besieged by imploring children and parents, some tearful and some bringing every influence and pressure to bear.

8. It was in the light of this and my other experiences that I recorded the first formulation of my philosophy for the school, I wrote that "in many developing countries only a tiny minority of the population are likely in the foreseeable future to complete secondary education, and most of them do so at the expense of taxpayers for whom money is scarce, or as beneficiaries of external aid, given in the hope of promoting development, or a compound of both. Even if only because of this, these few educated people have some obligation to contribute to the process of development for others. The danger of creating a small, privileged and even self-perpetuating elite is inherent in the situation where financial limitations dictate that only a handful of people can attend secondary school or university.

9. "The pace of development will depend upon several factors, one of which is the priority that the rulers assign to it. At Swaneng Hill School, we have been much concerned to relate education to development. We have been extremely anxious to discourage the notion that education is just a ladder on which ambition climbs to privilege. We have felt that it is of some importance that the educated minority in a developing country should feel committed to stepping up the pace of development and committed also to the idea that an ever-increasing number of people should share the benefits of development. We try to ensure that, when our students leave us, they will feel under some compulsion from within themselves, through sympathy and fellow-feeling with the poor and hungry, to fight want, ignorance and disease in their country. We seek to equip them not only with the commitment but also with the confidence, knowledge and skill to tackle, themselves, the problems facing their country."

10. We were constantly looking for means of achieving these aims through the life and activities of the school and through its curriculum. The diversification of the curriculum was deliberately pursued. In addition to Mathematics and Science and the traditional academic subjects, we introduced Woodwork, Metal-work, besides Building Science, Technical Drawing, Commercial subjects, Art and crafts, and Agricultural Science. This would help provide the skills needed by a developing economy. Included

in the timetable were discussions with the students about their society and the country's economy. These discussions were vital but I soon realised that they needed shape, direction and coherence. We found this ultimately in a selection from various disciplines which we call Development Studies. This course, now accepted by our university examination council as a subject, consists of seven sections. The first is an economic analysis section, explaining the factors of production, the meaning of consumption and investment, the importance of the surplus to development provided some of it is invested rather than wholly consumed, and the meaning of specialisation and how it depends on producing a surplus. The section also discusses money, employment and labour, the allocation of resources, capital accumulation and population growth.

11. The second section deals with pre-industrial history, starting with man as a hunter and gatherer and proceeding through the first agricultural revolution to the eve of the industrial revolution. This section shows man's early efforts to use the resources of nature to his advantage, and also how each technological innovation was part of a cumulative process that made the next step possible, so creating the ultimate possibility of an industrial revolution. Here we stress the non-European origin of much of the early technological discoveries. The third section analyses scientific progress both before and after the industrial revolution and notes its role in development. The fourth section discusses politics and how governments and ruling classes have always played an important part in the control of the surplus. The fifth section concerns industrialisation. Here we show the main contrasts between industrial and pre-industrial societies. We then discuss the first industrial revolution, with all its exploitation of child and woman labour; we note the contributions of slavery and colonial exploitation. We then proceed to look at the special problems of industrialisation today and some contemporary experiences of industrialisation. The problems of rising expectations, prestige spending, luxury imports, are discussed along with the pros and cons of intermediate technology and labour-intensive methods. The sixth section discusses the economic situation in the student's own country and section seven analyses social and cultural change related to economic development and industrialisation.

12. Other instruments were being forged to give effect to the aims of the school which I enunciated - namely "to equip the students not only with the commitment but also with the confidence, knowledge and skill to tackle themselves the problems facing

their country". But before describing these I must mention some other undertakings which had a profound effect on my thinking and were to help in forging instruments for giving effect to those aims.

13. In mid-1963, I spoke quite informally to a group of villagers about the high prices in the trading stores - mainly European-owned - and how they might form a consumers' co-operative. A series of meetings followed at the school and a bulk-purchasing group was formed. In 1969, 1,400 members had a turnover in the store of £65,000. For five years the society has each year declared a dividend on purchases of 5%. Some of the staff were involved in running the society in its early days and in training the manager. A few students have over the years been elected to the management committee. On the whole the school's total involvement in the society was marginal. But I had learnt a lesson of importance from my regular meetings with people from the village and I think incorporated in the aim of the school, the belief - as I expressed it at the time - "that the secondary school in a developing country can be a focal point for development in the surrounding community. The talents and intelligence of both staff and students are an asset of enormous value which should properly be utilised for development in a country's overall planning and development. As the school participates in development, it is also able to carry out its function of educating its students for development; if the students participate fully in the implementation of the school's role as a focal point for development in its area, they will thereby have an opportunity of learning both skill and commitment".

14. At the beginning of 1965, in response to the many imploring young people encamped outside my door seeking entry to the school, I took an initiative - in association with the chief of the tribe - in an attempt to deal with the problem. The chief called a tribal gathering and I put to those assembled a proposal he and I had agreed in advance. I tried to explain that the primary school leaver problem existed because there were not the funds nor the other resources required either to educate or employ the thousands of young people turned away from secondary schools. We offered an on-the-job apprenticeship type training, in which trainees would work productively - while they learnt to build. They would undertake building for public and semi-public authorities at relatively low cost. Their earnings as builders, while they learnt, would cover costs. We called this the Builders Brigade; the name was taken from Ghana, though the important principle of covering costs differed from the first Brigades formed

in Ghana. We chose this name to emphasise that this was not a school or other training centre with a high theoretical and classroom content. The Builders Brigade has in five years trained 70 builders, over 45 of whom have passed Government trade tests, and over 60 of whom are now in employment as builders; and this has been achieved at no cost to the state and without any subsidy - apart from management skills of volunteers.

15. In 1967 we extended this type of training into other activities. We established a carpenter's brigade, a farmers brigade and a textile workshop for girls where wool was carded, spun and woven into blankets, rugs and tapestries, where textile printing and dressmaking were taught. By the end of 1969 all were covering most of their costs, not however including the wages of the expatriate instructors who were necessary to launch the new programmes. In mid 1969, the first girls to pass out of the workshop training in spinning and weaving set up an informal co-operative with our assistance and in their first six months provided themselves with reasonable earnings.

16. The Farmers Brigade has been beset by the most intractable problems. There has been periodic discontent in all the Brigades but nowhere so marked or bitter as amongst some of the Farmers Brigade trainees. Some discontent was to be expected in a new and revolutionary programme in which trainees had to work while they learnt to cover the costs of their training. Close by were relatives and friends in the secondary school with a much less exacting programme. For some of the Brigade trainees the Brigades were only a consolation prize because their first ambition was the secondary school. In the Farmers Brigade especially some had come to mark time to continue being taught while they waited for other opportunities. The constraints of the Brigades were that they should cover costs; this meant a high proportion of practical, productive work. Some insisted on a higher proportion of theoretical and classroom work than the system could afford. Too high an element of theoretical and academic work increases costs while at the same time reducing time for the productive work that has to cover costs. As soon as a Brigade needs external subsidies for running costs, it becomes subject to the same limitations that in a poor country makes secondary education a programme for a minority.

17. Some of the trainees insisted that we should be providing a programme that equipped them for employment as agricultural demonstrators. And still others insisted that we should provide them with sufficient capital that would enable them to earn as

much as the students who had undergone 3 years of education in the secondary school.

18. While we tried to promote a small settlement, and in the final analysis there were and still are trainees willing to attempt this, it has not been possible even now to secure land for them. This is so not because there is a shortage of land but because of the system of customary land allocation that still survives.

19. We have been willing to provide each trainee with a modest sum for settlement and this is a charge against the Brigade's running costs - and we remain committed to this. And despite all the problems 45 trainees remain in the Brigade and their parents, who have been interviewed, agree that they should.

20. In view of all the difficulties that have arisen in the Farmers Brigade and in response to lessons we have learned from others we have been prepared to modify the programme. We have been prepared to recognise that we were wrong to establish an institutionalised form of training. We recognised that young people separated from their environment might during 3 years in an institution assume unrealistic aspirations about their levels of earnings. Or perhaps we could say that unrealistic aspirations already assumed would be nurtured by institutional training. After discussion with the Ministry of Agriculture we made proposals for a modified system of training that would combine institutional with in situ training. The Ministry were agreed - and so was the Chief - that we should approach selected villages offering to train young people from the village. In advance the land, capital and farming operations would be identified in the village. The young trainees would spend half their time in the institution and half on their land - in rotation. There would always be some in the village and some in the institution. The importance of the institution was that it should cover the costs of the scheme and preserve the basic principle of Brigade training. It could also up-grade training and provide academic support knowledge and motivational training. And as the trainees went back periodically to the village a continuing evaluation could be made of the application of their training to their own farming. The Brigade would maintain instructors in the villages. The agreement with the Ministry of Agriculture and the Department of Community Development was that a comprehensive integrated programme of rural development would be introduced in the selected villages. Co-operatives might be established, adult literacy undertaken, and, in general, the adults in the village might be prepared towards accepting the changes and innovations

that the young trainees might introduce.

21. Last week we put this new programme to the District Council. Much concern was expressed about the amount of land that would be needed. There remains a lot of work to be done in that process of communication and explanation that Professor Lewis was speaking about yesterday.

22. Within the system of Brigade training, Farmers Brigades have provided the greatest problems. This is the most important area of training because we must recognise that it is farming that will provide gainful opportunities for production of most of the young - and older - people of our developing countries. There is a limit to the number of builders, carpenters and textile workers that we can train. We are examining other industrial activities to see whether the Brigade system can be introduced into these. Plans for a tannery and for leather-working are well advanced. Diversification is the essence of development but it cannot reckon without the production of food - and the diversified production of food - and the production of agricultural raw materials.

23. The success of the Brigade system of productive training in absorbing primary school leavers - or older primary school leavers - will depend on how far the following conditions can be met:-

- (a) ability to cover running costs;
- (b) low capital costs; it will be clear that the higher the capital costs the more limited the programme in a poor country;
- (c) there must be a demand for produce and output if the Brigades are to cover costs;
- (d) those trained in the Brigades must be able to find work; for the farmers this means, among other things, having some initial capital and land;
- (e) sufficient instructors have to be trained.

24. I believe that many of these conditions can be met and I have discussed how they can be met in the paper I presented to the Nairobi Africa Regional Youth Seminar which is contained in the

Report of that Seminar between pages 111 and 124. I explain in that paper the special difficulties about capital costs of a Farmers' Brigade, and the special difficulties for farm training and settlement in a climate as harsh as ours, where in the last eight years six were of prolonged and severe drought. Little reliance can be placed on arable production, either for revenue or for production of staple food for trainees. We need a minimum of beef cattle to produce revenue and so does everyone else, whereas the Botswana Government's 1968/69 Agricultural Survey shows that something like 15% of the population owns 60% of the country's 1,500,000 cattle. Nevertheless, I have suggested that means can be found to utilise the country's ill-used national herd through taxation and a system of national bonds. There is also a scheme run by the Botswana Meat Commission which buys immature cattle and makes them available to poorer people for fattening. Brigades can take advantage of this scheme. We are using methods of intensive horticulture and flood-spreading techniques. Our diversified farm programme includes beef, mohair, dairy produce, vegetables, eggs and poultry, goat meat and milk, sunflower and silage and high value crops from borehole irrigation. In more favourable climatic and other conditions I believe that Farmers Brigades would have lower capital costs.

25. There is also the market factor. As Farmers Brigades expand will they be able to sell all their produce? Even if villagers want to buy milk, cheese, eggs, butter, vegetables and mohair, they have no cash to buy them. In the paper I presented to the Nairobi conference I discuss this problem but I would like to defer discussion of it here for a moment.

26. We are trying at Swaneng Hill School to run the Brigade programme alongside the formal secondary school and to integrate Brigade trainees with Secondary school students in certain aspects of the life of both. I have founded another post-primary institution known as Shashi River School where Brigades and the school have been integrated from the start. This has been a very educative experience for students, staff and myself. Brigade trainees and secondary school students have been brought into contact as much as possible. The Brigade trainees have complained about the superior attitudes of the students. The academic students use insulting words about them because of the predominantly manual work they do. The trainees compare the length of their working day with that of students; they compare the length of their holidays with that of students. Only two weeks ago when they had a confrontation at Swaneng Hill School, I had to remind the Brigade trainees of the constraints of the programme - to cover costs.

27. There is a significance to this confrontation. We are all aware of the disequilibrium between the modern sector and the rural sector. We are all well aware from what Dr. Gardiner and Prof. Callaway have told us - and there are many authorities besides - of the inability of the modern sector to absorb more than a small proportion of the youth or other age groups into employment. We all know about migration to the towns. Some of us answer by saying that we must raise the earnings in the rural sector and improve conditions there. To do this presupposes that we have solved the problems of underdevelopment in the rural areas. If all that is achieved is to create enclaves of wealth in the rural areas then I doubt if that will any more solve the mass problems of the rural areas than to create enclaves of wealth in the towns. Rural unemployment, discontent and migration will persist. If we raise our Brigade trainees to the level of the secondary school students we will have merely created a new element of privilege dependent on state subsidies, and what is potentially a large-scale programme will have been decimated. In practice we are unable to find enough funds to subsidise Brigade training, anyway. We can barely find the funds to subsidise the secondary school. The real question posed there is whether it is realistic to think that the problem of disequilibrium between the modern and traditional sectors can simply be disposed of in terms of arguing for raising of standards in the rural sector. It may be necessary that standards in the modern sector may have to be cut until conditions in the rural sector are improved by development and all the hard work that implies.

28. This confrontation does remind the students of their more privileged position. They do not have to work so hard, their work is less strenuous and they can - generally speaking - look forward to better jobs and better-paid jobs. Anyone who doubts this has only to be reminded of the difficulties that face the Farmers Brigade trainees nearby.

29. When we took students into the dormitories at Swaneng Hill School, it was a condition of entry that they would undertake their own cleaning and catering except for preparation of week-day lunches. At the time this was an essential economy. The students now have a catering association organised entirely by themselves - though supervised by staff - which provides them with all but midday meals during the week. The fees which boarding students pay are handed over to their catering association in monthly payments and they cover costs entirely from this. By this and other means, like student work on the vegetable garden, we effect a cost-savings amounting to one-third of the average

annual per student running costs for all the schools in Botswana. What it means is that without the savings we would have one-third less students in the school. We can demonstrate from this an interdependence of the students on each other through work in the school. If they did not undertake this work less of them would be in the school. The whole school now also participates in community service, and this was the consequence of a decision taken by the students themselves. This includes cost-saving work at the school itself, assistance to the Brigades and work in the community outside. All this is part of our attempt to inculcate commitment in the students. As in the case of the catering association, in many other ways, too, including a school co-operative, do we involve students in running their own affairs in order to encourage initiative and responsibility.

30. There is some resistance by a minority of students to the work they have to do in and outside the school. Most, however, acknowledge the force of the argument that their interdependence has made it possible for more to be in the school. And in relation to work outside the school we make the point that student fees cover much less than half the running costs. The school is subsidised by donations and a government grant. Some of this grant represents taxation. The school is therefore dependent on the community and to raise living standards and earnings outside will make more money available for education.

31. Secondary schools are expensive institutions. Even in our own two schools where costs have been drastically cut, with a total - in the two - of 860 students, total running costs that have to be found in cash amount to £86,000. On the other hand the total cost that has to be found in cash of training 310 in the Brigades at the two institutions - represented by the wages of expatriate instructors and managers - is roughly £7,000. As local instructors and managers are trained the Brigades will be able to cover salaries on local scales.

32. Already the Brigades provide a fair proportion of non-technical teaching. The syllabuses in Science, Mathematics and English have a high degree of vocational bias. The Development Studies course seeks to create an awareness of the economy, its job opportunities and lack of job opportunities. Generally it tries to prepare trainees for the possibility that they may have to be job-makers rather than job-seekers. The various courses, taken together, try to make them capable of operating small co-operatives as the first graduates of the Textile Workshop are now doing, and as some of the farmers will have to do.

33. While education in the Brigades ought to be self-contained it should also be able to lead some on. Its objectives should be to encourage rationality, initiative, reliability, self-discipline, loyalty based on understanding, and compassion. We do not need to rely on the traditional academic disciplines to teach and inculcate these characteristics and virtues. We can help people think scientifically without taking them through the laborious processes of examination science syllabuses. Agriculture provides just as good a discipline for rational thinking and for learning judgement as does learning European history. It is also my experience that people can learn much, too, from practical and productive work, from co-operating, and through discussion and having responsibility for their own affairs. After many long discussions with farm trainees I am well aware of the perspicacity and ability to think of young people who might be classified in formal school terms as semi-educated.

34. None of this is to deny the importance of secondary education. Every developing nation requires a certain proportion of people whose training will be long and intensive, such as doctors, engineers, veterinary surgeons, agricultural and industrial research workers, administrators, central bankers, development planners and rural innovators.

35. The main purpose of the existing pattern of secondary education directly modelled on the British grammar school and the French Lycée is to prepare young people for life in the modern sector with its privilege and cultural alienation. Very rarely was this system oriented towards production. We know how great the pressures are from parents and children alike for secondary places. We know the results of frustrated ambition among those who fail to gain entry. We have heard of the growing trend in some countries - though not yet in Botswana - of insufficient job opportunities even for those who have had a secondary education.

36. Manpower surveys can probably forecast reasonably accurately the numbers who will be required in the modern sector. Less easy to quantify are the needs of the rural areas for management skills, for technical innovators, extension workers in all the disciplines and integrating the disciplines. The need in the rural areas is to promote both agricultural - and diversified agricultural - as well as small scale industrial production. It is also to promote health and other social services and to provide infrastructure, credit and marketing facilities.

37. What are the qualities - other than the respective vocational skills - which will enable more highly trained people to carry out their functions? I suggest that such qualities will include initiative, the ability to reason, capacity for original thinking, being well-informed as the basis of sound judgement. Also to be included are reliability, self-discipline, self-confidence, organising ability, integrity, moral courage, enthusiasm, dedication and compassion.

38. We have inherited curricula from other countries and taught them in the belief that they were essential to inculcating the qualities I have described. The extent and range of these curricula have demanded an organisation of school life that makes difficult the inclusion of community service and cost-saving student activities. These curricula are also costly, requiring highly qualified teachers - often expatriates.

39. We need thoroughly to question the subject content of the subjects taken other than those in which vocational choice requires them to specialise. I wonder whether we need to retain the existing compartmentalisation.

40. Here I would take up the point made by Mr. P.S. Tregear in his paper on The Community School. "With one of its principal aims being the development of potentiality in the individual the school is essentially at variance with the norm of society where this is based on the duties and rights of the broad kinship groups". There is in other respects, too, a cultural alienation in process, for example, in the presentation of English Literature and European History. What is generally missing is any attempt to relate new insights to old experiences. In Development Studies, for example, the section which analyses social custom and social change related to development and industrialisation, has great importance. It must help people bridge the dichotomy. The teaching of art, music and literature should not attempt to displace the cultural experience of society but to give its own art and culture new means of growth, and to create the possibility of blending.

41. My current thinking on curricula reform includes developing a course in Cultural Studies which will select from literature, art and music, cultural history, elements of geography, comparative religion, elementary philosophy and possibly logic. History might then be divided between Cultural Studies and Development Studies. Geography might be split up among Science and again Development Studies and Cultural Studies. A student's

basic course might then be English Language, a local language - if desired - Development and Social Studies, Cultural Studies, Mathematics, Science and possibly a practical subject. I must acknowledge however that any thinking and work in this respect are not yet fully enough advanced for me to stand up in defence of the proposals under cross-examination. I am highlighting the problem without being fully sure about the answer.

42. I conclude, Mr. Chairman, with some thoughts on rural development. As I see it, rural development essentially means economic development in the rural areas. What this means is that there should be an ever-increasing production and continual diversification of production. More goods and services of an ever-increasing variety should be produced by a continually increasing number of people. The historical pattern was that agricultural surpluses led to increased industrialisation. But now the high cost of modern capital intensive industrialisation distorts the process. Immense amounts of capital have to be generated to employ small numbers.

43. Now I do not ignore the need for modern industrial development or even large-scale agricultural development where natural resources make their strategies sensible. I do feel that it is not enough just to increase production of primary raw materials. Rural development is not only agricultural development. There must of course be increased agricultural production and diversification of this production. Rural Development must also include manufacture, using simple tools and simple technology, of those goods that rural people require, from local resources, whether animal, mineral or vegetable. This includes a variety of foodstuffs, personal needs, woollen and leather goods, wooden goods, housing, sisal goods, beverages and household goods. If cash shortages inhibit exchange of these goods then a credit system and a marketing infrastructure should be established. If there are existing manufacturing structures, like those Prof. Callaway mentioned, then these can be used to build upon and expand. Where these are lacking or where new skills have to be introduced then the Brigade system can be used to introduce the new skill not only to school leavers but to village people of all ages. Here is an ideal field for an exchange of volunteers and inexpensive experts among developing countries. I think, for example of the cotton-weaver from India teaching in Tanzania, or a tanner who might come from Cairo to Botswana. We need soap and candle makers, men who can cure tobacco, leatherworkers and saddlemakers.

44. We at Swaneng Hill School and in the attached Brigades are now beginning to explore this as a technique of rural development. We have asked the senior students as part of development studies to undertake resource surveys in the village and to locate existing skills. And our Brigades and the practical departments in the school are undertaking experiments in local production. At this stage we can only hope that our experiment will be successful but we can claim no more for it than that it is an experiment.

45. Finally, I want to express my thanks to the Botswana Ministry of Education for its tolerance in allowing me to develop the experiment that Swaneng Hill School constitutes and for the increasing financial support we have received from them.

THE COMMUNITY SCHOOL

by P.S. Tregear,

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'A problem facing the educational authorities is to devise a curriculum which will meet the needs not only of a small minority who engage in non-agricultural pursuits but the bulk of the population in order that they may be able to lead a better, richer life in a rural environment.'

'Its (education's) aim should be to render the individual more efficient in his or her condition of life, whatever it may be, and to promote the advancement of the community as a whole through the improvement of agriculture, the development of native industries, the improvement of health
Every department of Government concerned with the welfare or vocational teaching of the people - including especially the departments of Health, Public Works, Railways, Agriculture - must co-operate closely with educational policy.'

'The school can fulfil its function only if it is part of a more general programme conceived in terms much wider than the work of the school.'

Experience tends to show that efforts to educate the young are often largely wasted unless a simultaneous effort is made to improve the life of the community as a whole.

The efficiency of the school in promoting the good life of the community depends upon the extent to which it is able to co-operate with the moral forces operative in society and to build on these as a foundation.'

'It is the duty of every school to relate the whole of the curriculum to the life of the community it serves.'

1. These four quotations are taken respectively from the minutes of the Privy Council in 1847; the 1925 Colonial Office Memorandum 'Education Policy in British Tropical Africa'; the 1935 Colonial Office paper 'The Education of African Communities'; the report of the 1951 Mission on Education in East and Central Africa. These words will be familiar to many present on this occasion and the sentiments expressed have been accepted, in principle, as policy in every country represented. Why, then, are we confronted today with what has been described as a 'Crisis in World Education'? Why should the Ministers of Education in Africa at their meeting in Nairobi in 1968 express alarm at the consequences of the tremendous quantitative development in education?

2. The reasons are many and varied but one that is constantly present in my mind as a possible prime cause is the divergence between the expressed aim of the authorities and the wishes of society as a whole. If not all, then certainly the great majority of the societies with which we are concerned had their own systems of education before contact was made with the Western world. These systems were in perfect tune with the aims, values and mores of the society. The education provided was sometimes formal, sometimes informal and conformed exactly with Durkheim's thesis that education (the school) is the means by which one generation transmits to the next the values and standards it holds most dear. The traditional systems of education were exactly at a pace which permitted change to be accepted with little or no social difficulty. The traditional way of life continues but is - and has been for many years - subject to pressure for change from without. As well as a population explosion we have witnessed an education explosion. Schools have proliferated everywhere in response to what Professor Harbison describes as 'the almost insatiable demand for ever more education propelled by irreversible social and political forces.'

3. The Western school is, however, essentially urban in character: it is appropriate to a society engaged in an exchange economy requiring the language of symbols for communication at a distance and for the recording of commercial transactions. Its main concern is, in principle, the development of the potentiality of the individual. Now, although societies in the areas with which we are concerned have all, to a greater or lesser degree (some totally), been brought into contact with the technological, industrialised world outside, they are (often to 90%) rural, often subsistence economies and

traditional values and customs are still prized and upheld. To generalise, in them the group, the extended kinship and family group is of chief importance - not the individual. The hierarchy of status still retains much of its validity. As expressed by Nduka in his 'Western Education and the Nigerian Cultural Background' in traditional culture 'custom is custom and there the matter ends' whereas the Western outlook is critical, flexible and rational.

4. This Western outlook is apparent in the aims expressed in the syllabuses being prescribed for primary education in all parts of the developing world and is the main ingredient in the movement for curriculum reform and development. The aim is to encourage children to observe, to question, to draw logical conclusions from observed facts, to reason - all things which may run completely counter to the wishes of and patterns of behaviour desired by parents who send their children to school.

5. We are, then, confronted with what appears to be a very complete divergence between the aims and attitudes of society and those of the educationalists. With one of its principal aims being the development of potentiality in the individual the school is essentially at variance with the norm of society where this is based on the duties and rights of the broad kinship group. In the words of Professor John Lewis 'a dichotomy exists between the schools and the communities they exist to serve and the teacher is involved in bridging the dichotomy'.

6. In this paper we are concerned in examining possible ways of bridging this gap and certain very obvious and difficult obstacles that need to be overcome. I shall be concerned with the Primary School in a rural setting for two principal reasons, firstly, because 80% of tropical countries are rural, agricultural communities and, secondly, because upwards of 80% of pupils in school cease formal education at the end of the primary course. If primary education is the terminal point of formal education for the majority of children, then an examination of its purpose must be undertaken. What is the role of the primary school in socio-economic change? Has, in fact, the primary school any economic effect? A recent study of a district in Tanzania showed that the education children received at school did not assist them to understand and apply methods of improved cotton growing, the cash crop cultivated in the area. No doubt examples of this kind could be repeated from other countries.

7. It is only in comparatively recent times that education has been seen as an important factor in economic development and this is usually at the secondary and tertiary level. Where then, does the primary school fit in? Why, in fact, do parents send their children to school? Their objective in tropical areas does not differ in essence from that of parents in industrialised countries. They look to the school for an opportunity for their children to 'better themselves'. This opportunity has, for many years, been that of moving out from a narrow existence of grinding poverty in subsistence agriculture into respectable, regularly paid employment preferably in Government service. It was, until comparatively recent times, gained after completion of the primary school course of some eight years. This is no longer true - and has not been for a many years - but parental aspirations have not changed. It would, perhaps, be more accurate to say that they had not changed until very recently; present indications in at least two countries (Nigeria and Uganda) are that, for the first time, enrolment in primary schools is decreasing. Is the demand for education no longer 'insatiable'? Is the reason for the decline in enrolment a feeling on the part of parents that the school is no longer the avenue to the better life? Is there still a tendency in parents to expect from the primary school something that it can no longer provide and which, at bottom, is contrary to the interest and benefit of both the nation and the local community?

8. The education provided in the colonial era has been bitterly criticised as being inadequate in quantity and as being too academic, too bookish, too divorced from the 'needs of the people'. In actual fact it was extremely vocational for it supplied pupils with the tools required for clerical and administrative work, the career prized above all other by their parents. In this way the school did respond to the needs of the community. Whether the results contributed adequately to the economic and social development of the country is another question. The answer is perhaps given in the anxiety now being felt in many parts of the world. It is appropriate here to quote some words spoken at the Lagos Commonwealth Education Conference in 1968:

'The first question to be asked should surely be "Why has rural education failed to deliver the goods?" The answer is that it has not failed. It has delivered the goods it was designed to deliver, namely ever-increasing swarms of young adolescents possessing minimal skills in literacy and numeracy,

with scarcely any manual skills except what have been self-taught or picked up at home, by no means ill-equipped for the inevitable unemployment which faces them, but with next to nothing to contribute to the development which their countries so badly need.'

9. If primary education is to have a beneficial socio-economic effect it must have a recognised purpose and one that is understood from top to bottom in society. In essence this means a radical change in attitudes - from initiators of policy through administrators, inspectors, trainers of teachers, teachers themselves to parents. It may be unwise to single out any one of these categories as the key but in the last resort it must surely be the parent. What reasonable limit can be set to the function of the rural primary school which will satisfy both the parents (that is to say, the community) and those in political authority? For it must be recognised that the aims and objectives of the two are not necessarily always identical. Is it possible to prescribe an aim which will be satisfactory both for the local community and the larger national society? I think it is. In this paper it will be impossible to do more than offer some outline suggestions with full recognition of the obstacles that lie in the path of achievement.

10. This paper is entitled The Community School. In what way will the Community School differ from the ordinary primary school in a rural area? To answer this we need to return to the quotations given at the outset which lay down principles which stand the test of time but whose validity has seldom been proved on the ground. First, the school has to be a 'good school' in that it provides a good education for its children. The teacher's first duty is to teach his pupils well, but what is he to teach them? This of course, is a matter which engages the attention of those involved in the curriculum reform and development movement and, no doubt, will be covered in detail on other occasions at this conference. I would say, however, that the prime objective of the teacher is the attainment by his pupils of full literacy and numeracy, by which is intended the ability to communicate easily in speech and writing in the language prescribed by authority, and to understand and interpret the world around him in its spatial and numerical physical aspect. These are the basic skills required in any society which is developing into an exchange economy. If this objective is achieved it will be adequate both for those who cease formal education at this stage and for those who continue

to secondary and higher education. But will this satisfy the parents' aspirations? How will it help to integrate school and community? Many factors are involved besides simply curriculum reform - teachers' skills and attitudes; parents' attitudes; the attitude of those in authority; the trainers of teachers.

11. It may be considered that to place such emphasis on literacy and numeracy means little more than a return to the 3 Rs and to the system of rote learning so prevalent in schools even today. The contrary is true. The one condition is that all learning - particularly in the early stages - be based on the experience of the children and this entails relating the school to the community. We have seen that 'it is the duty of every school to relate the whole of the curriculum to the life of the community it serves'. Taken from a purely sociological standpoint such a dictum may be open to question. If the community is a stagnant society then the education given will itself tend to be static with no forward momentum. But as a sound pedagogical principle it cannot be faulted although some may say that some environments are so lacking in stimulus that they lack useful experiences. This is doubtful. If I may introduce a personal note, the best bit of teaching that I saw in a recent visit to the South Pacific was in a small school on a tiny island where the teacher took his small class out to the reef to study shellfish and octopus, to the village gardens and the village itself. The English writing of these children aged eleven was far superior to almost anything I saw in secondary schools in the area. The reason is not far to seek: they were communicating experiences they had felt within themselves, relevant to their own conditions of life.

12. Therefore, it is suggested that a valid primary school curriculum can be organised around Literacy, Numeracy and Environmental Studies. This is not the place to attempt any detailed blueprint of the curriculum. It is possible, however, to put forward a few suggestions for the closer relationship between school and community. To achieve this it seems necessary not only to use the environment as a source of rewarding educational experiences but also that the community itself should, as far as possible, be involved in and participate in the educational process. A progressive involvement between the life of the school and the community might be:

- (a) a recognition by the teacher of the educational utility of the surrounding environment;

- (b) the stimulation of the community's interest in the objectives and techniques of the school.
- (c) the participation of the community in school activities;
- (d) the full collaboration of the community and school in community activities.

13. Already most syllabuses prescribe 'visits to the local market, the Post Office, the village Dispensary etc.' All such visits contain the ingredients of much valuable 'active training' but only too often are undertaken in a perfunctory manner and are regarded by teachers and parents alike as a frivolous waste of time taken from the serious business of learning which can only take place within the walls of the classroom. It must be recognised that very often the teacher's own previous education and objective may well coincide closely with those of the parents who see the chief goal of education to be the passing of examinations which lead to further steps up the ladder of education. This is, indeed, not an uncommon attitude to be met with in what are called the 'developed' nations among both teachers and parents. Where primary education is the terminal stage for most, such an attitude is not realistic but, nevertheless, it is likely to remain one that is influential in a teacher conditioned as he must be by his own upbringing. If he is to be successful in operating this 'community orientated' 'problem-solving' curriculum he needs to be completely convinced of its validity and that it will not jeopardise the chances of his pupils for further education. For this to be conclusively shown to be true an examination and reform of the selection procedure is clearly indicated - but that is a matter into which it is not appropriate to go at this moment.

14. Provided the teacher is convinced that what he is doing is valid how can school and community objectives be best reconciled? This, of course, is not purely a function of the teacher but very largely concerns the wider political and administrative organisation. The teacher is but one unit in this organisation - the 'coal-face worker'. He can only operate successfully if he knows (and the general community knows) that he has the support of those in authority at all levels - Minister, Permanent Secretary, Chief Education Officer, Inspector and Headmaster. This postulates that a policy has been agreed in which principles and objectives are stated and propagated among the people at large. The one example visible

today is, of course, President Nyerere's 'Education for Self-Reliance' and schools do operate where the principles apply. The fact remains, however that the teacher is at the coalface and it is he and not the Minister or Provincial or Regional Officer who has to confront and convince the parent of the rightness of new approach.

15. It would be appropriate to attempt a short definition of what is meant by the term the 'Community School'. It is a place where children learn the basic skills needed for interpretation of their environment and for adjustment to change through experiences provided by that environment in the first stage, broadening out to take in the world outside their immediate horizon; a place where the knowledge and skills of the adult community are brought in to aid the teacher in his task; where close association is sought with the extension workers in the fields particularly of health and agriculture; a place whose buildings may be placed at the disposal of these workers for meetings with the adult community; whose buildings and grounds are available for cultural and recreational activities by the community as a whole - adults and adolescents alike. This may well be an idealised picture and one that is unlikely to be realised on a national scale at the stroke of a pen in a national policy statement. There may well be, however, areas or individual schools where circumstances are ripe for a development on these lines. It is in such cases that the understanding of the administration may be needed to permit experiment, the relaxation of some of the regulations - for example the adjustment of the school calendar to fit local conditions. In all this is involved the preparation of the teacher (both pre- and in-service), discussion with inspectors and supervisors and, in many cases, a reorientation of the attitudes of teacher trainers themselves.

16. Success in new approaches to teaching, in changes in the curriculum, depend ultimately on the quality of the teachers. This is true in any circumstances but applies with redoubled force if a new objective is given to the school. Criticism of the inadequacy of the bulk of the teaching that passes for education in schools at present is familiar to all. The rote learning process to pass examinations and gain admittance to further education is clearly not delivering the goods the countries need. As indicated earlier there is a widespread movement for curriculum change with the aim of integrating the subjects in a coherent whole. The students who come forward for training are themselves, to a very great degree, conditioned

by their own education which has largely been concerned with the acquisition of factual information. To gain a new attitude to teaching they require not so much training as re-education, i.e. an entirely new approach to subjects already learnt. This would be relevant to any good school and would apply to the training of all teachers. What, then, is peculiar to what we have termed the Community School? It is surely the importance of linking school and community together in a common understanding and purpose. It means the school extending its attention to and joining with adult education in the broadest sense and linking with the agencies of social and economic development operating in the area. This is something beyond the scope of normal pedagogical training where attention tends to be focussed almost entirely on the education of children within the framework of the curriculum and syllabus within the classroom. The Community School idea, however, places the school in its proper role as one of the agencies involved in social change. The Community School approach is - and must be - a co-operative effort in which all concerned work together towards a common end, each understanding the contribution which the separate agencies can make.

17. It will not be taken amiss if it is said that not all tutors in colleges of education are competent to undertake this wider function without themselves going through a process of preparation through conferences, discussions and actual experience in the field. A counsel of perfection would be for all agents of social and economic development to be trained in common in multi-purpose centres which might well be described as Centres for Rural Development where teachers, agricultural extension workers, health visitors, community development workers were housed on the same campus, attending some courses in common but pursuing their specialities separately. For many reasons this eventuality is unlikely to come about. What is essential, however, is that at least there must be opportunity for these agencies to be involved and for students and staff of the colleges of education not merely to visit other training centres but actively to participate in the work being done there. If there is to be reality in a joint approach to raising the level of rural community life, then there needs to be a closer relationship between those responsible for training workers in the field.

18. Colleges of education are, however, seldom sited near to other centres of training. The students are trained to be competent teachers of children in the classroom. If it is agreed

that the teacher has a wider function than it would appear to be important that the staff of the colleges should contain members with special qualifications in the fields of Rural Sociology, Community Health, Agriculture and Child Care, persons who would be additional to the normal cadre of pedagogical tutors but working in close collaboration with them. Teachers in a Community School need to know, as a basis for their work, the structure of the society wherein they live. It follows, then, that they require adequate theoretical knowledge and practical experience of studying a community and of identifying the role of the school in its development. It may be said that the teacher already knows his society, of which he has been a member from childhood, but firstly, he may very often be a 'stranger' to the community and, secondly, even if he is indeed indigenous to the area, because of his very familiarity with life he may be too close to it to understand the implications involved.

19. The inclusion of these 'specialists' on the staff does imply the production of expert agriculturalists or health officers. It is to ensure that the teacher has knowledge and understanding of the extension work being undertaken and also is competent to use this knowledge in his teaching of the children. In agriculture, for example, he should be familiar with seed selection, the use (and abuse) of fertiliser, the rearing of poultry and other small livestock, fish farming etc. - all activities which will probably be advocated and propagandised by the extension workers and all of which are items which, under proper guidance, can be profitably practised in school both for their utilitarian purpose and for their educational value.

20. All the above is concerned with the preparation of the young teacher entering the profession. We all know the cold douche of disillusion which he may experience on being appointed to his first school where his enthusiasm, particularly for ideas now put forward, will be met with indifference or even hostility. Of at least equal importance with the training of new teachers is the in-service training of inspectors, supervisors, and (perhaps particularly) head teachers.

21. Reference was made earlier to the inadequacy of the teaching force. This is largely true but, within this apparently under-educated mass there is, I suspect - and from my own experience know - there is a larger number of men and women of imagination and initiative who, if encouraged, could exercise a much greater influence than they do at present. One function

of the inspectorate should be to identify and bring these people more closely into a more effective role. This can be done through courses of in-service training, organised to a great extent on a 'workshop' basis. A point worthy of consideration is the disposition of such teachers after re-orientation. To post them back automatically to their previous schools where circumstances may not be conducive to the new approach may be self-defeating. It may often be preferable to make other arrangements and keep the teachers as team units posted to places where success has a good chance of being achieved. This is a suggestion unlikely to commend itself at first sight to administrators. If, however, they too are convinced of the validity of the Community School, they will recognise that success depends on the co-operative effort of the school staff, supported by the administration at all levels.

22. One factor which so often militates against success is the sense of isolation suffered by the village school teachers. More frequent and understanding visits by supervisors and inspectors (who come more to advise than to 'inspect') will help to break this sense of isolation. Week-end seminars and discussion meetings where teachers themselves can bring forward suggestions in the light of experience will help to foster a feeling that they are themselves an integral part of a dynamic, forward-moving idea and not merely the recipients of directives from above. But, as indicated already, this is not only a local or regional matter. Where Community Schools are organised it must be clear to all that they have the support of the central government. News letters from Headquarters and radio "Teachers' Forums" have their part to play in keeping touch with the schools themselves but this is really only part of a wider programme of adult education, to which much lip-service has been paid in the past. If Rural Reconstruction and Development has the priority in policy that governments seem to be according it, then a concerted and coherent plan of adult education, aimed at changing people's attitudes is called for. At this point we are indeed, back in the days of Phelps-Stokes and the 1925 Memorandum. Over forty years have passed but the ideas then put forward seem to have just as much - perhaps more - validity today. 1970 will see the start of the second Development Decade and is to be celebrated as International Education Year: Unesco is elaborating programmes for 'life-long' education; F.A.O. in collaboration with Unesco is to hold a world conference on agricultural education. Is not the time ripe for a fundamental re-assessment of the problem of education in rural areas and the role of the school in development, as part of an attack on a broad front?

TRAINING TEACHERS FOR EDUCATION IN RURAL AREAS

by

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Introduction

1. Education has long been recognised as the key to development and the recent history of developed nations bears witness to this fact. Yet time and time again education of rural communities has had the disturbing effect of triggering off their migration from the land to large towns, without effecting the desired social and economic development of the rural areas. Most people agree that education provides the means for securing a better life, but feel that this latter can only be obtained in large cities and towns. So with whatever level of education they acquire they set off for the bright lights leaving the villages undeveloped. Perhaps the type of education being provided has contributed to this situation, as it has been considered to lay too much emphasis on training for white collar jobs. Thus the notion has still in many countries to be destroyed that educated, and, in some cases, merely literate, people should not work on the farm.

2. The question has been how to provide the necessary education and at the same time induce the rural populations to stay on the farm. It is suggested that they could be made to see the benefits of staying on in concrete terms, in the form of increased agricultural production, more financial benefits, better community development, better life, and the resulting pride in belonging to a growing community.

3. While it is true that numerous schemes have been tried without much success in the past, it is suggested here that perhaps the right kind of teachers, trained specially for the role of agents of socio-economic change, will at last bring about the desired results. The instrument of such change will be a fitting education tailored to serve rural communities in particular. What follows below is a scheme designed to meet these requirements, with special reference to developing countries. The job to be done seems particularly difficult and calls for great patience and sacrifice on the part of individuals. But it looks like being the only answer at this stage and is

certainly worth giving a try.

What sort of education for rural areas?

4. I would suggest that rural areas need education in four dimensions, namely:

- (a) Education for social and cultural change;
- (b) Education for economic change and agricultural improvement;
- (c) Education for technological change and industrial improvement;
- (d) Education for self-reliance and national improvement.

(a) Education for social and cultural change.

- (i) Education is a passport for social mobility and the more there is the more the social structure changes. The 'average' thus alters so that there is a gradual social movement which has to be directed towards cultural change. More education should also mean better education if it is not to lose most of its effect.
- (ii) In this light education has to aim at the development of new attitudes towards the conditions in the rural area. Generally, new attitudes to nutrition, child care, the role of women, home management, health and disease, should all go along with improved education. But, especially in the rural area, a new attitude to manual labour is vital if the enhanced social status is not to go with snobbery and the rush to the towns. Along with this should go new ways of doing things directed towards easier labour and more efficient performance. This will bring in new ideas and new ways of living. Especially important also is a proper sense of the value of leisure and recreation which enhances productive efficiency, and so brings in higher income. People also need a proper sense of the value of money and how to use it wisely.

- (iii) The revised sense of values so introduced will increase the social responsibility of the individual. He thus comes to take his share in the provision of social amenities - schools, community centres, water supply schemes, etc., which should be the collective responsibility of the villagers, as indeed it is already in some instances.
- (iv) It is being suggested that the teacher's role in all this is to give leadership and to train his pupils along such lines that they will come to accept such changes as natural and necessary for a better social life. The teacher should by training be equipped to act as the spearhead for cultural change in this way as well as by exerting a direct influence on local music, dancing and other social customs.

(b) Education for economic change and agricultural improvement.

- (i) Education for economic change and agricultural improvement is in fact the most obvious kind of education of which the rural areas are in need. Technical information and services are among the prime requisites for moving from a traditional agriculture to modern levels of production and marketing. While the institutions of higher learning and of research can be expected to provide the basic services needed through applied research, extension programmes for farmers and teaching programmes soundly rooted in science and scholarship, the rural folk must have the necessary level of literacy (scientific and otherwise) in order to benefit materially from the extension services.
- (ii) Thus the child at school requires education about improved crop production through better agronomic practices, improved live-stock production through better health care and management, better (i.e. more efficient) systems of land use, more efficient systems of marketing, drying, storing and packaging produce for transportation, ways of extending the normal crop season and so on. In short he needs the education that will teach him now

to farm better than his father, and how to use extension instruction and advice to make more money.

(c) Education for technological change and industrial improvement.

This is an age of machines and automation, when the burden of labour can be lightened by getting machines to do the drudgery. Thus any fitting education for rural areas must include an understanding of how machines can do the work and how the machines themselves work. Thus technical education is indispensable in this connection. The farmer has to be a technician of some sort and the more capable he is the better. Then he can care for his tools and his equipment. There is even scope here for some creativity in adapting foreign technology to local conditions and in developing some intermediate technology to cope with requirements on a smaller scale. This is where the industrial improvement comes in. For there are quite a few cottage industries on which small villages can thrive with judicious investment and management. From small beginnings big ventures can, with patience, ultimately arise.

- (d) (i) Education for self-reliance and national improvement is gradually being forced on us all nowadays by the drying up of external aid funds. This is a general education for all, but is particularly applicable in rural areas where development schemes often come as an afterthought of the national planners. A better life comes sooner through self-help than by waiting for government funds to become available. Thus rural people require the kind of education that should enable them to see their problems clearly, to investigate different methods of attack and devise solutions, and then to implement the solutions. They should be given the sort of lead that would make them take pride in the village to which they belong rather than desire to migrate to a large town. They should be in a position to have the emotional satisfaction of seeing their locality grow into a prospering township through their own initiative and endeavours. They should be equipped both mentally and physically to do their work to perfection, rather than being satisfied with a second best or half done job.

- (ii) In short, the average villager should be given education for adulthood rather than perpetual dependence on a "father figure" in the form of a government or foreign agency. Only then can he make his own small community a secure place for himself and his family and thereby contribute maximally to the development of the nation as a whole. In a sense there cannot be much serious talk of national development without the development of the rural areas whose people form the majority of the population. If these can be equipped and given the necessary leadership to develop their areas significantly, a big part of the national development problems would be solved.

5. The specific objectives of this kind of broad education can be considered under two headings, namely, what the teacher is supposed to do with the pupils and with what the teacher should be equipped in order to perform the task well.

6. In general, at the primary school level, the teacher is supposed to guide and encourage the pupils to explore and discover facts about their environment and their situation, to discuss these and to learn to reckon and report; to discern relationships. At the secondary school level, he is supposed to formalize their study more and to focus attention on inter-relationships of science and mathematics and agriculture; social changes and economic development; all the time using the environment as resource material.

7. For education for rural transformation, one must lay emphasis on science in the widest sense. An integrated study of science is the most effective tool for economic and social development nowadays. Thus the education at school will necessarily be science education.

8. Science in relation to rural development: Science takes in the natural environment - its nature and operation (functioning), its evolution (changes with time) and the interactions of its components. It is concerned with every aspect of the environment and of its components both physical and biotic. It seeks to understand natural events and phenomena as cause-and-effect relationships. Thus it depends on repetition of events and phenomena for verification of such relationships. It uses logic in its method and builds up an organized body of knowledge on which to draw for further

investigation of nature.

9. One can interpret this as an ever deepening familiarity with and understanding of the natural environment as a basis for man's exploitation and improvement of the environment as well as an amelioration of his existence. Thus science is to be developed initially from knowledge of local environment and phenomena, by use of local materials, and for further improvement of local conditions. In time a whole body of scientific knowledge - data and methods, ideas and techniques - will be built up and seen to be part of the universal scientific knowledge made up of similar components developed in other parts of the world.

10. The emphasis on local environment does not imply a special kind of science peculiar to a region or a people. It suggests rather that study of local conditions is the easiest road to a full understanding of scientific ideas and their methods of development. It implies that study based on one's own experience is more readily advantageous than study that is not. It means that application of science to improvement of one's situation is more valuable and less taxing when the principles derive from local rather than foreign conditions. The scheme proposed below seeks to create the right conditions for the development of scientific education based on local conditions for these very reasons.

Training the Teachers

11. As regards the training of the teachers to carry out these tasks one should aim at equipping them to regard their education as continuous, to show concern for the economic and social welfare of the local population by studying their problems and devising possible solutions, to use the environment as resource material for lessons in science, mathematics, language, literature, civics and character building; to develop creativity through awareness of necessity; to be dedicated and interested in curriculum improvement and effective teaching; to go in for teaching as a worthwhile career rather than as birds of passage. In short we wish to train teachers who are agents of social and economic change by improving the academic quality and relevance of the education they acquire and transmit, and by improving the status and remuneration of teachers in the interest of contentment. So the curriculum has to be modernized, with changes in course content,

modernization of examination procedures, development of new attitudes about how and what to teach, and innovation and use of various teaching aids.

12. It has been said that for too long our education has been mechanical so that all we acquire has been book-learning rather than education. This suggests that the kind of education we have been receiving (and transmitting) has somehow missed the real essence of education and has been ill-suited for our situation. So we have to stop and take a fresh look at things; to begin again and introduce corrective measures such as repatterning the system, revising and reorienting the training of teachers as well as the curriculum, and changing the emphasis to a focus on local problems to be solved.

13. Teachers should be made to realise that it is more important to take into the classroom problems of the rural people, than to teach their pupils abstract knowledge about things foreign to their experience. Thus the curriculum for teacher training should be directed to problems of farm production, marketing and transportation; community development and social change.

14. It will be more profitable to direct attention to methods of production and marketing, travel and transportation costs; easing the burden of work by development of simple tools for ploughing, bush clearing, sowing, harvesting, storing and drying; to methods of calculating expenses and profit; and to methods of expanding business. Along with these, attention could focus more relevantly on improving domestic and personal sanitation, feeding habits and diet, handling and preparation of food, and health and social life. For if the education is to fit the individual more properly and securely into his environment, he needs to understand the problems and to be able to see that they are capable of some solution. When he goes off to become a farmer his education should enable him to produce more and better crops rather than just enough for the extended family and for the next season's seed.

15. Teachers should be able to see the relationship between mixed farming (crop production and animal rearing) and the continuous culture of one plot of land perennially, to be able to advocate it by example in the school garden. By teaching with such a project he will bring home more forcefully to the pupils the advantages of the method.

16. What goes into teacher training? The following should form the core of the curriculum:

English, Mathematics, Physical Science, Biological Sciences, Agriculture, Environmental Studies, Social and Economic Studies, Curriculum Development and Innovation, Unit Writing, Special Projects, Professional Education Subjects.

Teaching practice should be spread over 2 - 3 years.

Note: Teacher methods should come as part of the respective subject areas rather than as separate areas.

17. As regards English, this is basic to all other subjects, being in most cases the language of instruction. But more important is the use of the knowledge of English for enlivening instruction through translations of folklore, portraiture of local scenes and village life, to make pupils understand the beauty of the language as well as see the beauty and deficiencies of their own situation. The lessons in English can also be used to effect some reappraisal of social customs, question basic assumptions and guide social conduct through creative writing by the teacher.

18. Mathematics is also basic to other subjects and should best be linked with the sciences, agriculture, and social and economic studies. Thus by using the topic or unit approach a mathematics lesson could be constructed out of a subject like Gravity, or Air, or Water. This will then link up with the physical aspects, the chemical aspects and the biological aspects. Mathematics will be seen to be important for an understanding of all these if the treatment in each case is quantitative. This should make young teachers become really familiar with mathematical computations; should dispel their fear or inhibitions, and should enable them to deal more effectively with the subject in the classroom. Some remedial work will be required in some cases as there will be students who have ceased learning mathematics early in the secondary school.

19. Physical science could combine Physics and Chemistry and, as much as possible, it should deal with the application of principles to local phenomena and easily obtainable materials. For instance, the chemistry and physical properties of the soil, of clay; analysis of locally produced salt,

properties of sound using local instruments, seeing by reflection from surface of water, weighing by balancing on both sides of a ruler, etc. The aim should be to derive the principle from the experiment and reapply it to other problems. Thus the whole exercise is to introduce a practical bias to the subject. For teachers have to be made to consider what each item of information can be used for and how it can be used most effectively to improve the current situation.

20. Chemistry as a subject should receive similar treatment. But one must always remember that this is not to advocate teaching of these subjects without the usual apparatus and chemicals. Rather it is to suggest that the teacher should be able to think up a substitute when he finds he wants to teach a topic and does not have either a solvent, or a suitable solute, or a pipette, etc. This is the whole purpose. Should he abandon the lesson or simply write out the procedure and results for the pupils to memorize? I think not. He should be able to substitute kerosene for acetone, or petroleum ether, and locally distilled gin for amyl alcohol, and so on. The measure of one's depth of understanding can be gauged by the extent to which one can suitably transfer one's experiences in this way.

21. The biological sciences offer the most fertile field for innovation of this kind. For here the practical bias takes the student out to the field to study living plants and animals in their own environment, including man, through inclusion of human ecology in the syllabus. For the teacher should be acquainted with plants and farmers, tropical health problems, food resources and food production, and child welfare. It is important to focus attention on health hazards involved in agricultural development schemes, e.g. schistosomiasis, trypanosomiasis and tsetse fly and livestock or wild fauna in relation to man, genetics and reproduction in relation to population and food production. For these are the topics that add relevance to education in rural communities, for they bring out the role and status of man in nature as well as his long and persistent efforts to change and improve his environment. It is necessary to add that as often as possible, historical evidence has to be stressed so that students can see that much of this was achieved by careful observation of things around the discoverer.

22. This brings us then to environmental studies. Here, the student is made aware of the geography and land use of his area in particular, in relation to other areas of the world.

He is able to see how improvements were made elsewhere and what effects such improvements proved to have on the lives of the people. This should fire his own imagination to consider how to improve his own location. Interesting and perhaps profitable and useful exercises could develop from such considerations.

23. Studies of towns and human communities in general bring us to social and economic studies. The teacher would need to be familiar with ideas in these fields to understand the social organization in which he finds himself. His creative activities and effective teaching will gradually change the prevailing socio-economic conditions and he should understand the forces and processes at work so that he can influence the change for the better. He must be able to appreciate the sociological importance of cultural changes so that he would know how to deal with them. And these changes are bound to come about with better education, if not for all at least for the majority.

24. Agriculture must feature prominently in the curriculum as this is the very life of rural populations. Student teachers should become familiar with improved methods of production and with the applied research which forms the basis of discovery of the improved methods. Teachers could play a very important part in predisposing the rising generation to return to the land rather than seek, perhaps vainly, their fortunes in the large towns. Thus they could let their pupils see that farming can pay, and pay handsomely, by improved methods. Farming includes fish-farming as well, which can be undertaken along with livestock production and crop production, since pig manure contains 70 per cent digestible material for some fishes which can yield over 4000 lb/acre in 15 months. Thus the economics of agricultural production and management should be stressed to bring home the advantage of agriculture as a career, the value to the local community of increased production, and the valuable contribution to the national economy and international trade.

25. Curriculum development and innovation is vital to relate the study of various subjects to the environment and experiences of the pupils. Most important in training in innovation is that it forms the foundation for the teachers' continued growth after college. So every teacher should have a thorough grounding in this area. It is this preparation that will enable them to teach their other subjects in the way desired as it will

condition them to looking around them for materials and ideas to make comprehension easier for their pupils and to add interest to the lessons.

26. In this connection, teaching materials like specimens, models, handbooks, reports, etc., should be carefully preserved for future use to add continuity of activity and approach to the enterprise. In time it would be discovered that radical changes have been made to the curriculum and the average performance of the pupils has increased sharply. It has to be remembered that a curriculum is a dynamic thing and changes with the needs of contemporary education. Not only what goes into it, but also relative emphasis will change with time and changing local needs; and teachers will have to be equipped to meet these changes, preferably by being closely associated with curriculum construction and reform. It would be of considerable advantage if this could be done through a centre for curriculum development attached to an institution of higher learning.

27. Unit writing is another area that is exciting, challenging, and extremely rewarding. Experience has shown that primary school teachers can write greatly valuable and interesting units, intelligible to very young children, even when dealing with complex ideas in physics and chemistry. The benefit is not only to the pupils; the teachers themselves discovered remarkable insights which they could not have realised in the conventional type treatment of their topics. It is by no means essential for all teaching to be done with printed units. But constant practice leads to the impromptu unit construction which keeps pupils always approaching their studies with an attitude of curiosity, inquiry and exploration, and experimentation as appropriate. This ensures the realization of one of the major objectives outlined above - the development of a critical attitude to life and active, participative learning and constant search for possible solutions.

28. This constant search for solutions and continuous learning leads to the subject of projects. If the teachers are to focus attention to the environment and local problems, then it is useful for them to have proper training in methods of investigations they are likely to undertake. Such training is best acquired through special supervised projects of individual research. The important feature is that they must learn to do it well rather than press for sophisticated operations and spectacular results. The lesson of doing things well no

matter how seemingly trivial or unspectacular is more valuable than the search for what seem brilliant researches done rather badly.

29. The opportunities for project work are many and the College lecturer should find it easy to supply topics. It has been said that one of the distinguishing indications of the competence of a staff member is his ability to focus upon useful and significant problems in teaching and research; and that this ability is closely related to his ability to do constructive research work. If this is the case, then there is a premium on getting our teachers attuned to doing just this through training in project work. Other advantages derivable from this are that continued interest in such investigations could maintain a link between the teacher and his alma mater - a link worth maintaining if the teacher is to be on the ball all the time and not grow ineffective through frustration and despair. Media of communication could also be set up to spread new ideas, discuss progress and provide valuable new information or interpretations needed for building up a corpus of knowledge about the environment.

30. The need for close links between practising teachers and their alma mater is great enough in schools where more experienced teachers can guide and assist them. But frequently young teachers end up in charge of their subjects in schools where they alone are properly trained to do the job. This is where they need more urgently the continued help and guidance of their College. It is not always the case that people forsake the recommended approach through laziness or wilful negligence. Sometimes it is due to despair born of prolonged frustration which gradually undermines loyalty to a cause and damages efficiency. Every such case is regarded as a failure and counts as wastage. The Colleges can reduce the wastage from this source by keeping in touch with the teacher so isolated and acting as the mature colleague providing advice and material help.

31. The attention to local problems is also assured and, by seeing the interest which the teachers take in its welfare, the rural community is likely to respond with more active support and personal identification with the school(s).

32. All this can only be done with maximum effect in pre-service training. Yet there is a clear need for in-service training as well, to upgrade the level of competence of serving

teachers and create a salutary atmosphere in the schools where graduates will go with the new ideas. By introducing the serving teachers to the philosophy and methods of the College programmes the way would be paved for easy acceptance of the College graduates and their novel approach. Taken together, the two areas of training will help speed up the changes in teaching in the schools and colleges more effectively than either alone. For the products (graduates of pre-service and in-service training) will reinforce each other's efforts rather than work in opposition to them.

33. Thus the fresh graduate will soon be entering schools where the attitude to his training is favourable, where the methods and approach are already adopted or being launched by teachers with similar training or exposure, and where he can participate in curriculum research and development and testing of trial units.

University Involvement

34. To further these ends it is desirable that the University should give the lead, and not only in the follow-up of its graduates. It could initiate the establishment of communication media referred to above if only for the advantage of co-ordination and cross referencing, provision of expert advice and information, and storing up of feed-back from the field for use in developing areas of knowledge, revising courses and programmes, and synthesizing scattered fragments of information into coherent themes.

35. This can even lead to the starting of an information service at the University for which the necessary documentation will already be building up. From here it is a short step to the organization of vacation courses for teachers, so that they can return to College to acquaint themselves with changes in the direction, approach and contents of their areas of interest. This will facilitate curriculum integration from school to college as well as increase still further the preparation and effectiveness of the teacher.

Rewards

36. The tasks outlined are extremely demanding in terms of time, courage, size of responsibility, dedication, patience and ability. The rewards must therefore be high, and not

just in terms of real wages. The teacher could occupy in society a position of high esteem, of warmth and affection, of sympathy and benevolence as well as high material rewards. This to me is the only fitting recompense for the diligent service, the enormous sacrifice, the patient dedication and enduring loyalty of the really good teacher. This is the ultimate achievement that will crown his strivings along the difficult paths of educational improvement and nation-building. For if the hand that rocks the cradle rules the world, then the hand that shapes the unformed youth must surely build the nation.

37. The scheme outlined above is intended to be not exclusive or exhaustive, but central to any programme for rural education and transformation under present conditions. It is held to be more likely than any other to ensure the orderly development of the rural community into an environment that is attractive to educated youth with rising expectations. It gives them something to work for; to take pride in its growth and enjoy the emotional satisfaction of a really worthwhile achievement. In a sense they will be participating in the building of a lasting "monument, more enduring than brass" and certainly more enriching both to themselves and to their country, a monument on which anyone can look with admiration and even with envy.

EDUCATIONAL MEDIA FOR THE DEVELOPMENT
OF RURAL EDUCATION

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Introduction

1. Though rural communities are often richer in personal, face-to-face contacts than are urban communities they are poor in other respects. The poverty of personal life in newly urban communities is exemplified in accounts of the loneliness of the families who have been moved from slum buildings in large cities, and in the urbanised women in the Copper mines in Northern Zambia and the migrants on the edges of developing industrial towns such as Kumasi. The town is rich in mineral goods, in diversity of living and in the accessibility of new ideas. In contrast, the poverty of the countryside, in these latter two respects particularly, has been noted by many workers and in the context of this essay it is illuminating to examine the studies of Professor Becker(1) in the primary schools of Nottinghamshire and in the work Tsuji(2) in the isolated villages of Japan. Both writers comment on the stimulating effect of introducing television into the homogeneously unvarying even-toned life of the primary schools.

2. One may well ask however, in what respect the rural school is under-privileged and what aspects of the lives of rural communities should be enriched. If the rural school does indeed stand in need of educational rehabilitation and a widening of its social content, in what way can audio visual aids be expected to contribute? Furthermore, if rural societies are limited in their range of contacts and are poor in creative and intellectual resources what help can educational aids offer towards enriching the quality of life in rural communities?

3. The school in any rural environment is usually under-financed, because the community itself is poor, except in those few situations where farmers are rich, as for example, in parts of Canada and South Africa. Normally money collects in towns.

Secondly, rural schools are small and for these two reasons there are few learning materials to be found in most of these schools - few books, few pictures, few models, no gramophone records, little of the apparatus of learning. The second point to note is that the quality of the teachers in rural schools is usually not of the best. Most rural primary school teachers are undereducated for their duties and lacking in general experience of living, compared with town dwellers. The most able, those who do well at school, those who take correspondence courses in order to better themselves in some way, migrate to the town. Professor C.E. Beeby has pointed out that "The teacher in a village school who has himself struggled to a doubtful grade six or grade seven level is always teaching to the limits of his knowledge. He clings desperately to the official syllabus, and the tighter it is the safer he feels. Beyond the pasteboard covers of the one official textbook lies the dark void where unknown questions lurk"(3).

4. The third point of note is concerned with the quality of life around and outside the school. The background of the children's lives is uniform and unvarying so that the children themselves offer little that is new or stimulating to each other or to the teacher.

5. The life of the community too is limited. Village life and small town life has a uniformity determined by the limited contact with the changing world and the occupational similarities of the people within the community. The events of the great world outside bring only small ripples to the village. The most able, the most competitive, the most aggressive, move to the town and new ideas filter only slowly to the countryside; the ways of working, the values and aspirations of the people tend to be tradition-bound and static.

6. From these arguments it seems clear that the rural school needs more, varied and stimulating materials together with better quality teaching, and the community within which the school functions needs the stimulus to change. Of course these requirements are to some extent already being met. Schools have teachers, books are supplied and there are blackboards. But there are not enough of these and there are not enough schools. The ones that exist are often isolated and under-equipped, and cannot serve as Youth Centres. Consequently there is nowhere for young people to congregate where they can develop social skills, discuss their own concerns and test out their newly acquired "adulthood". As far as the adult community is concerned there are of course agriculture extension officers and health workers but in most countries there are too few of them, their channels of

communication are inadequate and their capacity to serve as agents for change is limited because their work is under-supported. There is clearly a case to be made that an increase in the number of available communications channels will accelerate the rate of change of a rural community and will directly improve the quality of the work that goes on in the school. Some of these arguments are set out in Communication and Change in the Developing Countries edited by D. Lerner and W. Schramm(4). Professor Schramm suggests that the main function of an increased use of communication channels is to help establish a climate in which developments can take place, and this obviously includes a number of subsidiary functions. The second important way in which a communication channel can accelerate the change that is needed in rural societies is that it can serve as a "multiplier". From all the developing regions of the world reports are available concerning the use of mass media to show how to supplement the resources of local schools, to multiply the contacts available to field workers, to speed up learning and encourage people to expose themselves and their children to further learning opportunities. The third use of communications channels is to spread ideas of change, to raise the aspirations of the people so that they will want a larger economy and a modernised society.

PART I. THE TASKS WHICH EDUCATIONAL MEDIA CAN ENGAGE UPON

7. (a) The teaching of skills. In all educational situations some teaching of skills goes forward e.g. the skills of reading and writing, the manipulative skills required in various handicrafts, new farming skills, the more subtle social skills that young people want to learn. Most frequently such skills are taught by means of face-to-face demonstrations with all the limitations that this implies in terms of numbers. Now that we have access to a variety of educational aids, the traditional ways of teaching these skills can be re-examined. We can consider the possibility of not only increasing the number that can be taught at any one time, but also improving the quality of instruction. For example there is a good deal of experimental evidence that film presentations of manipulative skills improve the quality of the demonstration because close-up, subjective viewpoints can be offered at a controlled rate. Films can be shown many times to large audiences, or distributed on television and this certainly has the potential of the "multiplier effect". It has also been demonstrated that gramophone records and tape recordings can help learners to acquire the skills of speech, through listening to stress and

intonation patterns of foreign languages. The recording is unvarying, can be repeated endlessly, does not tire, and radio can provide the "multiplier effect". That these new educational aids can facilitate the teaching of skills is not in doubt. The only problem is that of cost/ effectiveness, which is closely associated with the difficulties of production and distribution of the materials apart from the matter of capital outlay on playback equipment (cine projectors, radio receivers, gramophones).

(b) Imparting information. This is one of the basic tasks of the school, and it is one upon which much adult education work depends. In the past, books and word-of-mouth were the chief means of communication available, but pictures had some part to play, particularly in the formal school. Pictures are needed to give reality and concreteness to words and today pictures are available in many forms, prints, photographs, projected still pictures and moving pictures. There is no difficulty about finding pictorial material; the problem is that of cost of production and distribution. But words are needed too, since words help to clarify experience and provide the wherewithal for the formulation of concepts. Generalizations are of the essence of educational growth, since without them much of what we teach can remain as "lumps of unamenable fact". Once again, there are many ways of distributing the spoken word as well as the written word; the problem is that of production and distribution.

(c) Changing Attitudes, and Aspirations. Values and interests provide the energizing element of all communities, both the formal one of the classroom and the less formally organised community outside it. In order to change and develop, communities need to change their value system and modify or extend their aspirations. The socio-psychological conditions that are necessary for such changes to be accepted will not be discussed here, but it is apparent that the mass means of communication can be effective in bringing about change, because new ideas can readily be disseminated.

8. I have suggested that the educational media, particularly the new ones, can be used to carry out these three educational tasks, given the production facilities and distribution possibilities. But do the new educational media save money? Here I would like to quote from "The new media: memo to educational planners" published by Unesco/IIEP in 1967 (5):

"Do the new educational media save money? We pointed out this is a very complex question, requiring one to

measure quantitative cost against some things not so easily quantified - the quality of education, for example. Media projects will rarely save over present budgets, but often make possible a substantial saving in the context of growth and change - when a school system is planning to change a curriculum, offer new and different subjects, extend its services to persons or places where education has not before been available, or bring more people into the company of literate and educated persons. Even here, however, the saving is usually against possible or projected costs rather than present costs. Very often the media make it possible for a school system to do what it could not otherwise have done, regardless of cost; or to do faster what could otherwise have taken longer. And regardless of the quality of the evidence that they have saved financial resources, there is no doubt that they have contributed to the saving of human resources."

PART II. THE MEANS AVAILABLE

9. The purpose of considering the means of communication is to examine ways of improving the quality of instruction through better teaching materials, and ways of enriching the quality of community life in rural societies in order to promote change. The means available can be classified in many ways, but in this essay they are discussed from the point of view of administrative action and the allocation of the responsibilities. There are two types to consider. The first is those materials that provide only the substance for teaching. The second type consists of those materials that provide not only the substance for the teaching but also the dynamics of the teaching itself.

(a) Materials that provide the substance of the teaching and thereby the learning, are used by a teacher who initiates the instruction, controls the pace of presentation, directs the activity of the learners and operates in the framework of a class-sized group. Examples of these materials are textbooks, pictures and charts, flannelgraphs, gramophone records and tapes, filmstrips. If they are well designed, the provision of a wide range of these will improve the quality of instruction in both skills and factual information. They can certainly be produced centrally and distributed to schools, but in addition teachers can make their own, provided they are given a certain amount of help. This concept of teacher-made material will be discussed in Part IV under the heading Local Production. It could be a most fruitful

way of improving the quality of teaching, since engaging on these activities in itself raises the capacity of the teachers.

(b) Materials that provide both the substance and the dynamics of the teaching are usually designed and initiated by agencies outside the classroom and beyond the parish of the Agriculture Extension Officer. They are given an educational context by the teacher who becomes quiescent or by a monitor or what the French call "un animateur". In some instances these materials are used by the learners themselves for self instruction without the mediation of a teacher or a monitor as in the Radio Farm Forums or in Home Study materials for self instruction. Examples of these materials are the radio, film, filmstrip with tape, television, posters, newspapers, booklets for new literates to read and correspondence course materials.

10. These materials can improve the quality of instruction both in teaching skills and in disseminating information but especially they can contribute to changing the aspirations and values of a community and can influence them in the direction of change. If the materials are made with sufficient sensitivity, they can both re-educate the teachers and re-orientate a community towards new ways of living. In the book The new media: memo to educational planners, Professor Schramm lists five great needs of developing societies for which the new media are being used, namely: upgrading instruction, teaching teachers, extending the school, teaching literacy and fundamental education, and finally adult education and community development. He also points out that an educational medium is very seldom being used effectively by itself to meet one of these priority needs. "When one of them is used in a significant way in response to a serious problem we find it always being used in combination with other learning resources and experiences, such as monitors and discussion groups, special reading materials and exercises, correspondence work and the like. In short, a new educational medium must be seen as a component of a teaching and learning system which work best when all the components of the system are well integrated and balanced."

PART III. CONDITIONS WHICH MAKE FOR EFFECTIVENESS OF EDUCATIONAL AIDS

11. Whatever programme of educational activity is undertaken by a Ministry some change in behaviour is envisaged and these changes should be clearly enunciated. There should be a specific, explicitly formulated series of objectives, not just a

vague generalisation about "education of youth" or whatever. In greater detail, such changes in behaviour are often expressed in terms of active responses to be made by the pupils, the young people, the farmers, the adults; in other words, the target audience. It should be clear to the designer of educative materials that the children or the adults should acquire a specific skill, or possess knowledge they did not have before, or adopt new attitudes after being exposed to the particular material being designed. Administrators must pay attention to certain aspects of the project, within the framework of the general aim.

12. Within the general aim of, say, bringing literacy to farmers, each project should have in view specific changes to be brought about in a specific group of people whose characteristics are known. Each communicator, each designer of communication material would do well to ask himself the following questions "Who communicates what, with what purpose, by what means, to whom, in what situation, with what effect?" In other words, the administrator with whom this paper is concerned, must pay attention in detail to production, distribution and utilization of educational material. All three of these aspects will probably require special arrangements for the training of personnel and this problem will be discussed separately.

(a) (i) Problems of production are partly technical problems of running a printing press, radio or television transmitter or providing photographic studios. Finding solutions to technical problems is crucial to success, of course, but deeper thought is needed in connection with the problems of the design of such materials. The quality and effectiveness of the materials produced, be they radio broadcasts, posters, booklets for new literates, or whatever, will depend upon the abilities of the people who produce them. Groups of materials should be planned on an integrated basis with a view to the response and activity of the learners in mind. The visual and verbal vocabulary of the target audience must be known to the designer since instruction can only succeed where it is related to the existing knowledge, attitudes, motivations, ways of thinking and communicating of the people, and where attention is paid to their traditions or experience of verbal and visual means of communication. The work of Hudson(6) in Southern Africa, Fonseca and Kearn(7) in Brazil, and of Alan Holmes in East Africa(8), indicate the importance of the cultural threshold in all communication situations. This is of course a familiar problem to teachers who have experienced the difficulty of teaching outside their own

cultural frame of reference. In his preparatory work for the production of basic educational television in Niger, Max Egly(9) studied the audio visual learning processes of seven - and eight-year old children, in order to determine to what extent these children were capable of identifying objects, actions and drawings presented on television without the aid of their native language. The writers and production team were able to use a great deal of the information gathered in these preliminary stages .

(ii) Of equal importance, especially when working with non-captive adult audiences, is the factor of motivation. Motivation is the source of energy which makes the individual act and if change is hoped for in the community it must be linked to that community's basic value system.

(iii) Professor Arthur Lumsdaine maintains that the more general features of the programmed learning concept should be incorporated into the development of all educational programmes. This should be provided for in the initial planning stages and include:

- the detailed specification of behavioural objectives;
- the analysis of the learning tasks based on research for delineating initial characteristics of the learner; and particularly
- the empirical tryout of the programme, followed by revision based on test data which show the extent to which the specified objectives have or else have not actually been attained.

(b) (i) Problems of distribution are partly technical and partly a matter of logistics. The needs will vary from place to place and many of the problems of distribution are already familiar. One can quote a film library held in the capital city in a country without a regular postal service so that only the schools in the capital city could in fact make use of the films held there. One has heard that in some cases 90% of television receiving sets in one particular region were out of commission so that distribution of programmes simply broke down. One has heard too of radio programmes the contents of which were closely linked to a large printed picture which arrived at the school at the end of the term instead of the beginning, thus negating the use of the radio as an educational aid in this case. The technical staff of any

enterprise will have to consider many details such as the power available in a transmitter, where the receivers should be placed in a classroom and how posters are to be protected from the weather. Most frequently overlooked or under-estimated is the matter of the maintenance of the receiving sets and projectors. This requires a special organisation and again is a matter of logistics related to the peculiarities of a particular region. Possibly a special training programme is necessary to develop a sufficient cadre of technical personnel and this may require overseas aid in many instances.

(ii) A particular problem arises in the case of non-captive audiences such as farmers and each area will have to develop solutions peculiar to itself. For example, the Ministry of Agriculture in Tanzania discovered that the readership for its newspaper, directed to farmers, increased by fifty percent as soon as the extension officers carried stocks of the newspapers for sale in their jeeps. Once it became easy for the farmers to buy the papers they did so. While the problem of distribution remained unsolved, the sales were poor, although the paper was popular among those who actually read it. Another example comes from southern France where communal viewing points, provided through the creation of "téléclubs" in some isolated villages, made it possible to disseminate new ideas to these rather static communities.

(c) (i) Problems of Utilization. All educational media must be used in an educational context which may be created by the teacher in the classroom, a youth leader in a community centre or an agricultural extension officer, or a community development village-level worker. The effect of even the most excellent material can disappear like water in desert sand if it is not given an appropriate context. Television, radio, film, flannelgraph, textbooks are only pipe lines; they are likely to be only as interesting as what goes into them and as effective as the learning activity that can be generated around them. These materials work best with the informed and active participation of the classroom teacher at all stages in the process of learning. In fact, they are but one component in the teaching-learning process. The learners must be prepared for a broadcast, since they can only perceive that which they are ready to perceive, and after a broadcast the learners must practise the skills that were demonstrated, learn the facts that were presented, apply the principles and concepts that were offered, or express the stimulus that was given to their imaginations.

(ii) Only when a learner is highly motivated and skilled in the strategies of learning can he conduct his own study activities arising out of viewing or hearing a broadcast or receiving correspondence course materials. When the learners are not highly motivated and not skilled or experienced in learning activities it has been found that study in a group helps to sustain each member and the presence of someone who acts as leader, guide, monitor, "animateur", or teacher makes a significant difference. The social climate in which learning goes forward is dominant among the factors that contribute to successful learning and this is true of formal education, literacy classes, agricultural extension work or community development activities. The implication is clear - for the newer educational media to be effective and yield a reasonable educational return for money and human resources invested in them, care must be taken to organise reception or discussion groups at village level, and to see that teachers integrate the programmes into their classroom activities.

PART IV. LOCAL PRODUCTION

13. In the main, the production of radio, television, film, textbooks, newspapers, i.e. the mass media, requires expensive plant and skilled personnel to operate the equipment and are therefore appropriate undertakings for central or national government. This need not be debated here, though attention should be drawn to the importance of maintaining close liaison between the central production team and the field workers or class teachers. Administrative machinery is needed to ensure participation in planning and devising educational materials, and continuous consultation with those who actually use the materials. This requires a reliable flow of information in both directions - information and technical assistance from centre outwards and feedback or evaluation data from the users to the centre.

14. There is a case to be argued for an alternative to central, large scale production of educational materials, for three main reasons. First, capital outlay and recurrent costs are relatively small and therefore starting such centres does not have to wait upon external aid. Secondly, there is in most countries a real need to cater for local variations, and, thirdly, local centres of production can harness the creative talent and inventiveness of the teachers and field workers - not an inconsiderable contribution to the overall development of education.

15. The idea of provincial or district "Teachers Centres" or Audio Visual Centres is not new. For example, in Czechoslovakia Audio Visual Centres have given some stimulus to the wider use of films and filmstrips; Teachers Centres, now being established in many towns of the United Kingdom, are providing focal points for development of new curricula projects, and in Ghana a mobile van for some years provided a sort of itinerant Teachers Workshop.

16. What I have in mind is the establishment in selected village schools of Educational Materials Workshop centres to which teachers and community workers at all levels could come for instruction and help in making their own teaching materials, such as simple wall charts, flannelgraphs, cut-outs, matching cards for language work and apparatus for practical mathematics. None of these materials needs much artistic skill, but most primary school teachers and most adult education workers need help and inspiration to get started and in most developing countries they lack facilities in their own homes where they could make simple educational aids.

17. Because communities even within regions of one country differ in the artifacts they produce, their work habits, their interests, economic and social structure, language and values as well as degrees of urbanization, great stress should be placed upon localizing production and thus meeting the communication problems of particular workers in particular areas. To produce material on a large scale at a central headquarters is not satisfactory except possibly in the case of a national campaign and for certain kinds of textbooks. Many local needs arise, for example in preparing materials for agricultural exhibitions, local women's groups or home craft teaching, or primary school "apparatus"; the design of these materials will have to take into account the purely local flavour of the peoples' perceptual habits.

18. For the community education workers the problem is to find materials with which to convey messages about skills, facts and ideas and it is just in this area that the school and its teachers can help. It is possible to envisage a school taking on a new function, serving the community in an outgoing, extended fashion by providing the focal point for meetings, demonstrations and talk, and also as a "production centre" for the creation of communications materials of the kind that community workers can readily make use of. There is the further possibility that the larger schools could become rural district training centres where

community development workers and voluntary group leaders are trained in making and using communications materials. The school could serve the adult community in three ways; by providing a meeting place for the adults, by housing the facilities for the creation of simple communications materials by field workers in collaboration with the teachers, and by serving as a centre for the training of field workers and voluntary group leaders.

19. It now becomes necessary to consider what kinds of communications materials are appropriate to this task and what equipment is required for the generation of simple materials which adult education workers and teachers unskilled in graphic arts can make and use. Some other practical questions arise, concerning the organisation of supplies, maintenance and servicing of equipment and problems of personnel.

20. We must accept the fact that a rural school will not be able to afford expensive equipment such as, for example, an off-set litho printing press, cine projectors or even a silk screen press. But a certain minimum level of equipment must be available in order to start at all. Gradually it will be possible for the community school to build up its resources so that it becomes a centre serving a large number of teachers, field workers and voluntary group leaders within the community. The materials that can be made with very little equipment include posters, charts, flip-charts, flannelgraphs, and handouts. All of these can be made with the simplest apparatus and can be used effectively by people with very little training. Posters are used for short term campaigns; they are displayed for a week or less in places where people pass to and fro and are usually drawn on cheap paper, with a simple eye-catching slogan, conveying only one idea. Single charts or a group of charts clipped together to form a flipchart, are intended for longer term use in a teaching situation and should be executed on better quality paper than are posters. A typical set of "charts", would for example, carry the picture mnemonics for the first stages in a series of literacy lessons.

21. Flannelgraphs are composed of two elements, the background cloth of cheap fluffy material and the teaching items. The latter are usually drawn on firm paper and backed with a rough textured material such as sandpaper or lint. Flannelgraphs are used in a teaching situation to build up a sequence of some kind, for example, a series of pictures of the kinds of foods needed for health or the key characters in a story for language teaching.

22. "Handouts" may be single sheets of paper or little booklets, which can serve several educative purposes. Single sheets are often given out as reminders to take home after a demonstration and should bear the personal stamp or local flavour of that particular demonstration. Little booklets, often of only four or six pages may carry similar reminding messages, or stories in simple language for new literates to read at home. As with charts, if these have a local character, closely connected with the material used by the teacher, community worker or literacy teacher, their effect is that much greater. In order to make handouts for members of the community to take home, the workers need access to a duplicating machine, preferably one which can yield coloured drawings without repeated printings, in other words, a spirit duplicator. The cost of such a duplicator would be of the order of £50.

23. All that is needed then for the production of these simple educational aids are two grades of paper about 1 metre x 50 cms. in size, drawing materials, some cheap fluffy cloth and a spirit duplicator.

24. A typical three teacher village school usually has three classrooms and a room for the headmaster. At least one of these rooms will be able to accommodate a cupboard in which can be kept pairs of scissors, coloured crayons and chinks, cheap newsprint paper, cartridge paper, sand paper, adhesives, fluffy cloth for flannelboard background and, possibly, a spirit duplicator with the appropriate carbons and run-off paper. None of these materials take up much space and can easily be stored in the school. One of the three teachers employed in the school will have to be in charge of the supplies and will conduct practical workshop sessions for four or five (depending on population density of the area) community education workers at specified, mutually convenient times. (See Appendix I(a).)

25. In a larger village, there will be a larger school where a small training centre could be set up to provide periodic short courses for both school teachers and community workers. Here an itinerant training officer can conduct classes in the simple techniques needed for the production of posters, charts, flannel-graphs and handouts and can give demonstrations of ways of using these materials. Once the community workers and teachers have acquired the necessary skills, they can set about making their own materials in their own village-level workshop, with the leadership and under the guidance of their own village teacher. (See Appendix I(b).)

26. The effective operation of these two types of centre, i.e. small village-level workshop and larger village training centre, will be dependent on the existence of some kind of regional or national organisation which will provide the materials and will employ a training officer skilled in techniques of making and using simple aids appropriate to the background of understanding and experience of particular communities. Such a network would be a part of the appropriate Ministry.

27. In the scheme outlined above, trained teachers would play an active part but would themselves not undertake the task of teaching the adults in the community. Their energies would not be unduly diverted from their main task of teaching the children, yet their skills would become available to the wider community through the help they could give to the community workers, whose demands upon their time would be limited to the workshop sessions. In addition, the Training Centres could give assistance to teachers not yet trained in these techniques and the two branches of the education service would thus reinforce and support each other's efforts.

References

1. Becker, S.L. The utilization of School Television Broadcasts in England, University of Nottingham, 1964.
2. Tsuji, I (Japan) The effect of TV School Broadcasts on Children in Isolated Villages, Japan Broadcasting Corporation, Tokyo, 1964.
3. Beeby, C.E. The Quality of Education in Developing Countries, Harvard University Press, Cambridge, Mass. 1966.
4. Lerner, D. & Schramm, W. (editors) Communication & change in the Developing Countries - East-West Center Press University of Hawaii, Honolulu, 1967, pp.333.
5. Schramm, W., Coombs, P.H., Kahnert, F., Lyle, J. The new media: Memo to educational planners, Unesco: International Institute for Educational Planning, 1967.
6. Hudson, W. Pictorial depth perception in cultural Sub-groups in Africa - The Journal of Social Psychology, Vol.52, 1960, pp. 183 - 208.
7. Fonseca, S., & Kearn, B. Comprehension of Pictorial Symbols: an experiment in Rural Brazil, Bulletin 30, College of Agriculture, University of Wisconsin.
8. Holmes, A.C. A Study of understanding of visual symbols in Kenya, Overseas Visual Aids Centre, London, 1965.
9. O.R.T.F. Report of the Third E.B.U. International Conference on Education Radio & Television Paris 1967 published by Office de Radio diffusion - Télévision Française, 1969, p.196.

APPENDIX I

(a) Suggested dimension of cost of a Teachers
Workshop Centre (See paragraph 24)

Capital

Spirit duplicator	£50
Scissors, rulers and other graphics such as stencils.	30
Cupboard, keys	10
	<hr/>
	£90, or approximately <u>£100</u>

Recurrent items will include:

- Run-off paper.
- Cartridge paper.
- Flannelgraph items.
- Crayons, paint, pencils, glue.

Personnel

Salary of low-grade technical help part-time.

(b) Suggested cost of a Teachers Workshop and
Training Centre (see paragraph 25)

Capital

2 Spirit duplicators	£100
1 Roneo (Gestetner)-type duplicator	100
1 Silk screen press	20
Stencils, rulers, graphics	40
Storage shelves	20
	<hr/>
	£280, or approximately <u>£300</u>

Recurrent items will include:

Run-off paper

Cartridge paper

Flannelgraph items

Paint, ink pencils, glue.

Personnel

Salaries of (a) low-grade technician, and

(b) Teacher-A.V. officer (could be shared between 2 centres).

COMMUNICATION AND RURAL DEVELOPMENT

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Introduction

1. The title chosen for this paper is "Communication and Rural Development". Why "communication" and not "education"? Because, however it may be re-defined, "education" still means, for most people, something that teachers give and pupils get, usually in schools and universities. This paper, on the other hand, is concerned with the whole complex, kaleidoscopic pattern of human relationships, through which ideas are exchanged, skills acquired, knowledge increased and behaviour changed and by which development is largely brought about.

2. In this multi-directional flow of ideas, 'purposive', 'directed' communication, in the form of education, training and public information, interacts with 'non-directed', 'socially controlled' communication - farmers chatting in the market place, women gossiping at the well, and people just receiving, absorbing and acting on information. And in the operation of this whole system, feedback from the farmer and the housewife is as important as input from the teacher and the technologist and should largely control it.

3. Development planners and educators are primarily interested in directed communication, which is the component they can most easily control. Nevertheless, its effect on development depends upon its action within the total communication network. This paper, therefore, deals with both directed and non-directed communication; with channels of communication and especially the role of literacy and the written word; with the relationship of technology and research to communication and the means by which research and experience are transmuted into messages and transmitted by media; with the role of action-research and evaluation in improving communication and enhancing its contribution to development.

Preliminary Definitions

4. It is perhaps desirable initially to define the two terms "communication" and "development".
5. "Communication does not refer to verbal, explicit, and intentional transmission of messages alone....but includes all those processes by which people influence one another".¹
6. Guy Hunter² poetically describes development as "the long ground swell of social and technical change". The American sociologist Everett Rogers³ defines it more prosaically as "a type of social change in which new ideas are introduced into a social system in order to produce higher per capita incomes and levels of living through more modern production methods and improved social organisation".

Development and Communication

7. However defined, development, and particularly rural development, involves more than communication. It involves more than communication. It involves research, planning, legislation, finance, organisation and administration and the provision of equipment and materials. All of these are, however, largely dependent for their efficiency on communication:-

-communication between research workers and planners, planners and administrators, administrators and field workers, providers of equipment and materials and their users and consumers, financing agencies and their beneficiaries;

-vertical and horizontal communication within systems of organisation and government, rural communities, co-operatives, plantations,

¹Alfred G. Smith: Communication and Culture. Holt, Rinehart & Winston, New York 1966. p.626, ref. p.61.

²Hunter, Guy: Modernising Peasant Societies . Oxford University Press, London 1969. p.324.

³Rogers, Everett M : Modernisation among Peasants . Holt, Rinehart & Winston, New York, London. p.429.

irrigation or land settlement schemes ;

-above all, communication between change agents and the people whose lives they are helping to change.

The last of these must be two-way communication, with feedback conditioning and controlling inputs. It must also be multi-media communication using all appropriate and available channels as a system. It must often be multi-step communication reaching the population of a rural community, for example, through its more progressive members. It must be selective and sensitive communication, which treats adults - even illiterate adults - as experienced people, with particular interests and problems, attitudes and personalities, prejudices and potentialities - people to be consulted, listened to and communicated with, rather than taught like a captive class of school children.

8. This is not to belittle the importance of schools and universities, or of formal adult education and training, in laying a foundation of knowledge, skills, ideas and attitudes for development, but only to suggest that a simple conception of education and training as the essential motive force for rural development is totally inadequate.

Various Forms and Stages of Rural Development

9. Rural development takes many forms. In later stages of development and in the modernised sectors (for example, in land settlement schemes, irrigated areas, plantations) land use and the agricultural regime, are, and in large measure must be, planned, imposed, and even enforced from above. But if government cannot always be "by the people" it should be "for the people" and as far as possible "with the people". So one can detect three major functions for communication in the modernised sector :

-to keep the population informed of policy and practice, of necessary rules and restrictions, and the reasons for them, and of the progress of the enterprise: in short, management-labour relations;

-to feed back, from the population to the management, aspirations, suggestions and complaints: in short, labour-management relations;

-education and training for managers, field staff and labour, for the new and specialised functions required by modernisation.

10. At the other extreme, rural development may involve the gradual improvement of subsistence agriculture and raising levels of living in traditional rural societies. Here communication may be more concerned with motivation for development and the injection of new ideas, improved methods of farming and intermediate technology. This is much more delicate and difficult. Any tampering with traditional patterns of agriculture and animal husbandry may start a chain reaction of consequences and side effects, many of them unforeseen. New inputs, like fertilizer or animal drawn ploughs, will cost money which may or may not be recoverable by increased production. Unpredictable factors like rainfall and locust invasions, perhaps also more predictable ones, like salinity or wind erosion, may turn the best intentioned improvements into disasters. Furthermore, to change the behaviour patterns of conservative communities is notoriously difficult and generally slow. People living on the subsistence line are naturally reluctant to take risks and sceptical of advice from the outsider. Research in different continents indicates that a new practice seldom takes less than ten years, and often much longer, to permeate a traditional rural community.

11. Between these two extremes of modernised and traditional societies we find the situation which is increasingly common in developing countries - communities in transition. Here innovation has begun. More people are ready to listen. There is increasing confidence in the possibility and potential usefulness of change. Here directed communication, especially extension and training in various forms, should aim to further the progress of innovation and to help the population to modernise with the minimum of dislocation and suffering.

12. Thus systems and functions of communication vary with the environment and directed communication must be adapted to the aims and needs of each particular project. Nevertheless one can describe some of these functions and see how they fit into a phased programme.

Communicating fundamental research and field experience to planners and operators

13. It is deplorable how little of the relevant research reaches those responsible for rural development programmes and

how little of it is readable even if it reaches them. Errors will be repeated and valuable lessons remain unlearnt unless more is done to interpret and communicate research to the consumers. This may be helped by conferences and meetings, which bring together research workers, planners and senior operational staff. by high-level training/orientation courses and by disseminating research results in laymen's language in manuals, periodicals, digests, abstracts, films and tapes. This top-level communication between research scientists and operational staff is the link between scientific discovering and its application and extension.

14. Even more important is to communicate the results of relevant practical experience - success and failure - from other areas and other countries - a process which calls for similar techniques.

Feeding back the needs of development planners to research workers and research organisations

15. How much fundamental research is planned to satisfy scientists and research students, and how little to find out what the planners and operators want to know. More feed-back from operational staff to research workers would make research more relevant and realistic. This is only to emphasise that top-level communication must be a two-way flow.

Action research¹ and project planning

16. Fundamental research accumulates knowledge and expands technology. The successful application of this knowledge and technology requires action research in different environments and societies. Will the new strain of wheat or poultry resist the local pests, thrive in the local climate, require radical changes in husbandry beyond the resources of local farmers? Will the extra cost of improving a local craft price its products out of the market? Will the recommended family planning technique be applicable? More basically what are the human problems, needs and aims of development as the local people see them? All over the world there are recurring cases of failure and frustration because projects are launched before such questions have been answered. Rural development should therefore be preceded and

¹Action research might be defined as systematic study, the results of which are fed back directly and immediately to the operational staff to help them in improving the efficiency of their activities.

guided by action research - basic socio-economic studies, problem surveys to locate and define local development problems, problem studies to investigate key problems in depth, feasibility studies to examine possible solutions, pilot projects and experiments to test them, field tests to prove new equipment under local conditions.

17. 'Action research' is thus built into the programme of action and designed to get action going on the right lines. As far as possible, it should be systematic and objective research rather than subjective and intuitive study.

18. But what has this to do with communication? First, action research is itself essentially a communication process - feeding back information to the planners and operators. Secondly, it is a pre-requisite of directed communication. In jargon terms, it validates the message before the message is embodied in media and communicated to the target audience. Thus before directed communication begins, it helps to ensure that:

- any facts to be stated are correct;
- any ideas to be put across are sound;
- any action to be proposed:
 - can be carried out by the target audience:
 - with the skills they possess or can acquire,
 - in the conditions in which they live and work,
 - with the funds and equipment they have or can obtain;
 - will have the desired results in the given situations;
 - does not unwittingly conflict with social customs or taboos or personal beliefs and attitudes.

Thus action research feeds data into the planning of rural development and specifically into the planning of directed communication.

Planning directed communication

19. As the objectives of development become clear, communication assumes a new role - to transmit ideas, knowledge and skills to the population. This involves systematic communication of selected messages to a variety of target audiences. It should be systematic not only in the sense that it is planned and efficient. It should also be planned as a system with the different components locked in with each other. Different sections of the population may need different information about the aims of the development plan, ideas on how to form and manage co-operative societies, knowledge about health, child care or family planning, new methods of agriculture, drainage or house construction, new skills in maintaining machinery. The better educated will want more complex and sophisticated information, using the printed work wherever appropriate, the illiterate will need concrete advice and demonstrations. All this will require what the Kericho Conference¹ called: "a much strengthened, more clearly thought out and effectively co-ordinated educational service to adults" - a wide range of information, extension, adult education and training, using all appropriate institutions, media and methods. These should not be planned piecemeal. There must be inter-departmental communication in planning the communication programme.²

Directed communication: preparation of media

20. The directed communication programme cannot become effective until the ideas, knowledge and skills to be communicated have been embodied in training courses and programmes, manuals for teachers and extension workers and a variety of other media especially for adults at different educational levels and in a wide range of learning situation. The preparation of media is therefore crucial to an effective rural development programme.

21. It is also a highly professional task, requiring a specialised team or teams based on a well equipped media centre. The teams must travel sufficiently to make themselves familiar

¹Conference on Education, Employment and Rural Development: Kericho, Kenya, September 25 - October 1, 1966.

²An excellent example of this is the work of the inter-departmental Adult Education Board in Kenya.

with various forms of rural development and should do much of their production work in the field rather than in the centre. It is debatable whether there should be a media production centre for each Ministry of government service concerned with rural development (e.g. Agriculture, Health, Community Development etc.) or whether the Ministries and Departments should pool their resources and set up a co-ordinated centre. (This will be discussed in the last part of this paper which outlines the possible structure and functions of a Centre for Communication in Rural Development.)

22. Media production for rural development involves team work between topic specialists (with knowledge and experience in various fields of development, such as agriculture, health, housing etc.) and production specialists (with training in writing, editing, script-writing, photography, filming, radio programme-making etc.). The production specialists generally form the permanent staff of the media centre. They must have the power to call upon topic specialists from the various departments and agencies engaged in the development programme. Thus a cameraman or graphic artist would not be expected to be a specialist in agriculture or rural crafts. Nevertheless the director of the media team, and perhaps one or two of his writers, should have enough knowledge of rural development to enable them to ask the right questions and to obtain and transmit the right information.

23. The choice of media will depend upon the nature and importance of the programme and the budget available. The modern trend is to treat the various media as components in a learning system; hence the preference for a multi-media centre over the traditional pattern, in which, for example, book publishing, film production, radio broadcasting, and the production of low-cost visual aids was each regarded as the proper province of a different agency.

24. The staffing and equipment of a media centre naturally depends on the range and quantities of media to be used; conversely the choice of media will depend on the availability of competent staff and facilities for their production. These problems will be further discussed in later paragraphs.

Action Research and the Preparation of Media

25. Action-research is not only needed for project planning; it also has vital functions in the preparation of media.

(a) Topic Study

Before writers can begin to write, or artists to draw, there must generally be a systematic study of the topic - the subject matter or content to be communicated. This may involve: - consultation with topic specialists; study of books and other documentation; field visits (to see, for example, what is being done in research institutes, demonstration farms or in communities which have already introduced the innovations proposed); finally, and most important, "opinion study" (to discover what the target audience already does, knows, thinks and believes about the topic). This systematic preliminary study serves to validate the message before it is embodied in the media.

(b) Job - and Performance - Analysis

If the production team is preparing training media for a vocational training project, action research may be needed:

- to analyse the skills required in specific jobs;
- to discover the skills, abilities and deficiencies of the trainees, and their level of performance, if they are already on the job;

eventually the training programme must bridge the gap between the second and the first.

(c) Pre-testing of Media

Pre-testing is designed to ensure that the media will communicate their message as effectively as possible to the target audience. The techniques of pre-testing naturally vary with the media. Written material can be tested in at least three ways. The first is to ask individual

members of the 'test audience' (a sample of typical readers) to read the text aloud; this reveals words which they do not understand, sentences that are too long or too difficult. The second procedure is to give the complete text to a number of readers and give them a simple test to detect how far they have understood it. The third is to give it to a sample of people to read and then to bring them together to discuss it. If the discussion is recorded on tape the resulting dialogue may also suggest changes in style and vocabulary and even provide live phrases that can be incorporated into the text. The testing of a visual aid involves using the aid, with its accompanying talk, lecture or commentary, on the test audience and then testing individual members on their comprehension of each picture. Radio programmes, if recorded on tape, can be played to test audiences, who are then interviewed or tested individually to discover how far they understood the programme.

(d) Evaluation or 'post-testing' of media

The evaluation of completed media is a procedure which does not entirely fit the definition of action research, since the feedback from this type of evaluation can hardly modify or control the production process. Once the media are published and distributed in quantity, a negative evaluation can do little more than cause disappointment and possibly provide some data for the improvement of similar media in the future. Whilst, therefore, the evaluation of completed media may help the users of the media to select and employ them more efficiently, it is less valuable to the producers than pre-testing.

26. The integration of action research into the production of educational media is a comparatively new and difficult enterprise. The techniques have seldom been systematically applied by a media production team. They undoubtedly involve new expertise,

additional time and additional cost, but the experience so far gained indicates that the benefits and improvements will greatly outweigh the costs and difficulties and provide ample justification for including in the media team, in any important rural development project, a full-time action-research worker or associating the media team with an action-research unit.

The Operational Phase: Training of Operational Staff

27. The transition from the preparatory and planning stage to the operational stage of rural development involves the training of staff for work in the field - both pre-service training for new staff and retraining, orientation and up-grading for existing staff. It should include instruction in communication techniques as well as in the subject matter and the specialised knowledge needed in the various jobs to be performed. It should include both essential theory and a maximum of supervised field experience. It should also imbue the trainees with an understanding of action-research and a readiness to study problems and not to trust in untested solutions.

Extension, Community Development and "animation"

28. In most developing rural areas agricultural extension is already providing advice and training to farmers and their families. In largely illiterate societies this performance relies mainly on face-to-face communication and on demonstrations. Along with agricultural extension are often found nutrition education, home economics extension, health education and family planning programmes, the last two, in particular, organised by Ministries of Health. These extension services are sometimes related to, or included in, a wider community development programme, which may be administered by a Ministry of Community Development and Social Welfare and may employ its own community development workers. Community development has been described as "both an organisational and an educational process". Some community development programmes fill the gaps, covering fields not normally dealt with by other services, for example low-cost housing and building, road construction and rural crafts; others aim to co-ordinate the impact of various government departments and non-governmental agencies on rural communities. They frequently include, or are related to, basic adult education and adult literacy programmes. In any case communication between the people of the local communities and the government services and development agencies is a crucial

feature; indeed one might even define a community as a group of people who communicate.

29. An interesting application of community development is found in many French-speaking territories of Africa under the name of "animation". The workers of the animation service seek to identify the innovators (Fr: "animateurs") in the communities - generally the somewhat younger more progressive and educated elements - who are then brought out for short intensive residential training courses. In these they learn new techniques of development. On their return to their communities they are assisted in applying these, with equipment, modest finance and expert advice, by officials from the relevant government services.

30. The effectiveness of community development programmes can often be greatly improved by the introduction of better communication techniques and the provision of soundly prepared extension and training media.

Residential Training Centres and Courses

31. Residential training courses are not limited to animation programmes. Farmers' training courses, courses for women, for craftsmen, for local midwives, indeed for many occupational or social groups, are organised in a wide variety of rural training centres.

32. Residential courses can enable people from different communities to meet each other and to meet specialists from the government services or other development agencies. They free the people temporarily from their local problems and social pressures and enable them to study these problems with a certain detachment. Residential centres can also be equipped with better educational media (e.g. film projectors, overhead projectors, permanent exhibitions) than would be available in scattered rural communities.

33. Although such centres are essentially designed to benefit the local population they may be usefully combined with - or placed near to - training centres for the operational field staff of the project.

The Community School

34. The rural school should certainly be linked into the general network of communication. Schools have suffered too

long from isolation within the communities they serve. The education of the children, in the classroom and outside it, will derive much benefit from such links; so will the attitudes of parents to the education of their children and to education for themselves. How far the school should become an active centre, and its teachers active agents, in adult education and community development will depend on many local factors. These include the suitability of school buildings and furniture, the availability or lack of other centres for adults, the status, training and limitations of the teachers and the heavy work-load they already carry to fulfil their primary function. Nothing but good can result from any movement towards the community school ideal, provided it does not go too fast or too far, overstep its limitations, overstretch its resources or try to usurp the functions of more specialised and diversified educational services for adults.

Mass Media Programmes

35. The mass media - cinema, radio, television, exhibitions, the press - can reach a large and scattered target audience and can exert a powerful emotive impact. They have, however, certain obvious disadvantages. First, they are non-selective, since it is not economic to direct specific messages to limited social or occupational groups; secondly, they are essentially one-way media, although it is possible to set up systems of feedback and audience research, for example by organising listening groups or farm-forums which communicate back to a broadcasting organisation; thirdly, they tend to be transitory in their impact; finally, they require expensive and delicate machinery, which needs careful handling, maintenance and repair. Nevertheless, where the necessary infra-structure exists and the budget permits, powerful use can be made of these media, perhaps especially radio, for motivation, information and the general education of adults. They should play their part in a communication system rather than being called upon to do the job on their own.

Communication Related to the Provision of Finance and Equipment

36. Rural dwellers seeking to modernise are often handicapped in their efforts by not knowing where and how to obtain credit, equipment and supplies. This handicap can be overcome to a degree by communication between suppliers and consumers - consumer action-research, which studies the needs and problems of the local population and feeds back their needs to banks, financing organisations and retailers. The suppliers may also

need advice and guidance on how to make known their facilities and supplies. This is a question partly of improved communication with and through extension staff, partly of improved communication media. The media will include sales literature, how-to-get-it, how-to-do-it and how-to-use-it literature, short films, radio programmes, posters, exhibits and demonstrations. Although much of this literature and supporting media exists, it is too often unintelligible to the consumer. A rural development communication centre or media production team might well produce and pre-test media of this kind. This improved and simplified communication between suppliers and consumers is less necessary in the modernised sector, where consumers are more sophisticated. Its particular value is in the transitional and subsistence sectors and at the level of intermediate technology.

Functional Literacy

37. Literacy is essentially an extension of the power to communicate, from speech to the use of the written word. A very large proportion of the adult population of rural areas in Africa, Asia and Latin America is deprived of this power by illiteracy. In quite a number of countries the incidence of rural adult illiteracy - always higher than in urban areas - is over 75% for men and over 90% for women. The problem is particularly acute where people speak localised vernacular or unwritten languages, since the acquisition of literacy then demands also the mastery of a second language.

38. In crude terms the problem of mass illiteracy is a result of the failure of the primary school system to keep pace with the population explosion. In the world as a whole the total number of adult illiterates continues to increase, despite a reduction in the percentage of illiteracy. Recent figures indicate that in Middle Africa each year more than 4 million children reach the age of 14 with no education or less than 4 years of primary schooling and will therefore, with rare exceptions, remain functionally illiterate for life.

39. How important is literacy to development and particularly rural development? Can the problem of illiteracy be solved and what measures should be taken to solve it? These crucial questions should be squarely faced by the planners of rural development programmes, but the answers are, however, by no means clear.

40. Communist countries have given the highest priority to the eradication of illiteracy and have tackled the problem literally without counting the cost. In many other countries considerable funds and devoted efforts have been spent on mass literacy campaigns. These have, however, had rather limited success, through lack of motivation among the illiterate adults, lack of efficient organisation and finance, failure to provide the necessary adult teaching materials and to train teachers for the specialised task of teaching adults. The rate of drop-out from adult literacy classes has often been very high and the follow-up which is essential to keep people literate has seldom been provided on an adequate scale. Regression into illiteracy has consequently been widespread.

41. This situation has led Unesco to advocate what it calls "a selective and intensive strategy for work-oriented functional literacy". It is being tested in Unesco's Experimental World Literacy Programme and work-oriented literacy projects of considerable magnitude are now operating in 12 countries.¹ In others, more limited experiments or micro projects are being conducted to test this approach.

42. The strategy is selective in that literacy teaching is provided in areas and for social and occupation groups where motivation is high, where illiteracy is a handicap to development, where there is the infrastructure and organisation to enable functional literacy to be provided and where it can be immediately put to use in training and extension programmes. The strategy is also selective in that objectives, methods and media are adapted to the needs of specific occupation groups (i.e. work-oriented). This implies that programmes and media have to be prepared for comparatively small numbers of people and related to individual jobs. The strategy is intensive also in that it favours quality rather than quantity, stresses efficiency and generally requires longer and more elaborate training. In this training the acquisition of literacy and numeracy is integrated with the learning of essential knowledge and skills. It is therefore more costly and more complex than generalised mass literacy teaching but seems likely to be correspondingly more effective.

¹Algeria, Ecuador, Ethiopia, Guinea, India, Iran, Madagascar, Mali, Sudan, Syrian Arab Republic, Tanzania, Venezuela.

43. Evaluation, built into the experimental projects of Unesco, may shortly indicate to what extent and under what conditions functional literacy of this intensive kind is cost-effective in development terms. Meanwhile those responsible for rural development must decide, largely on intuitive judgement, whether, and to what extent, adult literacy teaching should be included as a means of improving communication and promoting development and, if so, what language or languages should be used and what strategy and methods should be adopted. It is only possible within the scope of this paper to mention a few of the many considerations which should influence their decisions. Literacy enables a person to absorb written and printed information at his own speed in his own time, and to supplement his memory by the recall of knowledge, recorded by himself and others in writing. It thus reinforces oral communication and facilitates extension and technical and vocational training. Indeed these can only be taken to a very elementary level by oral exposition and visual demonstration. There is also no doubt that the acquisition and use of literacy brings to the individual increased powers of analysis, conceptualisation and generalisation and a greater ability to understand and solve everyday problems. Psychologists have also found a high correlation between innovativeness and literacy, from which it seems at least likely that literacy is an important factor in modernisation. But what percentage of literacy; and at what levels?

44. So the planners must enquire what is the extent and depth of adult literacy in the rural areas? Is it sufficient to permit communication through the written word at least with the more progressive elements of the local society? Or is mass illiteracy such a handicap to development that it should be regarded as a priority problem? What is the language situation in the area? Will a multiplicity of local languages - some of them perhaps unwritten - handicap the organisation and increase the cost of adult literacy programmes? In what language or languages should literacy teaching be provided? The answer to this last question will depend upon a balanced judgement between a number of conflicting factors. These include: the psychological advantage, greater ease and speed of teaching literacy in the learner's mother-tongue, which is the normal vehicle of his thought and self-expression; the economic and political advantages of imparting literacy in a language of wider communication with a fuller technical vocabulary and adequate existing reading matter, generally the national language of the country. Again it is wise to ask: what do the people themselves prefer? What is their motivation?

45. If it is decided to build adult literacy into the communication system of a rural development project what strategy should be used? Should preference be given to mass literacy campaigns followed by appropriate extension and technical and vocational programmes and the provision of reading material for the new literates? Or should preference be given to a selective, work-oriented, functional literacy programme, in which literacy teaching is integrated with technical and vocational training and adapted to specific occupation groups?

46. Whichever strategy is adopted - unless of course an effective programme is already operative - new teaching, training and reading materials will have to be prepared by the media, production service. These must be based on action-research and pre-tested in experimental classes and courses. The media may include teachers' manuals, literacy primers and simple visual aids, or, if the work-oriented strategy is adopted, programmes of technical and vocational training with the literacy component built into them. The mass media will need to be enlisted especially for motivation and information, and teachers and instructors will have to be enrolled and trained. Even under the most favourable circumstances the preparatory phases of an adult literacy programme are not likely to take less than two years, but the more thorough the planning and preparation the more effective and functional will be the effect on development.

Influencing Socially Controlled Communication

47. Research¹ indicates that the spread of innovations, the adoption of new technology and new practices in a community largely happen by undirected and socially controlled communication. It also indicates that adoption is a long slow process in the rural community. Sociologists have studied this process and have analysed the characteristics which seem to go with innovativeness² in individuals. They have found a high correlation between

¹For a recent summary of this research see Rogers op.cit.

²Defined as "the degree to which an individual adopts new ideas relatively earlier than others in his social system".

innovativeness and literacy, educational aspirations, exposure to media, empathy¹ and cosmopolitanness.²

48. How far then can the adoption process be stimulated and speeded up? With this question in mind it seems logical that strategies, systems and methods of directed communication should be planned to achieve the maximum influence on socially controlled communication.

49. A promising communication strategy for rural development might, then, be a two-pronged attack on ignorance and inertia, involving:

- the selective and intensive injection of new ideas and skills into the more innovative and progressive sectors of the community by extension and vocational training;

- an effort to give to the more inert, illiterate and 'laggard' sectors some of the attributes and antecedents of innovativeness and to encourage their readiness to accept change. This will need fundamental education, functional literacy and mass media programmes.

50. The communication programme should, of course, go hand-in-hand with a social and economic programme - introducing land-reform, supervised credit and other appropriate measures for removing material handicaps to modernisation. And these in turn must be explained to, and discussed with, the local population - in short accompanied by improved communication.

51. Finally the channels of socially controlled communication can be cleared and extended, for example by bringing people together for discussion, smoothing out enmities and rivalries, strengthening old forms, and establishing new forms, of organisation, action and co-operation - village councils, farmers' or women's societies, 4H clubs, co-operative societies, community

¹Defined as "the degree to which an individual is able to project himself into the role of another person".

²Defined as "the degree to which an individual is oriented outside his social system" (Rogers op.cit.).

centres. Thus the organisational function of community development interacts with its educational function.

Evaluation in Rural Development

52. Brief reference has been made to the evaluation of media, but there remains the question whether evaluation should be brought to bear upon the whole rural development programme or upon specific components of it. Within the communication field, for example, it might be applied to a training course, an adult literacy project or a mass-media programme, or used to compare the cost-effectiveness of two different strategies. A Unesco definition states: "Evaluation aims at measuring, whenever possible in quantitative terms, and according to well-defined criteria, the major direct and indirect effects of a certain activity, taking into account its objectives as established before its inception".¹

53. An important purpose of evaluation is to provide the financiers, planners and administrators, who allocate funds for rural development with objective information on how these funds have been spent. It is particularly essential in an experimental or 'pilot' project, in which it provides a rational means of determining which elements or alternative approaches should be adopted and generally applied.

54. Evaluation may be rather of the action-research kind, feeding back its results to the operational staff to help them improve their efficiency, or it may be long-term and rigorous measurement of the overall results or cost-effectiveness of the programme. The first of these is of immediate practical value and can be undertaken by a comparatively modest action-research-evaluation unit. The second, essentially a 'before-and-after' measurement, must always be planned and started before the operational phase of the programme begins. It is a costly and difficult operation only to be undertaken if an independent and highly competent organisation² is available or can be set up for the purpose.

¹Unesco Manual on Adult and Youth Education: Evaluation of Experimental Literacy Projects. Provisional version: document ED/WS/135, Paris. 85pp.

²A good example of this is the Programme Evaluation Organisation of the Planning Commission of the Government of India.

Communication and Rural Development: Some Concluding Remarks

55. For the sake of clarity and at the risk of over-simplification, an attempt has been made to show how communication can be built into the successive phases of a rural development project. In fact it is more likely that programmes will already be operative. It will then be a question of improving and expanding communication. Communication in rural development projects is rarely planned systematically. Seldom are the various channels and media of communication used to support and reinforce each other. Still more seldom is action-research used to improve the effectiveness of the development programme and its communication component. Nor is evaluation generally applied to measuring their effects. If the vital business of communicating the ideas, knowledge and skills, on which modernisation depends, were better managed and more widely extended, this might well do more than any other single action to accelerate and improve social and economic development.

A Centre for Communication and Rural Development

56. The control-room-power-house envisaged for a comprehensive rural development programme - might appropriately handle three broad areas of activity:

- study, action-research and planning;
- preparation, distribution and maintenance of media;
- high-level training.

Study, Action-Research and Planning

57. The centre probably should not conduct basic research, but it should be responsible for feeding the results of such research to rural development staff. For this purpose it will need a small study, documentation and publications unit. This might range from one versatile documentalist and a secretary-typist to a library and publishing unit of say six people, the size depending on the budget available to the centre and the facilities available from elsewhere.

58. The centre should certainly have a small action-research unit. This might consist of two or three professional staff members with basic training in the techniques of social research,

experience of rural development and a knowledge of communication and education. For data collection in the field it might employ either a small team of field interviewers or make use of the services of existing rural development workers or rural teachers, after appropriate short training courses. The action-research unit should be at the service of the planning staff for basic studies, feasibility studies and the like and should work closely with the media-production teams on topic study and pre-testing.

59. The centre might also contribute to, and provide facilities for, the planning and operational control of the rural development programme. The control of individual services, such as agricultural extension or health education, should not be taken out of the hands of the responsible departments of government. Inter-disciplinary planning and inter-departmental action, for example, by working groups, rural development committees or an adult education board, could, however, well be located within the centre.

Preparation, Distribution and Maintenance of Media

60. The core of the communication centre would be a media-production unit, staffed and equipped to plan, prepare, and publish whatever range of media the operational staff propose to use and are prepared to finance. If this range includes only the more simple low-cost media (books, pamphlets, manuals, flannelgraphs, flip charts and other simple visual aids), the staff may be comparatively limited in size and specialisation. It might then include: a director/educator with experience in rural development; two or more writers/script writers with training in writing material for readers at various levels of reading ability; one or more graphic artist/illustrators; a photographer; a specialist in lay-out and printing; a handyman/craftsman, capable of preparing exhibits and models and repairing the centre's equipment; and secretarial staff. If instructional films are to be produced this will require an additional unit of staff. If radio is to be exploited there should also be at least one staff member with training and experience in this medium. It is assumed that television is not as yet viable for rural development programmes; where this assumption is not correct, as for example, in India, the centre should have at least one person on its staff capable of planning programmes and collaborating with the television authorities.

61. Where a rural development programme operates in a number of local languages, staff and facilities for translation may be necessary.

62. The centre may also be staffed and equipped to select, purchase and adapt media other than those it produces. It should also have space and staff for the storage, handling and distribution of media. If mechanical/electrical media are being used there must also be a maintenance and repair service.

63. If the centre is serving a widespread rural development programme, or a number of scattered projects, it must be equipped with transport. Its budget must include provision for adequate travel. The production of media, and the action-research that goes with it, demand continuous contact with the consumers in the rural areas.

High-Level Training

64. It is assumed that most of the training of field staff will be done locally and departmentally. There is, however, a case for including in a communication centre facilities for special and high-level training. For example, it may make sense to train field staff in the use and maintenance of media and equipment in the same centre which produces, distributes and maintains them. Again courses in communication, essential to the staff of all departments concerned in rural development, might well be conducted in the communication centre or by its staff going out to local training establishments.

Localisation and Administration of a Rural Development Communication Centre

65. The size, structure and functions of a communication centre, and its location and administrative framework, will depend upon the nature of the programme it serves. If, for example, the programme is already inter-departmental and if the various Ministries collaborating in it do not have action-research units, media production teams and high-level training establishments, there may be a strong case for establishing a single National Centre for Communication and Rural Development, and even a number of sub-centres in distinct regions of the country or development projects. If, however, there are already training establishments, research and planning units, media production teams and agencies, publishing firms, printing houses, film units, radio networks - the function of a communication centre may

simply be to fill the gaps and to draw together, link up, and collaborate with, these various agencies.

66. The case for a single unified centre is particularly strong where there is a shortage of trained and experienced action-research workers, writers, artists, cameramen and other media specialists. Even where such persons are available, their concentration within a single centre can increase efficiency and reduce costs. Where they are in short supply the centre might be staffed initially by a combined team of national and foreign specialists, for it is at the level of the technical services that international co-operation and exchange can make its most effective contribution.

THE EDUCATION OF ADULTS AT ALL LEVELS

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PREAMBLE

1. This paper, the contents of which do not necessarily reflect the views of the ILO, is intended to deal particularly with provision for the cultural, economic and intellectual needs of rural communities and the appropriate vocational training. It would suggest a very general approach to this topic covering a wide range. Already much has been written on the education of adults and even a summary of the major aspects would itself be superficial. Therefore it is intended in this paper:

- to draw attention to the actual situation in rural areas;
- to highlight some of the problems which affect adult education;
- to discuss various methods currently used and to offer suggestions as to how adult education might help to alleviate the serious educational and employment problem in developing territories, without attempting to exhaust the topic.

2. These comments are made after thirteen years in West Africa in which the writer has been working mainly on problems of education and rural development with a view to promoting employment.

Defining "Adult Education at all Levels"

3. For this paper, adult education is defined as covering all systems which help people who have finished formal schooling - at whatever stage - or who have passed the generally accepted age-range for school children, to improve or develop any or all aspects of their lives. It ranges from institutional courses to

the impact of political, social and infrastructural changes which impinge upon them. It covers the planned and unplanned methods, balanced and unbalanced, social and economic development - indeed everything resulting in a valued change for the individual and the community.

THE SITUATION AT PRESENT

Traditional African Society

4. Many books have been published describing the present position in certain parts of Africa (1). Nevertheless, it is important to restate some of the aspects profoundly influencing the African's reaction to educative forces at work in his daily life (2). Unlike much of Europe, the natural evolution of African society has been confronted with a way of life introduced from outside and different, particularly in its use and understanding of the material world. Naturally, the African was able to reconcile his religious concepts and the forces controlling material functions in and around him in an empirical and spiritual approach. However, a new scientific approach was thrust upon him and he had to acknowledge the control of his material world by laws and limits discovered and formulated elsewhere. The impact of this new approach on young

- (1) Among them, Guy Hunter's 'Best of Both Worlds', Rene Dumont's 'False Start in Africa' and Andreski's 'The African Predicament' in one way or another describe the Africans' position as seen by the outsider, while Chief Awolowo, President Nyerere, Dr. Nkrumah and many others have written as Africans on the subject.
- (2) In this paper the writer uses African examples because of his experience in Sierra Leone and Nigeria. They would appear to be similar to examples from other developing countries.

educated Africans has been to create an over-materialistic emphasis of the facts of life. But, as in other societies, the pendulum will swing back from this extreme. In West Africa there are examples of the conflict between the "new" and the "old" pattern of life. One tribe had the custom of blessing new born babies in a ceremony in which the elders of the village entered the home of the child and scraped mud from the threshold. This was made into a mud plaster and placed on the umbilical cord of the newly born baby, with a spoken blessing "that all that was good from the child's ancestors, who had passed over the threshold, should fall upon the infant". Often the child contracted a fever from an infection due to the mud pack and died. This was attributed to some evil curse which had been put on the family by an enemy. The desire of the elders in their blessing was good; their deductions about the cause of death were understandable. Later when medical missionaries taught that the death was not due to an enemy's curse but to bacterial infection, the elders asked to see this "thing". But it was too small to see and thus the elders retorted "All you foreigners want to do is to break the bonds of our custom and culture for your own ends". Nevertheless, subsequent educational processes have enabled such village leaders to a clearer understanding of the material world.

Imbalanced Changes, Introduced from Outside,
through Formal Education and Population Growth

5. From mission school, colonial administrator and trading company the man of the "third world" was not slow to see the advantages of knowing how to read and write. Unfortunately the imported picture of the white man's social structure was incomplete; there were missionaries, doctors, administrators, "desk" workers, but few if any builders, sewage workers, carpenters, road cleaners, farmers, gardeners. So the quest for formal education grew tremendously in little more than a hundred years. However, one kind of education - the formal Western type - has been overemphasised, and the growth of other forms of education and economic needs have been neglected.

6. This situation can be well illustrated from the Western State of Nigeria which has perhaps the most advanced educational system in tropical Africa. At present the schools in Western Nigeria turn on to the labour market 200,000 school leavers each year, as follows:-

Primary school leavers (after 6 years of schooling)	75,200
Secondary Modern leavers (9 or 10 years)	15,100
Secondary Grammar leavers (11 or 12 years)	6,500
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Sub-Total A	96,800
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Primary school drop-outs	114,000
Secondary Modern "	8,600
Secondary Grammar "	1,500
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Sub-Total B	124,100
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Total annual school leavers (A + B) 220,900. Of these approximately 20,000 enter further education.

7. Since 1960, Western Nigeria has produced 1.85 million school leavers and of these at the moment it is estimated, that 900,000 are unemployed or at best grossly underemployed. A.Lewis (1) has already shown that of these job-seeking school leavers, the modern non-agricultural sector of the economy is unable to absorb, at best, more than half. The rural aspect of this situation has been shown in an I.L.O. survey within a rural area of the Western State which reveals that 60 per cent of the youth between 15 and 29 years have left the villages, leaving the countryside denuded of its most virile and educated people. Indeed the same survey shows that the average age of the farmers is 35 years and over. The results are obvious - an ageing rural population comprising the least progressive sector - not an attraction for ambitious youth.

8. To this changing social pattern must be added the rate of population growth which in most of the "third world" is certainly higher than 2 per cent and in Nigeria may be close to 3 per cent. At the moment at least 35-40 per cent of the population is of school-going age, i.e. younger than 15 years. Well over 50 per cent is below 25 years and thus falls within the most fecund period of human reproduction. It has been adequately shown in many publications, and recently in the I.L.O.'s Report to the International Labour Conference by the Director-General (2), that unless there is a sharp increase in production it will be difficult to maintain, let alone improve, living standards. Thus, economically, the developing countries are having to run fast even to maintain their present position.

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- (1) Lewis A. 'Aspects of Economic Growth': Nigerian Opinion Vol. 2, No.12, Page 138; Ibadan, December 1968.
- (2) The World Employment Programme, I.L.O., Geneva 1969.

The New Elite in a Dual Society

9. With the development of education, a small percentage (e.g. 4 per cent of the labour force in Nigeria) has entered what is now popularly known as the "elite" of developing countries. We have the phenomenon of the dual society or as Malcolm D. Rivkin has called it, "the floor and the ceiling" of society in the "third world". What is important is that the ceiling has not evolved from the floor. By the forms of education introduced from outside, the ceiling has been propelled out from the "floor" of the subsistent traditional masses. Thus educated persons, and in particular the young people, find a growing conflict between their traditional home and an acquired modernism with conflicting systems of reasoning. The former uses spiritual and fatalistic concepts - the latter rational and scientific modes of thought. This explains and justifies a flight - especially by the youth - from the rural stagnation to the relatively dynamic development of urban areas. This flight has superficially been called the "quest for the good life".

10. Young people, particularly those who have had some acquaintance with educative processes, realise that the urban area presents a more advanced opportunity than the cutlass and hoe of the farm. Professor F.H. Harbison has rightly said: "In this age of rising aspirations and spreading mass communication, the sons of farmers are not going to sentence themselves to traditional agriculture if they can possibly avoid it".

Planned and Unplanned Development in Education, Economics and Politics

11. Any planning, particularly in education, has to start from what exists, and not from what would be nice to have. Much of the literature on education and development for the "third world" becomes unhelpfully critical when it analyses the past fifteen to twenty years of the growth of independence with "if this and that had been done" or in suggesting development levels in the future for which there are insufficient funds within the developing world. Certainly at present there is a decreasing contribution from the more developed countries. The UNCTAD Conference of 1968 in Delhi with its 55 tons of documents and mimeographed statements, failed to find a way of bridging the chasm between rich

and poor countries. Thus while educating the adult populations of rural areas we must simultaneously endeavour to implement comprehensive long-term development plans for the control of population growth, the promotion of employment, balanced urban and rural development, the improvement and spread of education, and to facilitate the transition from tribal to modern forms of social and economic organisation. Yet at the same time the growing social pressures and inequalities which disrupt organised and planned development must not be overlooked. Indeed so great are the problems that all our present planning and educational methods have failed to mobilize society into an ordered development. However, the unplanned forces also create social mobilisation and human nature has constantly used explosive pressures to bring about change.

12. To illustrate this, we have the rapid growth of political awareness in rural people over the past fifteen years in West Africa, starting with the simple belief that their first African leaders would and could lead them from political independence to a more prosperous life. Such leaders have been followed in many areas by military men. The early hope that they, with absolute power, could eradicate social evils has once again turned to disenchantment and the realisation that perhaps the road to economic "take-off" is longer and more arduous than was at first expected. If anyone had set out to teach the fundamentals of political and economic stability in a series of adult classes, there would have been no success. In aiming to bring about an objective understanding of politics by rural populations we must make use of what have been unplanned and irrational trends and movements.

SOME PRESENT SYSTEMS OF ADULT EDUCATION FOR RURAL AREAS

13. Most of the methods used currently for adult education with any measure of impact can be divided into two groups:
- I those which originated from concepts introduced from "outside";
 - II those which arise from existing rural structures, or seek to develop what is evolving within the rural areas.

I Introduced Systems of Adult Education

A. Governmental Rural Programmes

14. Governments have become increasingly alarmed by the migration to urban areas of mainly young people who are unable to find adequate employment. Politicians have had to pay heed to the cry of their constituents for jobs, and many governments became directly involved in creating job places through the establishment of industries, settlement schemes, special youth employment and training schemes.

15. Unfortunately many of those schemes were not only initiated by the governments but also managed by them. Thus many failures occurred, since the civil service hierarchical delegation of responsibility and public administration methods are incompatible with the need for quick and flexible decision making and entrepreneurial initiative required for economic productivity in a competitive world. Thus, governments should aid, advise and help to provide the wherewithal in the form of expertise, credit and inspection etc., but should not shoulder the actual running of production schemes which is best left to commercial entrepreneurship, otherwise they remove the very elements that can educate the participants towards economic production.

16. Some governments have mainly emphasized the large-scale type of industry, often setting up factories in rural areas on the ill-advice of contractor-financiers or for political reasons. However, even where they are successful they mostly fall within the capital-intensive low-labour-intensive type of industry and have been disappointing in their labour absorption. Nevertheless, industrialisation will increase; it is only the rate of increase that is in question.

17. Farm Settlement Schemes: Nigeria is a leading example of an attempt to educate young people towards a better rural life through the various farm settlement schemes. In the Western State alone, the Government has spent over £10 million, devoted the major part of its extension service to the setting up of school leaver farm settlements and drawn heavily upon F.A.O. and U.S.A.I.D. advice and assistance. As yet the viability of the settlement schemes is unproven. In principle they could have taught rural communities much

about the advantages of a change in land tenure; and they could have been a means of introducing greater energy inputs into peasant agriculture. But they suffer from a government's inability to run commercial concerns efficiently. It also became clear that, even when faced with continual unemployment, a young man will not readily turn to farming just to have a job. In fact some of these settlements in Nigeria had more success when they recruited their participants from among maturer and in many cases illiterate farmers who then eventually proceeded to employ their younger school-leaver brothers.

18. In the Nigerian example both "on-the-job" and formal farm institute training were given to the young men, many of whom absconded from the farm settlements in the early weeks of their post-training period. Even now there are only approximately 1,500 to 2,000 settlers and of these only a few have taken root. This illustrates that adult education in farming was not enough to bring the will to work. For such young men, the social pressures had not reached a state which together with their training convinced them of the advantages of farming, as opposed to urban un- or under-employment.

19. This can be contrasted with the co-operative farm settlements in Israel (the Nigerian schemes were originally modelled after the Moshavim). There the social pressure to survive brought the will to take up farming and to undergo the necessary training at all levels, by all kinds and ages of people. Their success in agriculture was the basis on which diversified and specialised industries have been built. Here adult education was successfully married to social pressure. It is indeed a fundamental principle that the participating people must identify themselves with the subject to be taught. To find and maintain the needed underlying desire usually requires compelling circumstances, though it is recognised that desirable concepts are often not accepted because of "blind spots" in the make-up of the participants and methods must be adopted to remove these. A good example of this is seen in social hygiene habits in a community where pollution of a communal water supply is not recognised as a personal or social danger.

20. Advisory or Extension Services in Rural Areas:
There are many types of extension services carried out by governments whose major aim is to educate the people in rural areas to improved standards of living, higher productivity and better marketing. Of these services the most important are those dealing with agriculture and marketing, health and community development, small-scale industries and infrastructural development such as roads, water and power supplies. The extension officer is involved in all these cases. The extension officer - expected to act as an "innovator" in all these services - is facing built-in problems related to communicating. Very often such extension personnel receive their training in specialised institutions such as universities or schools of agriculture. Certainly all expatriate officers and many nationals have received all or part of their training in a developed country. Having trained in isolated or artificial conditions where the level of development is high, extension officers are often thrust out into raw rural conditions where their ability to communicate is greatly diminished. They may know how to tackle technical problems and they may well have the will to help the rural communities, but more often than not there is no supporting infrastructure in terms of transport, supplies, power and communications systems which they are accustomed to consider as essential and necessary prerequisites for the transmission of improved methods. Thus either willingly or reluctantly, the extension officer hibernates in his office or agricultural extension station and joins the ranks of the file-moving, report-writing pseudo-innovators who rarely come to grips with the rural people and their problems. Furthermore, this extension officer faces a conflict pertaining to his social position, which is midway between the civil service bureaucracy to which he is responsible and the client system in which he works. Research has tended to indicate that innovators who disregard the expectations of their bureaucracy in favour of those of their local client system are more successful in introducing improvements. But such is the pressure in developing countries that most field workers defer almost exclusively to their superiors, fearing loss of promotion or increment should disfavour be incurred. This, of course, cripples real extension work and develops the all too common "shadow service".

21. The problem of transfer of concepts embedded in the terms and background of developed countries is acknowledged

by expatriates and nationals. Yet in the majority of cases ideas are shipped almost unaltered from the originating country. Tractor-driver instruction books complete with comic illustrations are seriously given to semi-literate tractor drivers who neither understand the idiom nor the illustrations. Industrial news notes with work flow charts, management diagrams, European slogans and complex technical drawings are distributed to wayside entrepreneurs. Governments of developed countries and other organisations have handed over countless books which have no point of contact with the unfortunate reader. How often has the basic principle in education of moving from the known to the unknown been violated! In transferring ideas, especially on paper, the following steps should be taken:-

- (a) Establish friendly and trustful relations with the people to be influenced.
- (b) Come to an understanding on what is to be taught or changed.
- (c) Discover the levels and methods of intellectual perception currently used.
- (d) When written or illustrated material is used, each idea and drawing must be pilot tested with the people to ascertain that the feed-back is correct. (In a series of flip charts used in cotton growing with farmers, the innovator was unable to get acceptance of the improvements until he discovered that the cotton-growing audiences all thought his drawings of cotton plants were trees. He had not pre-tested his charts to know their effectiveness).
- (e) Such visual material must apply one single concept at a time; multiple concepts must be built up step by step from previously known ideas.

22. Self-help Community Development: Rural people usually are astute in assessing their own socio-economic situation and in setting realistic priorities. The following table indicates the importance attributed to certain self-help projects which depended entirely on the input of the rural people concerned. In 140 such projects carried out in Western Nigeria there were 17 different types. However,

the five most frequently mentioned were either directly linked to increasing the productivity (road building, market stalls, postal agencies), or concerned their social welfare (community halls, dispensaries).

<u>Priority</u>	<u>Kind of Project</u>	<u>Number of Projects</u>	
1	Roads	66)
2	Community Halls	22)
3	Market Stalls	13) 82% of all projects
4	Postal Agencies	7)
5	Dispensaries	7)
	Misc.Other Projects	25)
		<hr/>	
	Total	140	
		<hr/>	

23. Literacy Classes: The principle of functional literacy has been overwhelmingly established. After the first rush by politicians to run literacy programmes, it was realised that very often there was almost nothing of interest for the people to read and thus their newly acquired skill was generally lost through lack of use. In an extensive literacy programme to tobacco farmers which was aimed at improving their understanding of the production of high quality tobacco; it was found essential in the early stages to pilot test each illustration until an ability to understand illustrations had been built up in the readers.

B. Special Youth Employment and Training Schemes

24. Special youth employment and training schemes have been established by governments faced with growing unemployment among youths as an attempt to avert critical situations. At the same time they have endeavoured to mobilise the potential of such disadvantaged adolescents and young

adults for national development. These schemes can be broadly divided into two categories :

- (a) those which emphasize training and productive employment for unskilled unemployed youth ;
- (b) those which emphasize service to the community by educated youth.

The majority of programmes fall into the first category. At present in Africa there are about 60,000 young persons participating in this type of programme, which are operating in 18 countries (1).

25. Frequently emphasis is laid on modern agriculture with a view to encouraging youth to settle on the land after service and to prevent or absorb urban unemployment as well as to reverse migration to the cities. Sometimes an endeavour is made to promote a feeling of national solidarity and of civic responsibility. Generally, participants' ages range from fourteen to twenty-five years and they are selected from the unemployed who have little or no education or vocational training. Many developing countries seek by these means to utilise their manpower resources better for economic and social development. However, often there are more applicants than they can either administer or finance. Indeed a total of 60,000 is but a miniscule part of the available African youth.

26. There is a great variety of types of programmes and of objectives with different emphasis on training, employment and/or development. They cover in general :-

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- (1) Cameroon, Central African Republic, Chad, Congo (Kinshasa), Dahomey, Gabon, Ghana, Ivory Coast, Kenya, Liberia, Malagasy, Malawi, Mali, Senegal, Tanzania, Togo, Uganda and Zambia.

- (a) multi-purpose schemes such as the Kenya National Youth Service where participants serve for two years, six months of which are given over to full-time education;
- (b) rural programmes which aim at settling new villages or new co-operatives or improving existing villages. The Jamaican one-year residential programme has helped to restore public esteem for manual labour and agricultural work;
- (c) settlement schemes such as the Israeli specialised Nahal youth service units which have enabled young people to develop agricultural settlements under frontier conditions;
- (d) training programmes for rural animators where the concept is to train young villagers who will return as innovators to their homes. At present Mali is training 2,000 such catalysers of action;
- (e) urban programmes of a more limited nature and often consisting of a specific type of training for future long-term employment. This is the case in the United States' Jobs Corps;
- (f) programmes for young women. These are not very common owing to traditional social and cultural factors and the desire to use limited financial resources on schemes which mobilise young men. The Ivory Coast Women's Civic Service is designed as a type of "animator" scheme in which trained girls return to their village to spread knowledge of hygiene, diet, sewing and gardening;
- (g) civic employment and training programmes within military forces. With the spread of military regimes in the developing areas there has been a tendency to use their training facilities and manpower for economic and infrastructural development, particularly in building and road projects.

27. The second category of youth schemes is aimed at young people already possessing secondary or higher education or special skills. It is found both in developed and developing countries and can comprise service at home or overseas. The goals of such programmes include:-

- (a) the rendering of service to the community;
- (b) further education for the participant;
- (c) the reduction of high levels of unemployment among educated youths in urban areas.

An example of service within the home country is the Education Corps of Iran where appropriately trained youths are conscripted for 18 months to serve as teachers in rural villages. The well-known U.S. Peace Corps, the British V.S.O. and the Canadian C.U.S.O. are but three of the examples of service abroad.

28. In order to be effective as adult education programmes and to contribute to the national welfare in a real way, such special programmes have to follow certain principles:-

- (a) they must be integrated into overall national development plans. Hasty emergency reactions often lead only to failure, a disruption of the economy and of the employment market, and to disenchantment of the young people;
- (b) programmes must not be started on a large scale before pilot projects have tested their reception and effectiveness;
- (c) all schemes should aim at improving the participants' vocational qualifications;
- (d) the schemes should include methods whereby participants are encouraged and helped to return to normal economic activity.

29. Nevertheless, because most of these schemes are financed and administered by central governments, it is questionable whether their high public cost is not diverting scarce capital and administrative resources away from more important development needs. The problem of employment for

the participants after the scheme in practice often remains unsolved, and whether they are able even in part to stem the migration to the cities and improve the rural areas is still an open question. However, these schemes appear to have value in respect of political education.

C. Mass Media

30. The value of the press, film, radio and television for adult education has been well demonstrated. It is disheartening, however to find that the vested interests of politics and commerce often misuse the immense advantages of mass media among their people who are at a disadvantage because they lack discrimination. Few governments in developing countries make effective use of mass media to overcome the shortage of good teachers. Thousands of young adults in the "third world" struggle to qualify themselves, using inadequate correspondence courses or self-study systems, and nearly always have little - or unhelpful - guidance in their studies. Much could be achieved in government-run teaching centres using radio and television educational programmes.

31. Furthermore, there is perhaps no field in which the developed countries have failed so much to help the developing countries to make fuller use of one of the best tools of education. Insufficient aid funds and lack of help in research has resulted in the production of very little material suitable for rural areas. There has been inadequate training both in the technical fields and in the use of the media, and there has been a lack of control on the type and quality of material transferred. In most cases educational material is coughed up in an undigested, unedited, untested manner. There has been an excessive use of material offered to project the image (often an artificial one) of the donor country. Of mass media, it can be said, "never has such a good tool of enlightenment been so badly handled, misused and neglected".

D. On-the job Training in Private Concerns

32. In the past, large firms have found it necessary to establish their own training programmes owing to a lack of qualified technicians. These "on-the-job" courses have proved highly successful, no doubt because they were on a commercial "hire and fire" basis which produced rigid incentives and standards of work. These have been continued

even in the face of the development, by governments, of sponsored trade schools and technical colleges. By the end of a three- or five-year course the products of such institutions are often unwanted by the industries because they have the wrong kind of training and the artisans' expectations are already too high. Indeed it would be better to encourage firms and industries to run and pay for their own training courses while governments should give more attention to adequate inspection and control of standards in employment conditions and training facilities.

33. It is through industrialisation that we also witness a rapid peaceful educative means towards building a national spirit and reducing the undesirable effects of tribalism. For, in working to achieve a saleable product, the workers must have a cohesion. Tribal and language differences diminish and mutual respect is built on ability to do a good job. Each man in a production line learns his interdependence.

E. The International Labour Office and other United Nations Agencies

34. The United Nations through its specialised agencies is endeavouring to meet the rising need for adult education and training at all levels. In particular ILO, FAO, and UNESCO have through their Administrative Committee on Co-ordination reached agreement whereby they share and co-operate in the work of agricultural education and training. Under this agreement FAO will promote the agricultural aspects, UNESCO the educational and ILO the rural employment.

35. Furthermore, ILO has in its vocational training for rural areas placed great emphasis on training artisans, rural youth, women and young girls. Also, wherever aspects of employment promotion concern farmers and agricultural workers, ILO has endeavoured to provide the necessary training. Some examples of the vocational training programmes organised with the help of ILO can be cited. In Senegal a rural vocational training project is producing graduates who within their rural communities are then able to inject new methods among farmers, artisans and women. In Chad rural artisans are being trained for the southern part of the country and, to assist this programme, mobile units have been introduced which can inspect and advise the craftsmen in their work places.

The solution adopted in Niger takes into account the very low level of rural development and agricultural techniques. In this case mobile workshops travel from village to village helping to repair tools and implements at an agreed price. In Nigeria a pilot project is starting which is designed to upgrade existing entrepreneurs in rural areas by providing common facilities of skill, equipment, management, bulk-buying and marketing. The improvement of the skill of instructors is a key element of any training scheme, and in Mali the ILO has introduced a programme for the training of agricultural instructors and extension workers. In addition, ILO has developed prevocational training schemes in several African and Asian countries to provide school leavers, both boys and girls, with practical training in agriculture and other rural trades in order to facilitate their adjustment to the rural environment. This is to mention but a few of the vocational training programmes. Perhaps most significant of the ILO plans and policies is the approach given on the 50th Anniversary of the ILO when the Director-General presented his report to the International Labour Conference entitled "The World Employment Programme". In it the ILO sets itself the task of making productive and remunerative work available for ever larger numbers of people.

II. Existing and Evolving Rural Structures

36. In the dual society it is the ceiling which possesses the main institutions of formal adult education - universities, colleges, trade centres, institutes - all "introduced", all without origins in traditional rural life, all urban orientated. In time they will expand downwards, changing the very roots of society. This trend is inexorable. But if the present excessive quest of the masses for all to become educated leaders and top level salary earners is to be contained and converted into extensive social development, then more attention must be given to the existing rural systems.

A. The Farmers

37. Research has shown that improvements in agriculture must not over-reach the farmers' capacity to accept or utilise them. There are two conflicting forces in man - the need for security or preservation and the desire for adventure or inventiveness. In societies which are homogeneous and physically isolated, the tendency is for self-preservation to dominate. In the course of time, this instinct becomes

"fossilised" into traditional patterns and the urge for adventure is dormant. Thus "I grow this crop in this way to survive" changes to "I grow this crop in this way because my fathers have always done it so", and inventiveness is lost. Stranger elements entering that society may re-awaken the instinct for adventure. Farmers are notoriously conservative, and those who introduce improvements to peasant farming must not initially expect of the farmer greatly increased inputs of labour or money, particularly if the returns as compared to the costs involved are only slightly better than those resulting from his present method.

38. Thus five steps of educating the farmers to increased productivity can be defined:

- (a) Breaking into the traditional pattern and gaining acceptance of improvements. The most successful first step improvements usually are those of substitution: "you grow rice - then why not grow some of this improved variety?" (it is of course understood that the new variety has been tested for acceptability, growth, palatability, storage and processing qualities as well as marketing acceptance). The resultant improved yield encourages the farmer to attempt other improvements. Changes in cultural methods and the application of fertilizer and pesticides often come later;
- (b) the development of improved marketing through co-operation and effective thrift and credit facilities;
- (c) with growing farm incomes there can be an introduction of improved tools, cultural and storage practices, and the use of fertilisers and pesticides can be started;
- (d) developing the ability to invest capital in farming, making efforts to change the land tenure system in order to meet the needs for increased productivity and for diversification and specialisation of production;
- (e) the introduction of increased energy inputs through the use of tractors and maintenance of machinery.

39. It is not to be imagined that these steps always follow in a sequence. But no step, however effective it may appear to the innovator or research worker, must be pushed upon the farmers until they want it and can afford it. A great deal of initial adult education is involved in creating the "want". Research on agricultural innovation acceptance in the United States has shown that it takes up to three years before the most progressive farmers fully adopt an improvement, while the more conservative may take up to ten years before adopting it. How long will it then be in developing areas?

B. The Entrepreneurs-Craftsmen and their Apprentices

40. It is unfortunate that the smoke-stacks and humming dynamos of modern industry have so captivated the vision and imagination of governments and politicians from the "third world" that in many cases they have left out of their plans and even disdained the thousands of small indigenous privately-owned businesses. In Nigeria some two million people or more are engaged in productive activities in shanty huts on roadsides, while there are only some 700,000 engaged in wage and salary employment in government, commercial firms, large industries and professions.

41. These producers are pivotal for solving some of the problems of unemployed school leavers. In days now fast disappearing, both master and apprentice were often illiterate. Today in any market street can be seen notices outside workshops: "Wanted: smart boy who can read and write". Indeed, many of the apprentices are literate to some degree. It is in these side-street workplaces that large numbers of young adults are trained as mechanics, welders or carpenters, and in an endless variety of other crafts and trades. There are no formal programmes of apprenticeship. Entry requirements are based on personal judgement and social relationships. The final evaluation of an apprentice and his qualification is in the hands of his own master.

42. The development of this sector of the community and the rate of its progress is in no means limited by the desire, intent and energy of those who make up this group. Here are the inventors, those who by dint of trial and error have achieved a modest progress; they have the eyes and minds of the natural designer and business man. In the hard school of survival, they have been able to scrape together a living.

Now their limits are set by a lack of capital or credit facility and there is no one who will take time to teach them an improved skill. For them, better equipment and the use of power tools is almost a dream. They need to learn the advantages of bulk buying and improved marketing. They need an understanding of business management. Step by step they could be led towards a standardised apprenticeship scheme, and aspects of safety, good working conditions and labour welfare could be introduced. Two members of the Peace Corps in a few months helped 200 photographers in Ibadan, Nigeria, into such an effective association that they were making a profit of £44 per week out of bulk buying alone; from these profits they set about instituting a photographic training centre for themselves and their apprentices.

43. If in the next decade of development, governments, aid agencies and voluntary organisations can turn their attention to this important sector of producers, there is indeed hope that many of the young unemployed school leavers may find satisfactory jobs.

C. Women

44. "She who rocks the cradle, rocks the nation" is regularly lippered. But little is done to help the rural mother with her burden of work, her responsibility for rearing a family and her struggle with inadequate diets and health problems. Some would offer "the pill", others the "spiral" - birth control at any cost. She, the "ignorant, poor woman", is to be robbed of the one attribute for which her society values her - her children. Would not a growth of adult women's education help her in understanding and overcoming her problems? One effective "first step" has been the programme of "Home Gardens" which involves getting the family to grow a small plot of local high protein vegetables in the backyard right by their house, making use of the wastes which fall around the compound for watering and fertilising the garden. In Western Nigeria this idea has been successfully introduced; the 2 per cent extra protein in the soup has been reflected in improved baby health and a lowering of the incidence of kwashiokor. Simultaneously young women animators trained from the villages are helping the women to adopt hygienic feeding and cooking methods as well as a more balanced diet. On the other hand the fathers are asking in the local clinic "Now that my children are not dying, how can I stop having so many? I cannot educate all of them!"

D. Voluntary Organisations

45. All over the world church groups of every kind are turning their attention to ways and means of helping to alleviate the problems they unwittingly started to create, in bringing "the Book". Mission workshops and Faith and Farm Organisations are beginning to help the young people to obtain a satisfying occupation. Many pastor-training institutions are introducing farming and technical subjects into their theological courses. Pastors are beginning to encourage their church members to cultivate improved crops or keep poultry or rabbits. Gone are the days when they were linked solely with spiritual matters. They are key educators; since they are from the same society, they - as innovators - have to overcome fewer psychological barriers than external agents. On the other hand they are less inhibited than the common farmer, craftsman or even government extension agent in calling upon or looking for advice and help from outside.

CONCLUSION

46. Education has been seen as the springboard for modernisation in developing countries. For the politician, planner and common man this has meant formal educational systems - schools, trade centres and universities - to the neglect of other educational activities. The comparative ease with which it is possible to put a formal educational system into operation had brought about the explosive problem of the unemployed school leaver. What is apparent now is that education is powerless to promote employment in the absence of effective complementary economic policies. To advocate a "cold storage" policy of education for some sectors of the population would be untenable. The educational movement cannot be stopped nor appreciably slowed down - for, in the last resort, people will buy education for their children. This can only mean one thing - that the millions of unemployed school leavers are to increase unless much more attention is given to policies which stimulate production and marketing. One way in which this can be done is to accelerate rural adult education and "on-the-job" training. This takes people who are already engaged in work and enables them to improve. In rural areas this will result in an expanding production related to the economic level of the people. Furthermore, it puts the impetus for development back to the private sector from which the major thrust must come.

47. Governments in developing nations have over-committed budgets. The annual increase in their revenues cannot meet the demands. Thus all their systems of training and education are either being diluted to the point of ineffectiveness or are inadequate. The population cannot and will not shoulder a rapid rise in taxes to pay for desired improvements. Thus in the coming decade attention must be focused on self-help and commitment of the individual to the community. This concept is not alien to the rural African people. As the number of the educated increases, the premium for education diminishes. The present high value of the elite will either fall because their market value falls, or their price will be snatched down by force - the force of the frustrated masses.

48. It is often said that time is running out for us to meet the needs of the developing countries. This is only true, however, where our plans and methods are seeking evolutionary solutions. If we are unable to satisfy the needs, then unbalanced and unplanned developments will occur resulting in unbearable and thus explosive frictions. The time factor would then become meaningless.

Bibliography

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|-----------------|---|
| S. Andreski | The African Predicament.
Michael Joseph 1968. |
| W.H.G. Armytage | Four hundred years of English
Education. C.U.P. 1964. |
| O. Owolowo | Path to Nigerian Freedom.
Faber 1967. |
| T.R. Batten | Communities and their Development.
O.U.P. 3rd imp. 1962. |
| T.R. Batten | Training for Community Development.
O.U.P. 1962. |
| A. Callaway | Educating Youth for Rural
Development.
N.I.S.E.R., Ibadan 1968. |

- E.M.Rogers Diffusion of Innovations .
 Free Press of Glencoe 1962.
- D.R. Smock Rural development in Eastern
 Nigeria.Ford Foundation 1966.
- United Nations Assessment of Pre-Vocational
Economic and Training Projects
Social Council. Assisted by U.N.I.C.E.F. and
 I.L.O.
- U.N.E.S.C.O. Education and Agricultural
 Development. Basic Study
 15, Paris.

EDUCATION AND TRAINING FOR AGRICULTURAL
DEVELOPMENT: THE PLACE OF INSTITUTIONAL
FARMER TRAINING

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INTRODUCTION

1. Agriculture, in most of the developing countries of the world, occupies a unique position in the life and future progress of their peoples. Not only are most of these countries primarily based upon an agricultural economy deriving a considerable portion of their foreign exchange earnings from agricultural exports, but they also depend upon agricultural production for their expanding food requirements and the raw materials of many local industrial processes. The great majority of the population in these countries are rural dwellers deriving their livelihood from farming and related rural occupations. Even the expansion of local industry and commerce are largely dependent upon a steady increase in the purchasing power of these rural people. In practical terms this means a rapid and sustained increase in the productivity of the agricultural sector. Thus, measures such as agricultural research, education and training, which are directly concerned with agricultural change and improvement, have a vital role to play in the whole process of rural improvement and national development.

2. This paper is concerned with institutional aspects of farmer training as one of the many factors which may contribute directly to farming improvement and through this to the whole process of development. It is based almost wholly upon experience gained over the past ten years or so in the English-speaking countries of East and Central Africa*. The systems of farmer training examined form essentially an integral part of the agricultural extension services. Indeed, the courses offered at

* Kenya, Tanzania, Uganda, Ethiopia, Malawi, Zambia, Lesotho, Botswana and Swaziland.

the Farmer Training Centres might be regarded as the spearhead of the work of extension services because they cater not only for practising farmers, farm women and local leaders of various kinds, but also they perform the vital function of bringing field workers up-to-date through in-service training courses. The work of the Farmer Training Centres must therefore be considered as one of the "inputs" contributing to agricultural change and development. Its effectiveness will, to a large extent, depend upon the provision of other essential inputs as, for example, improvement in land tenure systems, establishment of marketing and processing facilities, introduction of agricultural credit and the development of suitable co-operative organisations. Needed also are such essential things as improved supplies of seeds, fertilizers, farm equipment and other requisites. The "package" or integrated approach to agricultural improvement is becoming increasingly accepted. Farmer training provides one of the vital elements in such an approach.

3. Farmer training may also be regarded as part of the process of mobilizing the human resources of rural development. For too long agricultural improvement has been mainly conceived as a technical matter involving the adoption of new or improved methods of crop and animal production. Only comparatively recently has the importance of the human element in all processes of agricultural change gained increasing recognition. The subsistence cultivator and the community of which he is a member are essentially conservative in outlook and guided by tradition and tribal customs. Modern farming involves not only new techniques; it involves new concepts in the use and management of land and other resources. New attitudes to change and economic and social development have to be created and strengthened. This is essentially the field for education and training of many kinds and at different levels. Amongst the people as a whole, rural and urban dwellers, a climate of sympathetic understanding and support for many new aspects of development has to be created. For those engaged in farming and rural occupations an understanding of what a modern farming economy means and the essential measures needed to achieve the transition from subsistence towards this goal have to be patiently taught and demonstrated by all available means.

4. This, then, is the context in which the work of farmer training institutions is set. Their activities in education and training are intimately connected with others in the field of community development, youth organisations, co-operative societies, women's clubs and other work concerned with the

improvement of rural life and the rural family.

THE ROLE OF FARMER TRAINING INSTITUTIONS IN AGRICULTURAL DEVELOPMENT

5. As stated already, the work of farmer training institutions is essentially one aspect of agricultural development. It is complementary to that of the field extension services, co-operative organisations, farmers clubs and other activities. At what stage of agricultural development does residential farmer training become really useful and what particular advantages does it have in comparison with other forms of agricultural extension?

6. One of the main advantages of residential farmer training courses is that a group of farmers - 30, 60 or even 100 - leave their normal occupations for several days during which they can be given courses of instruction specifically geared to their particular needs and conditions. Classroom instruction can be illustrated by visual aids of many kinds. Practical work and demonstrations can be given on the institute farm. Study visits can be planned to nearby farms, experimental plots, processing plants and co-operatives. Those who attend share experiences and ideas and thus stimulate each other. Whilst the normal contact which these farmers have with the extension service is through occasional visits by their local agricultural assistant, at the Farmer Training Centre they will meet and receive instruction from more senior and experienced officers belonging to the agricultural services. The Centre is often a very pleasant place with good accommodation, catering and teaching facilities. Thus new ideas and improved techniques are taught and demonstrated in modern surroundings. All these factors, combined with the skill and friendliness of those who teach at the Centre, can have a very marked influence upon those who attend. Much, of course, will depend upon effective follow-up work after farmers return home as well as suitable demonstrations in the areas from which they come.

7. Many aspects of the change from subsistence agriculture to a modern farming economy have little to do with methods and techniques. They concern the social aspects of rural life and land use. Cattle, for example, are not looked upon primarily as economic assets in many societies. The ownership of large numbers of cattle confers prestige and they are still widely used for bride price. Customary land tenure and inheritance practices may militate strongly against the adoption of land

tenure and inheritance practices may militate strongly against the adoption of new systems of farming. Completely new concepts of management are usually involved in the change to a market economy. These and other matters can be taught and discussed freely in the informal atmosphere of the training institution. Thus a well organised Farmer Training Centre, adequately staffed and with good facilities for teaching and demonstration can be described as an instrument of change and progress. It can offer a focal point for discussion of many fundamental issues beyond the technical aspects of modern agriculture. It can provide a meeting place where research workers and senior extension staff can have the opportunity of meeting and discussion with groups of farmers, providing the essential two-way traffic of ideas and experience between research worker and farmer. In such ways the system of institutional farmer training offers immense possibilities even if, at present, these are not often realised in practice.

8. At what stage of agricultural development does the short course residential farmer training centre begin to operate really successfully? It is, in fact, rather difficult to justify the very considerable investment involved in setting up farmer training institutions when the patterns of agriculture are largely those of subsistence with some cash crop cultivation superimposed and agricultural extension work is principally concerned in effecting some simple improvements in traditional systems of crop cultivation and animal husbandry. In these circumstances the normal work of the field extension services may be all that is financially possible and justified. It is really when the pace of agricultural change and development begins to accelerate, when new and often costly crops and livestock are introduced, and cash investment in farm development are required, that the work of the farmer training institutions can really pay dividends. Take, for example, the establishment of hundreds, or even thousands, of smallholder tea enterprises. Here is a new crop requiring considerable financial outlay in establishment and the exercise of real skill in land preparation, crop establishment, training of young tea bushes, weed control, initial plucking and delivery of leaf to the factory. Instruction of this kind requires a much more intensive training than can be provided by the itinerant extension worker. Being closely related to seasonal operations it may be essential to teach large groups of farmers together. The introduction of exotic dairy cattle to small scale farmers provides another example where special training in essential management practices can very effectively be given through short courses at a properly equipped farmer training centre. It may therefore be

suggested that the stage when farming ceases to be an occupation and begins to assume the character of a business is the point at which institutional farmer training becomes a valuable supplement to the normal extension services. It is also at this stage when a demand for training begins to arise within the farming community itself. Whilst it could be argued that to put every farmer in a district through a one-week course of training would take 20 or 30 years to accomplish, it is equally valid to assume that those farmers who do attend courses are likely to be the more progressive and returning to their home areas in significant numbers after attending courses they can exercise an influence upon the whole community. It must not be forgotten, also, that it is at the stage of accelerating agricultural development that the field extension staff are most in need of regular in-service training and here again the farmers' training institution can make an invaluable contribution.

THE INSTITUTIONAL FRAMEWORK FOR FARMER TRAINING

9. Farmer Training Centres (or District Farm Institutes, as they are called in Uganda) can be quite expensive to establish as well as to maintain. To function properly they require properly qualified staff and adequate facilities. They must also fit within some organisational structure and receive both technical and financial support. These are all part of the investment in agricultural development. As such, it is extremely important that the fullest and most effective use should be made of this investment if it is to be technically and economically sound.

10. There are several aspects from which institutional types of farmer training can be viewed. The technical training work of these institutions is essentially part of the normal extension activities of the agricultural field services. From the viewpoint of the farm family, major aspects of home improvement, better care and nutrition of children, hygiene and the home vegetable garden all assume an importance and inevitably bring in wider interest and other agencies, official and non-official. Finally, the improvement of agriculture must be viewed within the broader context of rural development as a whole.

11. Thus it has happened in several countries that farmer training institutions, originally established for very specific kinds of training directly related to the improvement of agriculture, have over the years enlarged their functions and now embrace many kinds of training including in-service training for field staff,

local leaders and others in a wide range of aspects concerned with farming, home and rural improvement. In Kenya, for example, where there are some 27 Farmer Training Centres, about a quarter of which are maintained by voluntary agencies, a number of the non-government centres have for some time been called Rural Training Centres which, in some respects, describes their function much more accurately. In Uganda, these institutions are called District Farm Institutes and several have "co-operative" wings attached to them.

12. In most cases, at present, the national Ministry of Agriculture is responsible for these farmer training institutions. However, there are now moves in several countries to broaden the basis of these district training institutions so that they can cater effectively for a wider range of training directly concerned with the improvement of rural life. The Kenya Government has now adopted a policy of establishing only combined training centres in the future. Each centre will have an administrative principal and staff operating central services such as catering, transport, etc., and there will be separate wings under the control of a technical officer of the ministry or department concerned. Kenya has also established a Board of Adult Education to co-ordinate all adult education by government and non-government agencies. Organisations of this character, embracing the education and training interests of all ministries concerned, can go a long way towards the avoidance of waste of resources through duplication and overlapping functions of different institutions.

ORIGIN AND DEVELOPMENT OF FARMER TRAINING INSTITUTIONS

13. It is believed that the first residential farmer training institution established in East Africa was the Teso District Ploughing School opened at Kumi, Teso District, Uganda, in 1910. During the 1920s and subsequent two decades, a need was felt in several countries for residential institutions where farmers could be given training in improved methods. In some cases, farmers and their wives were given training over a whole year. Elsewhere residential training was offered for young men who it was hoped would make farming their life's career. In at least one of these institutions each farm family or its equivalent operated a model small holding under supervision as well as attending classes and demonstrations. On the whole, the results of these residential training courses were disappointing. The numbers which could be catered for were small and the cost

relatively high. In practice, very few of those so trained went back into farming.

14. In the latter part of the 1950s several of the countries of East and Central Africa introduced an entirely new type of residential farmer training. Institutions, with a residential capacity varying from thirty to one hundred, were established with the idea of offering short course training for relatively large groups of practising farmers. In this manner institutions could give short intensive courses on selected aspects of improved agriculture to several hundred farmers in a year. Such courses proved to be popular and useful and were later extended to farmers' wives. Subsequently the range of courses was extended and subjects such as simple home economics, taught by trained women instructors, were added. These centres have also proved to be very useful for in-service training of field extension staff. Many of the earlier courses were of a general character but subsequently they have tended to concentrate upon special aspects of improved farming and related topics. The length of residential courses has varied from a few days up to three weeks. For farmers and their wives the ideal length of course seems to be one week. In some countries courses are entirely free; elsewhere a small fee towards the cost of maintenance is charged.

15. There are two main systems of farmer training institutions. The most common is that of the District Farm Institute or Farmer Training Centre. A single centre caters for the needs of an administrative area - the District. This system operates in Kenya and Uganda and in Botswana, Lesotho and Swaziland. Secondly, there is the system of Regional Training Centres, as at present employed in Tanzania, where each centre at present caters for a larger area than the District unit. Finally, there are countries which have developed a combination of both these types of institution. Malawi and Zambia have Regional Farm Institutes, built to a high standard and suitable for the training of staff at all levels and these are used for the training of local leaders and politicians as well as for farmer training to serve the immediate vicinity. At the district level both countries have a large number of 20/40 bed Farmer Training Centres of very simple, low cost construction. These centres are staffed by a single technical officer (certificate level trained) and a warden/storekeeper. All the instruction is undertaken by local officers, who need not reside at the centre, thus avoiding staff housing costs in the establishment of these institutions. The work of these Farmer Training

Centres is supervised and co-ordinated by a Regional Training Officer based at regional headquarters.

GENERAL CHARACTERISTICS OF FARMER TRAINING INSTITUTIONS

16. As already stated these institutions are commonly called Farmer Training Centres or District Farm Institutes and they come under the general control of Ministries of Agriculture. Although in some cases there are Regional Training Centres, often with rather wider and more sophisticated training functions, basically the common unit is that which serves the farm training needs of an administrative district and is, in practice, an integral part of the agricultural extension services. Both because of its functions and the need for the closest possible liaison with District Headquarters, where the agricultural and other technical services are based, it is of considerable importance that in siting these institutions they should be within easy reach of such headquarters. Not only will they need to make regular use of headquarters staff in connection with courses but the resident staff of the Farm Training Centres will probably be far happier if they are reasonably close to a headquarters community where educational, medical, social and other important amenities are available. If the training centre can, in addition, be adjacent to the district agricultural experiment station, this will be also a great advantage. There are, therefore, very sound reasons for giving much careful thought to the siting of new farmer training institutions which may well develop, in course of time, into district training centres with much wider functions.

17. In the countries of East and Central Africa there is a marked similarity of pattern in the facilities and lay-out of farmer training institutions. Basically they have an administrative block, residential accommodation, a central kitchen and dining hall, teaching facilities, and farm demonstration area. Residential accommodation usually takes the form of two dormitory blocks, one each for males and females, divided into twin-bed cubicles with appropriate facilities for washing, toilets, etc. In designing the central kitchen and dining room, it is most important to plan in such a manner that additions can be made later without the necessity for rebuilding. It may be worthwhile to construct a kitchen and store to cater for 100 even though the initial accommodation is only for 30/40 persons.

18. Teaching accommodation often consists of classroom units to take 25-30 persons. The most economical training unit is considered to be a 60-bed training centre and in this case it is found most practicable to have one central hall/classroom for 60 to 100 persons. This building is designed in such a way that it can be used as a classroom for 60, an assembly and cinema hall for up to 100, a conference centre, etc., with its projection room, store, toilets, instant daylight blackout and "expel-air" fans. Such a multi-purpose building can prove to be an invaluable asset. The administrative block is also important, providing suitable office accommodation for the Principal and staff, a proper place for the storage of equipment and supplies, and an office for the keeping of all records. As part of this building, or elsewhere, it is most important to have a place for a small carefully selected reference library for the use of teaching staff. They may also need a place where they can prepare visual aid material for use in the classes they teach.

19. The farm/demonstration area is probably the most important single aid to teaching. Those who attend courses are themselves practical farmers. They will be far more impressed by first-class demonstration of the results of good farming practice than they will by theoretical instruction in the classroom. In fact, as much instruction as possible should be undertaken outside the classroom on well planned and really impressive demonstrations of good husbandry. It is quite important that the demonstration holding should conform in general size with those of the surrounding area and the system of management, the crops grown and the livestock kept should represent what capable local farmers can themselves achieve. These units should be specifically designed and operated for teaching and demonstration purposes. Any revenue they earn or food they contribute to the training centre should be secondary and not primary objectives. The keeping of simple but accurate records is most important.

20. A farm classroom situated at a central point on the farm need only be a very simple, low cost structure. It requires a shady roof, supported by poles, and with one solid end wall. This wall is to take a blackboard and to form part of a lean-to store for equipment and teaching aids. Students make use of small 3-man benches and the floor space should be of a size capable of accommodating anything from a tractor to a dairy cow. In such a building a great range of practical demonstrations can be undertaken with protection from weather, maximum visibility and comfort for the students.

21. Some transport is essential for a medium to large training centre. Very good use can be made of a bus and light transport of related capacity. It may well be necessary to use the bus to collect and return groups of students from assembly points far from the centre. It can be invaluable for study tours to local farms and other activities of agricultural importance. The other transport is needed to obtain regular supplies for the centre and for many other essential tasks connected with its running.

22. Finally, it not infrequently happens that F.T.Cs are built close to a relatively large government farm. This farm may well be used partly to produce revenue as well as milk and other foodstuffs needed by the training centre. It is, in all probability, far larger than any local farms and more expensively capitalised in terms of buildings, fencing, water supplies and equipment. This farm should be well managed and run as far as possible as a normal commercial enterprise. From most aspects it is not suited for normal teaching and demonstration requirements and should not, therefore, be used in this way. It may well be a useful place for seed multiplication of improved crop varieties.

23. What do farmer training institutions, as described above, cost to establish and operate? This is a difficult question to answer satisfactorily. Naturally, much depends upon the standards to which the accommodation and facilities are built. In many cases the land for demonstration holdings and larger farms was already available or provided free of charge by local authorities. In a report on Farmer Training Centres in Kenya 1964, the capital investment involved in the establishment of F.T.C.s is quoted:- a 30-bed centre costs about £20,000, a 60-bed centre £35,000 and a 99-bed centre £45,000. The first 16 centres established in Kenya cost £425,000 of which over 40% came from non-government sources⁽¹⁾. A number of the centres established by non-government agencies in Kenya were designed on very economical lines: capital costs varying from £8,290 for an 80-bed centre in Western Kenya, where a number of old buildings were already available, to £30,000 for a 48-bed centre involving all new buildings⁽²⁾. In Uganda, a 52-bed centre cost £40,000 and a 72-bed centre £70,000 both built to very good standards⁽³⁾. Operating costs vary so greatly that it is rather dangerous to quote average figures. In some cases, fees charged largely cover the cost of food; elsewhere no fees are charged. A cost of shillings 10/- per student/day was quoted for Kenya in 1966 but shillings 20/- is probably a more realistic figure

today. Even so, costs will vary with the size and staff costs of the institutions, the percentage attendance at courses and the number of courses given each year.

STAFFING AND STAFF TRAINING

24. It hardly needs to be stated that the effectiveness of the work of farmer training institutions is almost entirely dependent upon the quality, ability, competence and enthusiasm of the teaching staff. Of special importance is the position of Principal since he is primarily responsible for the creation of a good team spirit amongst those who work at the centre. He also has an important public relations function in commending the work of the training centre to the people of the area served. It is clearly essential that those who teach at the centre should be mature, experienced and practical. Otherwise, there is not much prospect of their being able to gain the confidence of the farmers who attend courses. Staff of the right calibre and properly trained for this specialised type of work are therefore the critical factor affecting success or failure of the work of farmer training institutions.

25. Over the past ten to fifteen years these new institutions have grown up in significant numbers at a time when, with the departure of large numbers of expatriate staff following independence, there has been an unprecedented demand for local staff for a very wide range of technical duties. Farmer training institutions which are under government control have largely drawn their staff by secondment from the field extension services. Often, in fact, field extension staff have been posted to teaching assignments at farmer training institutions without having expressed any desire to undertake this kind of work and with no professional training in teaching. What is even more serious, however, is the general lack of continuity of management of these training centres through frequent change of principals. Records show that a significant number of farmer training centres have had four or five changes of principal in as many years. It is virtually impossible, in such circumstances, to build up and maintain high staff morale, good public relations and satisfactory technical efficiency. It is appreciated that during the initial phases of development many difficulties have been encountered over staff of these institutions. However, if they are to become a permanent and important feature of rural development many improvements in staffing will need to be effected.

26. In the first place, it is necessary to create and foster a specific professional cadre of agricultural educators and trainers. These people, men and women, must have appropriate technical qualifications, adequate field experience and proper professional training as teachers. They need to have a career structure and longer term prospects sufficient to attract persons of quality to this work and to retain their services in teaching for a reasonable length of time. It is clearly desirable that there should exist mechanisms allowing for staff interchange between teaching duties, field extension work and experimental station work. Finally, there needs to be established at Ministry headquarters an adequately staffed unit to administer effectively this growing number of agricultural training institutions and to give them the supervision and support they require.

27. Naturally, the level of professional training of the staff of farmer training institutions will vary in the same way as it does throughout the school system. For the position of principal or vice-principal the majority of present incumbents have undergone a 3-year course for the Diploma in Agriculture. Most of the instructors have undergone 2-year courses for the Certificate in Agriculture in local institutions. Few have had special professional training for this work and consideration is now being given in several countries as to how the situation may be improved. To do so will certainly take a considerable time. What is important, however, is to establish sound patterns for the future. Some countries are already aiming at staffing the larger institutions at principal level by university graduates. Uganda has a very interesting system whereby the Principals of the District Farm Institutes are men and the Vice-Principals women, the latter having undergone a 3-year training for the Diploma in Agriculture.

28. The common pattern of staffing of the larger institutions includes a Principal, Vice-Principal and 3 to 5 instructors, one of whom may be a woman teaching farmers' wives and responsible for simple home economics courses. A small administrative staff (clerk, storekeeper), catering staff, farm staff and drivers complete the list. As has been stated elsewhere a number of institutions obtain considerable assistance for course instruction through lectures and demonstrations provided by Technical officers belonging to district headquarters or who work in nearby research or experiment stations. Where agricultural development is proceeding rapidly and commercial firms and farmers' co-operatives are operating, these may be pleased to stage appropriate demonstrations and provide instruction in the use of

the products they sell. This can be a useful asset to course teaching provided that those who contribute in this way confine their contributions to technical matters.

COURSES AND COURSE CONTENT

29. Recent studies undertaken and reports published on farmer training institutions in the countries of eastern and central Africa indicate the very wide range of courses offered at Farmer Training Centres and District Farm Institutes. There has been a rather marked tendency for the number of inservice training courses for field staff engaged in a wide range of development activities to expand. This, in effect, amounts to training the trainers and as such means that the instructional work of these institutions can have a very important "multiplier" effect. In Kenya in 1967, for example, some 27 F.T.C.s were in operation (20 operated by the Ministry of Agriculture and Animal Husbandry, 1 by the Kenya Tea Development Authority and 6 by the Christian Council of Kenya). Of about 24,000 persons who attended short courses just over 17,000 were farmers and farmers' wives; the remainder were drawn from various rural development services. Within this latter group in-service courses were given for Agricultural and Veterinary field staff, Co-operative and Community Development staff, teachers, chiefs or sub-chiefs, 4-K Leaders (Young Farmers Clubs) and staff employed by the Coffee Board of Kenya. In the case of the 4-K Clubs of Kenya, of which there were 1,200 with a total membership of 35,000, some 821 leaders attended courses organised by F.T.C.s in 1967. This illustrates well what an important function such courses can perform. The range of courses for farmers, for rural women and for field services staff varies widely from country to country but the broad patterns of farmer and in-service training are similar.

30. Course content also shows very wide variations. Experience has tended to show that "general" courses embracing a wide range of topics tend to have little impact. Increasingly courses are being given on specific topics as, for example, "Farm Planning", "Rotation and Management of Arable Crops", "Establishment and Management of Tea", "Tobacco Production" and "Dairy Cattle". In each instance both in classroom teaching and practical demonstration, the basic principles can be emphasized and illustrated by examples in many different ways. The result of such well designed and well taught courses is that farmers return to their homes with a clear and practical understanding which they can proceed to put into practice. It is

hardly necessary to add that effective follow-up action by field extension staff is as important to successful results as the teaching at the training centre. Not infrequently, field extension workers accompany groups of farmers from their area to the courses given.

31. There is still very great scope for the improvement of course and curriculum planning, recruitment procedures, preparation of appropriate visual aids and effective demonstrations. The need for staff training has already been mentioned. Staff of farmer training institutions can also benefit enormously from the opportunity for periodic courses arranged on a national basis where they can meet others engaged in similar duties, exchange experience and ideas, and meet others responsible for agricultural research, extension services, youth activities and other aspects of rural development. With such needs in mind F.A.O. has organized regional training courses for principals and senior staff of farmer training institutions and is currently engaged, with the support of Danish Technical Assistance, in helping various Ministries of Agriculture in organizing national training courses for staff of farmer training institutions along with those responsible for regional and district extension services. These national courses have been much appreciated. On a longer term basis such needs offer a great opportunity to local university institutions to contribute to national development through the organisation of such courses.

EVALUATION OF THE WORK OF FARMER TRAINING INSTITUTIONS

32. A process of systematic evaluation of the effectiveness of individual courses and of farmer training in general is essential to improvement. Unfortunately little work has so far been undertaken in the area concerned though increasing attention is now being given to these vital aspects. This provides yet one more argument in support of the need for a well staffed agricultural education and training division at ministry headquarters. These processes of evaluation and, through this, the modification and improvement of courses and course content are important functions of such a unit. There is also a need for effective machinery at headquarters and field levels to ensure good co-operation and effective co-ordination of the various training interests represented at these farmer training institutions. No perfect formula exists for the achievement of these essential functions. What is needed is the willingness of all concerned to develop a satisfactory mechanism to ensure

the fullest and most effective use of the training opportunities offered by these institutions serving development needs at the district level.

SUMMARY AND CONCLUSION

33. This paper has attempted to describe the development and functions of the farmer training institutions established over the past 15 years in the English-speaking countries of East and Central Africa. Stress has been laid upon the over-riding importance of the human element in the whole process of agricultural, rural and national development. In view of this, education and training have key roles to play in the mobilization of human resources for rural development. Within this context, the work of farmer training institutions may be regarded as one of the essential "inputs" of agricultural change and development. Over the past decade, more than 60 farmer training institutions have been established in the area with which this paper is concerned. The various different approaches to this work present interesting contrasts and provide valuable experience. The character of these institutions is tending to change and their functions become broader. Catering initially for short course training of farmers they now undertake a great deal of in-service training of field extension and other staff working at district level. Courses for women have become an important feature of the work of these institutions and trained women staff are now a feature in many of them. Some indications are given of the capital costs of establishing farmer training centres and of other costs. The most important and critical factor in the success or otherwise of these institutions is staffing. Up to the present, most staff seconded to work at training centres have had no professional training for this specialised type of work. In spite of this some impressive results have been achieved. The greatest weakness so far has generally been lack of continuity in staffing. Efforts are now being made to rectify this situation but it is true to say that this type of work is still not very attractive from the career point of view. Much thought is now being devoted to methods of evaluating the effectiveness of institutional farmer training and to ways and means by which it can be improved.

Acknowledgement

The author of this paper wishes to acknowledge the advice and help given by Dr. Heinz Hoffmann and Professor Fergus Wilson of the Agricultural Education Branch, Rural Institutions

Division, F.A.O., Rome, in the preparation of this paper.

References

- (1) F.A.O. Farmer Training in East Africa. Report of a Seminar held in Kenya at Egerton College, 21-30 March 1965. F.A.O., 1966.
 - (2) F.A.O. Farmer Training Institutions in East Africa. Report of a Training Centre held at the Animal Health and Industry Training Institute, Nairobi, Kenya, 8-27 November 1965. F.A.O., 1966.
 - (3) A.E.G. Markham. A Study of Farmer Training in some English Speaking Countries of Africa, F.A.O., Rome 1967.
-

Jon Moris. Farmer Training as a Strategy of Rural Development. Education, Employment and Rural Development. Report of the Kericho (Kenya) Conference Sept/Oct 1966. University College, Nairobi, 1967.

C.W. Barwell. Reports of the Ministry of Agriculture and Animal Husbandry, Republic of Kenya, on Farmer Training Centres. 1964, 1965, 1966, 1967.

- (a) District Farm Institutes in Uganda at December 1966. F.A.O. Sub-Regional Office, Nairobi, 1967.
- (b) A Survey of the District Farm Institutes in Uganda, July/August 1969. Mimeographed report. F.A.O. Office, Nairobi.

ANNOTATED GUIDE TO CONFERENCE DOCUMENTS

INTRODUCTION

The working materials for the conference consisted of a keynote address by R.K.A. Gardiner, lead papers by L.J. Lewis, Archibald Callaway, Fergus B. Wilson, Shrimati Lakshmi Menon and Patrick Van Rensburg, together with solicited papers from individuals with special knowledge and competences related to rural education and papers contributed by governments and institutions having special interest in the subject. A number of published works were made available by F.A.O., UNESCO, and the Ministry of Overseas Development. F.A.O. and the British Council made available a number of films relevant to the subject of the conference.

The following annotated guide to the documents used in the conference has been prepared for the guidance of readers of the report who were not present at the conference. The keynote address and the lead papers are published in full in this report. Copies of documents annotated in sections 2,3,4, and 5 of this guide can be obtained from The Commonwealth Secretariat, Marlborough House, London, S.W.1.

1. Keynote Address and Lead Papers

The keynote address, Education in Rural Areas by R.K.A. Gardiner, draws attention to certain historical references, to the continued predominantly agrarian and raw-material economy of the developing countries and the continued dependence upon the development of human resources as an essential concomitant of development. Whilst recognising the need for the aesthetic, moral and cultural aspects of education, the author makes the case for utilitarian bias. He questions the present allocation of resources within education and the failure 'complex' created by current selection and assessment examinations. In respect of rural education he suggests that the content of the curriculum is much more a matter of emphasis than of differentiation. He points out that "nowhere in the current educational systems in developing countries is there as much attention paid to food production, farm management, marketing and co-operatives, science and its application, mechanical skills etc., as is done in more prosperous and industrially advanced countries".

A most valuable contribution is made to the problem of the structuring of education in rural areas based upon a relating of content and instruction to the levels of maturity and job opportunities at the different cut-off points within the education system.

In The School and the Rural Environment (CRE (70) Lead 1)
L. J. Lewis also draws attention to the history of educational effort for rural communities, the continued limitations of the teachers and the teacher-learning resources available, and reiterates the need to relate education to the actualities of the socio-economic conditions and the aspirations of parents and children. He questions the validity of the "prevent the drift from the land" approach to rural education, and makes specific suggestions for relating school and community activities. Eight requirements for bringing about the desired changes in the formal education system are categorised and briefly discussed.

Archibald Callaway in Out of School Education of Young People (CRE (70) Lead 2) describes and classifies out-of-school education and training and draws attention to the fact that little attempt has been made to look at out-of-school education as a whole. In turn he examines the issues of upgrading skills for youth who have never been to school; the skill needs of school leavers in relation to rural occupations; youth activities of a social and cultural nature; education and training of youth for national development through national youth organizations; and the need for and practice of action research and evaluation. In his summary he draws special attention to the low capacity of developing industry for absorbing employable population, thus the need to create a more progressive rural economy. He also points to the need for direct investment in education and training to be balanced with investment in the education of parents, and for the total investment in education to be balanced with other investments in the rural economy such as providing subsidized fertilizers or building roads, bridges, markets.

Fergus B. Wilson in Education and Training for Agricultural Development (CRE (70) Lead 3) concerns himself with the contribution of education and training to agricultural development. He suggests that past considerations have given too little attention to the farmer, the farm family and rural community as key factors in the process of change and improvement. His plea for an integrated or package approach to farm improvement and rural

development leads to recognising the needs for team work involving not only the various interested agencies but also local leaders, farmers and rural women.

Adult Education at All Levels (CRE (70) Lead 4) by Shrimati

Lakshmi Menon has as its keynotes the assumption that the bane of our past efforts at rural education has been the idea that the needs of the rural communities are different from those of the urban communities. The plea is made for recognising that the purpose of education is to forge ever-growing bonds of unity and understanding between communities and not to perpetuate differences. In so far as food production is the main concern of rural communities, the basic educational programme must be built around agriculture, food production and preservation, health, diet and nutrition, while social change involving the improvement of the status and role of women is an essential contribution to the effective education and improvement of rural communities. Attention is drawn to the importance of the cultural cohesion of the rural communities and the need to integrate the underlying traditional values and skills into improvement programmes. In drawing attention to the role of literacy in adult education the importance of approaching the education of adults through guidance and not formal instruction by grades is emphasised.

Patrick Van Rensburg in Swaneng Hill School, Botswana (CRE

(70) Lead 5) tells the story of the work done by himself and his collaborators in developing an approach to education related to development in such a way that "when our students leave us, they will feel under some compulsion from within themselves through sympathy and fellow-feeling with the poor and hungry, to fight want, ignorance and disease." The objectives, methods and content of the diversified curriculum and, in particular, the Development Studies are described, as are the problems of the Brigade system for absorbing primary school leavers into farming. The necessity for the diversification of the rural economy including the application of simple technology to production of materials as well as food and to the development of a rural economy is emphasised, and reference is made to the use of students to survey villages and to locate existing skills.

2 The Formal School System

P.S. Tregear in The Community School (CRE (70) A/1)

discusses ways of bridging the gap between the school and the community with special attention to the Primary School in a rural setting. He points out the essentially vocational nature of the school in the past, and that the community school concept puts the school in its proper role as one of the agencies involved in social change. He also draws attention to the importance of the tutors in colleges of education having appropriate skills and competence, the need to break down the isolation suffered by the school teacher, and the importance of supervisors advising rather than inspecting.

D.E.B. Chaytor in Training Teachers for Education in Rural Areas (CRE (70) A/2) reflects upon the experience of the teacher training approach being pursued at Njala University College, Sierra Leone. The Role of the Inspectorate in the Development of Education in Rural Areas - A Malaysian Experience, by Paul Chang, (CRE (70) A/3) presents a case study, in which he focuses attention on some of the problems encountered, some of the strategies adopted to cope with the problems and some of the problems yet to be resolved. Educational Media for the Development of Rural Education (CRE (70) A/4) by Helen Coppen examines the tasks which educationalists can be engaged upon in respect of (a) teaching skills, (b) imparting information, (c) changing attitudes and aspirations. She discusses the means available, the conditions which make for effectiveness of educational aids, local production, and sets out proposals for Educational Materials Workshop Centres based upon selected schools to serve both teachers and adult and extension workers. Practical Agriculture for Primary Schools in North-East Nigeria (CRE (70) A/5) by Von L. Hall outlines a rural development programme being carried out by the Rural Development sector of the Church of the Brethren Mission, Lassa, Nigeria and includes as an appendix suggestions for teachers. In The Role of the Primary School in Ghana (CRE (70) A/6) by S.M. Adu-Apoma and D.G. Wiafe-Anim, a brief account is provided of the Elementary Science Programme in the Primary and Middle Schools and attention is drawn to the development of the "Continuation School" for those who do not obtain places in the secondary schools, trade centres and polytechnics. G.J. Matys in Tests and Measurement Procedures, Review and Evaluation (CRE (70) A/7) discusses the present use of tests, the importance of integrating examinations and the curriculum, and draws special attention to the current role of examinations in emphasising the differences between rural and urban communities to the disadvantage of the former. The Way Ahead : A Programme for

Teacher Training in Rural Areas with particular reference to Botswana contributed by The Government of the Republic of Botswana (DRE (70)A/8) provides a factual account of the efforts being made to develop the primary and secondary sectors as quickly as the economy allows. The training of teachers in the rural communities is examined in social, professional and personal terms. The Formal School, its Organisation and Curriculum, together with the Training of Teachers (CRE (70) A/9) by Abdul Rahman Haji Arshad, presents a factual account with interpretative comment of the formal school in Malaysia. Notes on Rural Education in Mauritius (CRE (70) A/10) by F. Richard provides a brief statement on the school, agricultural extension and youth activities. Education in Rural Areas: Some Notes on New Zealand's Experience (CRE (70) A/11) contributed by The Government of New Zealand provides an account of a rural education programme which has successfully attempted to mitigate the discrepancies between the educational opportunities of the rural and urban children. Agricultural Education in Malawi Schools (CRE (70) A/12) defines the policy of the Government with the specific objectives of making primary school leavers receptive to the ideas and instructions of the extension staff of the Ministry of Agriculture and making the secondary school leavers aware of the possibilities that exist of transforming traditional subsistence agriculture, and describes the implementation of policy since 1968. Formal education and Development Policy in Rural Communities (CRE (70) A/13) by the Ministry of Education, Benin City, Nigeria, shows how through the formal school, its organisation and curriculum together with the training of teachers, the Mid-West State of Nigeria is seeking to serve the process of development in a predominantly agricultural community. The Formal School: Some Notes on Secondary School Education in Uganda (CRE (70) A/14) by E.K.K. Sempebwa provides a summary of secondary education in Uganda. Teacher Training in Uganda (CRE (70) A/15) by N.W. Mugerwa describes the teacher training facilities of Uganda in the context of the system and recent history. Education in Pakistan: Directions New and Old (CRE (70) A/16) by Moh. Basharat Ali provides a descriptive account with commentary of the education system of Pakistan. The contribution of The Government of Tanzania, Problems of Relating Education and Training to the Process of Development in Predominantly Agricultural Communities in Developing Countries (CRE (70) A/17) provides a description of the education system in the context of the policy of Education for Self-Reliance, a problem-solving approach to teaching, and postulates three problems for discussion. Primary School Education in Uganda (CRE (70) A/18) by A.M.K. Bagunywa

describes the primary school system with its direction towards the primary school becoming a centre of activities for the local community and the efforts being made to bring about appropriate curriculum reform.

3. Out -of-School Education and Training of Young People.

Out-of-School Education; The Education and Training of Young People Through National Youth Organisations (CRE (70) B/1) by G.W. Griffin examines the issues in the light of Kenyan experience, in terms of worth and costs, length of service, disciplines, leadership, balance of effort between work and education, the kind of education and work to be included, what work a Youth Service should undertake and the status of a Youth Service vis-à-vis other uniformed services. In Out-of School Education and Training for Young People in Lesotho (CRE (70) B/20) by G. L. Mochochoko a description is given of the various relevant activities and agencies in Lesotho. John Bowers in Communication and Rural Development (CRE (70) B/3 and C/5) examines the problems of education and training for rural development from a communications theory and organizational point of view, drawing upon UNESCO experience. Village Polytechnics from the Farming Point of View (CRE (70) B/4) by R.M. Spurin gives a working description of the approach to Agricultural Education in Kenya developed by the National Christian Council of Kenya and endorsed by the Kericho Conference on "Education, Employment and Rural Development", 1966. Out of School Education for Young People in Uganda (CRE (70) B/5) by E.P. Kibuka describes the range of agencies and activities contributing to out-of-school education in Uganda with special reference to youth and rural problems.

4. The Education of Adults at All Levels

Communication as Nutrition Education in Zambia (CRE (70) C/1) by H.A. Fuglesang, E.C. Thomson, and A.P. Vamoer describes the approach to the resolving of nutrition problems based upon the belief that it is a social condition which should not exist and that the keystone to a successful attack calls for a professional communications approach, designing and testing the information materials with respect to the reactions of the specific categories of recipient. Improved Nutritional Status in Rural Areas (CRE (70) C/2) by E.C. Thomson gives an account of

what has been done in Zambia since 1967 to tackle nutrition problems through educational and sociological approaches. The Place of Health Education in the Ghanaian Rural Education Programme (CRE (70) C/3) contributed by The Government of the Republic of Ghana describes the programme being developed to make a comprehensive attack on the health problems of the rural communities through adult and school activities on a team basis and school-community co-operation. David Calcott in The Education of Adults at All Levels (CRE (70) C/4), based upon thirteen years experiences in West Africa, draws attention to the situation in rural areas, highlights the problems which affect adult education, discusses methods currently in use and makes suggestions how adult education might help to alleviate the serious educational and employment problems. The Education of Adults at All Levels (CRE (70) C/6) by D.K. Okunyu discusses the role of the University in adult education based upon Uganda experience. In The Education of Adults at All Levels in Uganda (CRE (70) C/7) by E.P. Kibuma an account is provided of all the agencies and activities of recent years in Uganda. E.P.T Tugbiyele in Provision for the Cultural and Intellectual Needs of Rural Communities (CRE (70) C/8) provides a philosophical analysis of the educational needs of rural communities and the role of adult education in satisfying them.

5. Education and Training for Agricultural Development

J.A. Sutherland examines the Problems of Agricultural Education in the Pacific Islands (CRE (70) D/1), identifying the problems of implementation of plans with reference to levels of education, syllabus and curriculum construction, training methods, practical work and farmer training. In Integrated Education for Agricultural Development in Swaziland (CRE (70) D/2) David Brewin, questions the siting of higher agricultural education institutions near urban areas and describes the development of agricultural and other forms of higher education in Swaziland during the last three years with relevance to the issue raised. R.K. Anim, in Helping the Small Farmer to Increase his Productivity (CRE (70) D/3) discusses the problems of low productivity and how farmers may be helped by reference to cocoa farmers in Ghana, groundnut producers in Nigeria and sugar cane production in Ghana. Agricultural Education and Training in Tanzania (CRE (70) D/4) contributed by the Research and Training Institute, Ministry of Agriculture, Food and Co-operatives, Ukinguru, Tanzania, describes the current provisions for agricultural education and training in Tanzania in the context of the

of the socio-economic circumstances. The Education and Training of Agricultural Technicians in Ghana (CRE (70) D/5) contributed by The Government of the Republic of Ghana discusses some of the major features of the education and training of both lower and upper level agricultural technicians in Ghana and draws attention to the avenues created for progress from level to level. C.W.Barwell in Education and Training for Agricultural Development : The Place of Institutional Farmer Training (CRE (70) D/6) examines the role of institutional farmer training as one of the inputs in the whole process of development based upon ten years experience in East and Central Africa. Agricultural Education and Training in Uganda (CRE (70) D/7) by T.M. Othieno examines the whole range of activities relating to agricultural education and training in Uganda including research needs.

6. Supplementary References

Great Britain : Ministry of Overseas Development, Rural Development; Report of a working group May 1969, Information department, Ministry of Overseas Development, Eland House, Stag Place, London S.W.1. (Price 1s.6d. post free). Provides an example of how informal consultations between officials and people outside a government Department contribute to the process of decision making. The report provides a succinct summary of the present situation in general terms, recognises the economic factors involved and emphasises the compelling reasons for a more positive approach to the problems of the rural areas on the part of the Government in the aid programme.

Harold Houghton and Peter Tregear, Community Schools in Developing Countries. UNESCO Hamburg Institute for Education, Hamburg, 1969. (price £1.) Interpretative report of a seminar on community schools held at the UNESCO Hamburg Institute of Education in September 1969, includes succinct accounts of a number of successful programmes of a community school character. Commonwealth Secretariat, Youth and Development in Africa, The Report of the Commonwealth African Regional Youth Seminar, Nairobi, 1969, Commonwealth Secretariat, London, 1970 (price 20s.). A valuable study of the educational and training needs of youth in Africa and of the various activities being used to deal with the problem of harnessing the potentialities of youth to development.

A.E.G.Markham, A study of Farmer Training in Some English-Speaking Countries of Africa, F.A.O., Rome 1967. An examination of the basic principles which apply to the effective training of peasant farmers in new systems, methods and

techniques, the training problems, effectiveness of instructional methods, assessment of possible impact of training schemes on production and of new needs, together with an examination of the staffing requirements for the development of farmer training based upon East African experience.

F.A.O., Agricultural Education and Training: Annual Review of Selected Developments 1968 F.A.O., Rome, 1968,

Contains reports on fisheries staff training in the Caribbean, intermediate-level agricultural education with special reference to the Middle East, higher education in agriculture and home economics for women in Africa, intermediate-level agricultural education in Tunisia, education and training of horticulturists, veterinary education, Borgo a Mozzano - a rural extension training centre, forestry training in Ecuador, agricultural information and farm broadcasting, training extension officers, agriculture in Kenya secondary schools, the need for agricultural manpower planning, developing agricultural engineering programmes in Latin America, University textbook programme in Latin America.

F.A.O., A Comparative Study of Some Systems of Agricultural Education and Training, F.A.O. Rome 1969

An outline of the systems of education in Belgium, France, Federal Republic of Germany, Netherlands, United Kingdom, United States of America and a guide to the provision within them for agricultural education and training.

F.A.O., A Selected List of Books and Periodicals for Agricultural Education and Training in Africa, F.A.O., Rome 1968

Provides a select classified bibliography together with selected lists of publishers in the United Kingdom, the United States of America, and a small number of publishers in other parts of the world. It does not include all the titles of publications by F.A.O. For the latter the Catalogue of F.A.O. publications obtainable from the Distribution and Sales Section, Food and Agriculture Organization of the United Nations, Via delle Terme di Caracalla, Rome, Italy, should be consulted.

COMMONWEALTH CONFERENCE ON EDUCATION
IN RURAL AREAS

LIST OF CONFERENCE DOCUMENTS

GEN/1	<u>Objectives and scope of the Conference/Provisional Time-Table</u>
GEN/2	<u>Conference Arrangements</u>
GEN/3	<u>List of Conference Documents</u>
GEN/3 (Revised)	<u>List of Conference Documents</u>
KEYNOTE ADDRESS	<u>Education in Rural Areas</u> by R. K. A. Gardiner, Executive Secretary, United Nations Economic Commission for Africa.
LEAD/1	<u>The School and the Rural Environment</u> by Professor L.J. Lewis, Head of the Department of Education in Tropical Areas, London University Institute of Education.
LEAD/2	<u>Out-of-School Education and Training of Young People</u> by Archibald Callaway, Research Professor, Nigerian Institute of Social and Economic Research, University of Ibadan, Nigeria.
LEAD/3	<u>Education and Training for Agricultural Development</u> by Fergus B. Wilson, Food and Agriculture Organisation of the United Nations, Rome.
LEAD/4	<u>Adult Education at All Levels</u> by Shrimati Lakshmi Menon, India.
LEAD/5	<u>Swaneng Hill School, Botswana</u> by Patrick Van Rensburg, Botswana.

- A/1 The Community School
by P.S. Tregear, Department of
Education in Tropical Areas,
London University Institute of
Education.
- A/2 Training Teachers for Education in
Rural Areas
by D.E.B. Chaytor, Njala
University College, Sierra Leone.
- A/3 The Role of the Inspectorate in the
Development of Education in Rural
Areas - A Malaysian Experience
by Paul Chang, Chief Inspector of
Schools, West Malaysia.
- A/4 Educational Media for the Development
of Rural Education
by Helen Coppen, London
University Institute of Education.
- A/5 Practical Agriculture for Primary
Schools in North-East Nigeria
by Von L. Hall, Rural Development
Director, Church of the Brethren
Mission, Lassa, Nigeria.
- A/6 The Role of the Primary School in
Ghana
by S. M. Adu-Ampoma and
D.G. Wiafe-Anim, Ghana.
- A/7 Tests and Measurement Procedures,
Review and Evaluation
by G.J. Matys, Curriculum
Research and Development Unit
(Measurement and Evaluation
Section), Ministry of Education,
Ghana.
- A/8 The Way Ahead - A Programme for
Teacher Training in Rural Areas with
Particular Reference to Botswana
contributed by the Government of
the Republic of Botswana.

- A/9 The Formal School, Its Organisation
and Curriculum, Together with the
Training of Teachers
by Abdul Rahman Haji Arshad,
Malaysia.
- A/10 Notes on Rural Education in Mauritius
by F. Richard, Permanent Secre-
tary, Ministry of Education and
Cultural Affairs, Mauritius.
- A/11 Education in Rural Areas: Some Notes
on New Zealand's Experience
contributed by the Government of
New Zealand.
- A/12 Agricultural Education in Malawi
Schools
contributed by the Government of
Malawi.
- A/13 Formal Education and Development
Policy in Rural Communities
contributed by the Ministry of
Education, Benin City, Nigeria.
- A/14 The Formal School: Some Notes on
Secondary Education in Uganda
by E. K. K. Sempebwa, Chief
Education Officer, Ministry of
Education, Uganda.
- A/15 Teacher Training in Uganda
by N. W. Mugerwa, Senior
Inspector of Schools, Teacher
Education, Ministry of Education,
Uganda.
- A/16 Education in Pakistan: Directions Old
and New
by Dr. Moh. Basharat Ali, Reader,
Institute of Education and Research,
Dacca University, East Pakistan.

- A/17 Problems of Relating Education and Training to the Process of Development in Predominantly Agricultural Communities in Developing Countries
contributed by the Government of Tanzania.
- A/18 Primary School Education in Uganda
by A. M. K. Bagunywa, Senior Inspector of Schools, Primary and In-service Education, Ministry of Education, Uganda.
- B/1 Out-of-School Education: The Education and Training of Young People through National Youth Organisations
by G. W. Griffin, Director of National Youth Service, Kenya.
- B/2 Out-of-School Education and Training for Young People in Lesotho
by G. L. Mochochoko, Agricultural Officer (Extension and Farmer Training Centres), Ministry of Agriculture, Co-operatives and Marketing, Lesotho.
- B/3 Communication and Rural Development
by John Bowers, Department of Education in Tropical Areas, London University Institute of Education.
- B/4 Village Polytechnics from the Farming Point of View
by R. M. Spurin, Principal, Nambale Village Polytechnic, Kisumu, Kenya.
- B/5 Out of School Education for Young People in Uganda
by E. P. Kibuka, Principal, Nsamizi Training Centre, Ministry of Culture and Community Development, Uganda.

- C/8 Provision for the Cultural and Intellectual Needs of Rural Communities
by E. A. Tugbiyele, Professor of Continuing Education and Director, Continuing Education Centre, University of Lagos, Nigeria.
- D/1 Problems of Agricultural Education in the Pacific Islands
by J. A. Sutherland, Senior Lecturer in Agriculture, Armidale, New South Wales, Australia.
- D/2 Integrated Education for Agricultural Development in Swaziland
by David R. Brewin, former Principal of the Swaziland Agricultural College and University Centre.
- D/3 Helping the Small Peasant Farmer to Increase his Productivity
by R. K. Anim, Lecturer in Extension Education, University of Science and Technology, Kumasi, Ghana.
- D/4 Training of Farmers and Agricultural Technicians in Tanzania
contributed by Research and Training Division, Ministry of Agriculture, Food and Co-operatives, The United Republic of Tanzania.
- (D/4 Revised) Agricultural Education and Training in Tanzania
contributed by the Research and Training Institute, Ministry of Agriculture, Food and Co-operatives, Ukiriguru, Tanzania.

- C/1 Communication as Nutrition Education in Zambia
by H. A. Fuglesang, Director,
Public Relations Unit, E.C. Thomson,
Executive Secretary, A.P.
Vamoer, Assistant Executive
Secretary of The National Food
and Nutrition Commission, Zambia.
- C/2 Improved Nutritional Status in Rural Areas
by E.C. Thomson, Executive
Secretary, National Food and
Nutrition Commission, Zambia.
- C/3 The Place of Health Education in the Ghanaian Rural Education Programme
contributed by the Government of
the Republic of Ghana.
- C/4 The Education of Adults at All Levels
by David Calcott, Chief ILO/UNDP/
SF Pilot Project for Rural
Employment Promotion, Western
State, Nigeria.
- C/5 See B/3 (Paper considered by both
working Parties).
- C/6 The Education of Adults at All Levels:
The Role of University in the Uganda
Scene
by D.N. Okunga, Director, Centre
for Continuing Education, Makerere
University College, Uganda.
- C/7 The Education of Adults at All Levels
in Uganda
by E. P. Kibuka, Principal,
Nsamizi Training Centre, Ministry
of Culture and Community
Development, Uganda.

- D/5 The Education and Training of Agricultural Technicians in Ghana
contributed by the Government of the Republic of Ghana.
- D/6 Education and Training for Agricultural Development: The Place of Institutional Farmer Training
by C. V. Barwell, F.A.O.
Regional Adviser on Farmer Training, Nairobi, Kenya.
- D/7 Agricultural Education and Training in Uganda
by T. M. Othieno, Assistant Commissioner for Agriculture, Ministry of Agriculture and Forestry, Uganda.
-

OTHER DOCUMENTATION

Rural Development - report of a working group
Ministry of Overseas Development, London, May 1969.

Community Schools in Developing Countries
edited by Harold Houghton and Peter Tregear, Unesco Institute for Education, Hamburg, 1969.

A Study of Farmer Training in Some English-Speaking Countries of Africa
(RU: MISC/67/37) by A.E.G. Markham, Rural Institutions Officer, Agricultural Education Branch, Rural Institutions and Services Division, Food and Agriculture Organisation of the

U.N., Rome, 1967.

A Selected List of Books and
Periodicals for Agricultural Education
and Training in Africa

(RU: MISC/68/3) Food and
Agricultural Organisation of the
U.N., Rome, 1968.

Agricultural Education and Training:
Annual Review of Selected Documents

(RU: MISC/68/19) Food and
Agriculture Organisation of the
U.N., Rome, 1968.

A Comparative Study of Some Systems
of Agricultural Education and
Training

(RU: MISC/69/25) Food and
Agriculture Organisation of the
U.N., Rome, 1969.

Agricultural Education and Training:
Directory of Institutions in Forty
African Countries

(RU: MISC/69/28) Food and
Agriculture Organisation of the
U.N., Rome, 1969.

Prevocational Training in Rural Areas

(D.9. 1969) International Labour
Office, Vocational Training Branch,
Rural Unit, Geneva, Switzerland.

Youth and Development in Africa

The Report of the Commonwealth
African Regional Youth Seminar,
Nairobi, Commonwealth
Secretariat, 1970.

CONFERENCE ARRANGEMENTS

Background

Following recommendations by the Fourth Commonwealth Education Conference, held in Lagos, Nigeria, in February 1968, which were endorsed by the Meeting of Commonwealth Prime Ministers in January 1969, the Commonwealth Education Liaison Committee agreed that the fifth in the series of Commonwealth specialist education conferences should take for its theme Education in Rural Areas.

2. At the invitation of the Government of the Republic of Ghana the conference took place at the University of Ghana, Legon, Accra, Ghana, from 23 March to 2 April 1970.

3. Mr Harold Houghton, CBE, Deputy Education Adviser to the British Ministry of Overseas Development, was invited to serve as Chairman of the Planning Committee. Ill-health unfortunately prevented Mr Houghton from participating in the final stages of the work, and he was succeeded by Professor L.J. Lewis, Head of the Department of Education in Tropical Areas of the London University Institute of Education, who acted as Chairman of the Planning Committee, co-Chairman of the Conference, and also presented one of the lead papers. The Assistant Commonwealth Secretary-General, Dr H.W. Springer, CBE, acted as Secretary to the Committee. The Planning Committee comprised Mr W.L. Tsitsiwu (Ghana), Mr M.L. Obroi (India), Mr D.R. Davidson (Jamaica), Mr E.N. Gicuhi (Kenya), Mr Chang Min Kee (Malaysia), Mr J. Pirotta (Malta), Dr S.M. Ali (Pakistan), Mrs L.S. Dorset (Trinidad and Tobago) and Mr W.S. Mufana (Zambia). Mr L.C. Comber, Dr Edith Mercer, Mr M.J. Rolls and Miss H.M. Wallis (Britain), Mr E. Bortei-Doku (Ghana) and Miss J. Steckle (FAO) were co-opted on to the Committee during the course of its work: Mr M. Lubrano and Mr T.A. Khan replaced Mr Pirotta and Dr Ali as a result of staff changes in the High Commissions of Malta and Pakistan.

4. The Commonwealth Secretary-General, inviting Governments to participate in the Conference, wrote:

'The primary purpose of the conference is to provide an opportunity for those concerned with relating all forms of education and training to the process of development in predominantly agricultural communities in developing countries, to examine the problems, exchange ideas and experiences, and indicate possible lines along which Governments and other agencies might plan future policy. It is hoped to achieve this by considering:

- (1) the formal school, its organisation and curriculum, together with the training of teachers;
- (2) out of school education and training for young people;
- (3) the education of adults at all levels;
- (4) education and training for agricultural development.'

5. Each of the major themes was introduced to a plenary session of the conference by a distinguished authority who had been invited to prepare a lead paper. The themes were then discussed in detail by working groups which prepared reports for further discussion in plenary session. The five lead papers presented were:

- (1) The School and the Rural Environment:
Professor L.J. Lewis, Head of the Department of Education in Tropical Areas, London University Institute of Education.
- (2) Out-of-School Education and Training of Young People: Professor A. Callaway, Research Professor, Nigerian Institute of Social and Economic Research, University of Ibadan, Nigeria.
- (3) The Education of Adults at All Levels:
Shrimati Lakshmi N. Menon; ex-Minister of State for External Affairs, Government of India.

- (4) Education and Training for Agricultural Development: Professor Fergus B. Wilson, Chief, Agricultural Education and Rural Youth Service, Rural Institutions Division, Food and Agriculture Organisation of the United Nations, Rome.
- (5) Swaneng Hill School, Botswana: Patrick Van Rensburg, Principal, Swaneng Hill School, Serowe, Botswana.

6. Commonwealth Governments and representative international organisations were invited to contribute supplementary papers on topics relevant to the theme of the conference. 38 such papers were submitted, while the Government of Britain, the Food and Agriculture Organisation of the United Nations, the International Labour Organisation and the Unesco Institute for Education, Hamburg, also made available a range of published material; the Commonwealth Secretariat presented the report of the Commonwealth African Regional Youth Seminar, held in Nairobi, Kenya, in November 1969, 'Youth and Development in Africa'. A full annotated list of the conference documentation appears in Appendix A of this report.

Participation

7. The conference was attended by 85 delegates and observers representing 23 Commonwealth countries and dependent territories and 14 international organisations. Dr H.W. Springer, Commonwealth Assistant Secretary-General, represented the Commonwealth Secretary-General at the conference. Visitors included representatives of a number of the Commonwealth High Commissions in Ghana. A list of all those attending the conference is given in Appendix B of this report.

Conference Programme

8. The conference was opened on behalf of the host Government by the Honourable Mr William Ofori Atta, Minister of Education, Ghana. A vote of thanks was proposed by Dr H.W. Springer.

9. Following the official opening of the conference a keynote address was delivered to a plenary session of the conference by Mr R.K.A. Gardiner, the distinguished Ghanaian Executive Secretary of the United Nations Economic Commission for Africa. Further plenary sessions followed, in the course of

which the lead papers listed in paragraph 5 were presented.

10. The delegates were then divided into four working groups, the programmes for which were so arranged as to allow all delegates who so wished to participate in some of the discussions of working groups other than that to which they were allocated. Outline agenda were presented for the general guidance of the groups.

11. Arrangements were made for delegates to visit Accra, the Volta dam at Akosombo, the Apeguso Settlement Scheme and the Somanya Mechanised Farm, as well as community development courses for women.

12. The closing of the conference was addressed by the Honourable Mr William Ofori Atta, Minister of Education.

13. In the course of the conference the Government of Ghana held an official dinner for all delegates, following which a cultural show of Ghanaian drumming and dancing was presented by the Arts Council of Ghana. At the end of the conference the Assistant Commonwealth Secretary-General held a reception for delegates and distinguished visitors.

Acknowledgements

14. The Commonwealth Education Liaison Committee wish to acknowledge their gratitude to all those who contributed to the conference, and especially to Professor Lewis who took over at short notice the Chairmanship of the Planning Committee and co-Chairmanship of the conference. The Committee are grateful for the hospitality extended by the Vice-Chancellor of the University of Ghana, Dr A.A. Kwabong, the Master of Commonwealth Hall, Dr Thompson, and members of their staffs, and wish to express their appreciation of the support given to the conference by the host Government and other Commonwealth Governments, by the authors of the many informative and stimulating papers, and by the delegates, whose enthusiasm and expertise ensured the exchange of much valuable experience and information.

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