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Non-Formal Training Programmes For Rural Skill-Development

A State of the Arts Study by Alex Gorham



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NON-FORMAL TRAINING PROGRAMMES
FOR RURAL SKILL DEVELOPMENT

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The views expressed in this paper are those of the author. They should not be interpreted as reflecting the views of SIDA or those of the Institute of International Education.

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Preface

This study of non-formal training programmes for rural skill development has been carried out by Dr. Alex Gorham of the Institute of International Education, University of Stockholm, at the request of the Education Division of the Swedish International Development Authority (SIDA). In view of the increasing emphasis on non-formal training and rural skill development — not only in education but in other sectors as well — the education division felt the need of a state-of-the-arts paper spelling out the more recent experiences in planning, implementing and evaluating such programmes. A thorough review of the available literature on the subject is the basis of the study and an attempt is made to identify some of the major factors which appear to have influenced the carrying out of non-formal programmes in the Third World.

It is felt that the study will provide useful input in discussions, both within SIDA and with Swedish programme countries, related to non-formal training programmes geared to the skill development needs of rural areas. In addition, it is hoped that this report will be of interest to other individuals and agencies concerned with rural development.

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Alex Gorham

Vocational Training
Aims in the 1950s
and 1960s

I. Introduction

Beginning in the late 1950s, and continuing through most of the 1960s, Swedish aid to education in the Third World sought primarily to support the efforts of LDCs to rapidly industrialize their national economies. The historical experience in the West, it was felt, clearly demonstrated that such an economic base was a pre-requisite to the fulfillment of the wider development goals in these countries and, as such, the educational priorities of the new nations were seen to be those associated with an emerging modern sector. In terms of educational aid, the emphasis was squarely on the provision of financial and technical assistance to vocational training efforts aimed at producing the middle and higher level skilled manpower required for the industrialization process. Here, it was felt, Sweden was particularly well placed to help. Not only did the country possess a wide range of technical expertise, much of which was felt to be directly relevant to LDC needs, but equally important, its multi-faced educational system, comprising both formal and non-formal learning institutions, provided an effective means for transferring this know-how to the recipient countries. Thus, in the early and mid-1960s, Swedish support for vocational training in the Third World concentrated partly on providing these countries with types of expertise in which Sweden was regarded to be especially competent, and partly on building up the institutional infrastructure of vocational training so as to ensure the effective transfer of imported skills and know-how.

Yet, while SIDA's educational aid policy continues to reflect the importance attached to vocational training in Third World countries, the guidelines relating to such programmes are currently being re-appraised. In part, the need for such a re-appraisal stems from the belief that in relating vocational training too closely to the goal of industrialization, the economic benefits resulting from training have largely remained within the modern sector, and little of the hoped for spread-effect has been felt in other parts of LDC economies. In particular, the rural sector appears to have been virtually unaffected by vocational training programmes, and even where the latter have been provided in such areas, the most appropriate and lucrative market for the resulting skills and competencies remains in the urban and peri-urban centers where most of the industrial and commercial enterprises in LDCs are concentrated.

This situation, whereby the economic effects of training programmes have not had any substantial impact on the dominant economic sector in LDCs, has given rise to an increasing concern for the broader egalitarian issues associated with development in general and development aid in particular. Whereas in the 1960s, the creation of industrial societies in the Third World was generally regarded as the ultimate solution to the problem of rural poverty in these countries, many now feel that the measures taken to achieve this goal have only resulted in widening the gap between, on the one hand, small, yet relatively modern and well developed urban enclaves, and, on the other, large and expanding but increasingly less-productive agricultural economies.

To the extent that conventional approaches to vocational training have contributed to these growing disparities, the perceived need on the part of policy makers and aid specialists alike is to re-orient such programmes to a whole range

of new clientele, new sectors and new goals. Yet, while the emphasis thus far has been on providing highly specialized skills-training to meet the equally specialized requirements of an urban economy, the problem is not merely one of altering the content of training to conform with specifically rural requirements. It must also attempt to conform with a wide range of rural constraints which directly affect the way training is provided and the way it is received. In particular, where conventional vocational training approaches relied heavily on a formal institutional structure and were in a position to utilize a variety of sophisticated training facilities and methodologies, bringing the benefits of training to new clientele in the rural areas implies a dependence on fundamentally different organizational frameworks and institutional-structures. In most cases, such structures will reflect prevailing patterns of social relations at the local level and thus training programmes will be required not only to adapt to the practical problems of limited facilities and resources, but they will also be required to take cognizance of various social and cultural factors which condition social action at the local level.

Yet, while the re-orienting of vocational training programmes to meet the twin goals of economic development and socio-economic equality would appear to imply a separate approach to training in the rural areas, this is recognized to be neither practical nor desirable. Where the cause of many of the existing inequalities in LDCs are seen to have stemmed from the specialized treatment accorded to certain areas and groups, the perceived need with regard to national development is to integrate training within various sectors and coordinate it between sectors. This applies as well to vocational training efforts and it underlines the need to view adapted programmes within the context of a wider learning system in LDCs, encompassing both the rural and the urban, the agricultural and the industrial, the formal and the non-formal systems.

To a large extent, it is this kind of reasoning which lies at the root of SIDA's re-appraisal of its vocational training policy guidelines. The shortcomings of the conventional approach are clear. What is less apparent, however, is how practically oriented non-formal training can be designed for a wide range of rural clientele and rural goals and, at the same time, be fitted in to the comprehensive approach to educational aid implied in the sector approach.

The Study:

The purpose of this paper is to attempt to shed some light on these questions by looking at some of the recent experiences in what has come to be known as 'non-formal skill development'. Specifically, we will examine factors which appear to be important in the planning, implementation and evaluation of non-formal educational programmes, with the view to providing relevant information to those external bodies involved in supporting such programmes. The study is not concerned with questions of policy insofar as these relate to the definition of educational priorities in LDCs or the aid preferences of external agencies such as, in this case, SIDA. Rather, the main aim will be to examine factors which appear to be important for the effectiveness of non-formal programmes and which are associated with the three project stages indicated above. To the extent that such factors appear to be amenable to aid intervention, we will discuss the means whereby this might be facilitated. Finally, with regard to the scope of the study, no attempt has been made to present a comprehensive treatment of the whole range of non-formal activity which exists, or for which material is available. Instead, we will concentrate on broadly defined skill-development programmes which aim at improving rural productivity, income and employment for both youths and adults. However, we will also be interested in interactions between these types of programmes and other aspects of the rural learning system, such as the school and the informal training sector. We begin by looking more

closely at the origins of the non-formal concept and at the particular problems to which non-formal programmes address themselves.

II. The Background

As a strategy of educational intervention in LDCs, the non-formal approach has gained increasing support in the past decade, not only from researchers and aid specialists, but among educational authorities and policy makers in these countries themselves. This distinction is important when one remembers that 'organized, systematic educational activity outside the framework of the formal school system'¹⁾ has a long history in the Third World and most of the available material relating to literacy campaigns, adult education programmes, community development projects, rural training schemes and agricultural extension work comes from Africa, Asia and Latin America. Until recently, however, this wide range of educational activity tended to be regarded as something of a 'poor relation' to the formal school system and it is perhaps no accident that, typically, responsibility for such programmes rested with organizations and authorities other than the respective ministries of education. Moreover, when one considers that in most of the new nations, the 1950s and 1960s produced a great deal of evidence purporting to show substantial returns (both private and social) to investment in formal education²⁾ it certainly is not surprising that both policy makers and the people gave priority to such provision. In addition, of course, there was a great deal of political capital to be gained by supporting the expansion of existing school systems during this period.

Low Status of Non- Formal Education

As such, the promotion of out-of-school education programmes tended to be perceived mainly as an attempt to compensate specific groups and regions which, for one reason or another, had been denied access to the conventional school system.

In the pre-functional literacy period, non-formal education usually consisted of efforts to provide either the kind of reading, writing and numeracy skills associated with the primary school, or practically-oriented industrial arts training which approximated that of vocational trade institutions. Certainly, there was much rhetoric about the role of non-formal education in national development and a general belief that the combination of literacy and skill-acquisitions was the appropriate formula for rural improvement. But, in practice, it was evident that national priorities and prevailing growth strategies favoured the expansion of the formal school system and placed an increasing premium on formal school qualifications. Both educational and labour market policies were seen to reward academic excellence and where the latter was measured by the yardstick of accreditation or certification, non-formal training was, almost by definition, a low-status commodity³⁾.

Results of the
First Development
Decade

All this began to change as the results of the First Development Decade came in in the late 1960s. Despite annual investments in formal education of 20% and more of national budgets⁴⁾; the expected economic take-off failed to materialize and the educational economists, who during the 1950s and 60s had been thick on the ground in every ministry of education in the Third World, began to have misgivings about their human capital theories. Not only had the rapid expansion of existing educational structures not appreciably raised per capital GNP in most LDCs, but it appeared to be very closely associated with a widening of regional and ethnic disparities in income distribution, social service provision and a host of other living standard criteria.

Renewed Interest
in Non-Formal
Education

Thus began a period of formal school disparagement which is with us still and much of the Second Development Decade has been devoted to specifying the particular ills of institutionalized education in these countries, and in experimenting with new types and structures of learning not directly associated with the formal school system. Indeed, as one interested

observer has recently noted, research activity in this field has been so intense in the 1970s that "...the theoretical debate on priorities and definitions is beginning to out-run the practical issues of implementation"⁵⁾. Before going on to look more closely at how some of these issues condition the effectiveness of various types of rural skill-development programmes, we should perhaps devote a little more time to the problems which the non-formal approach addresses itself to. These can be conveniently grouped into two main categories:

- a) Problems stemming from the functional and logistical inadequacies of conventional education systems;
- b) employment problems resulting from national development policies and growth strategies.

The Inadequacies of Formal Schooling

Much has been written on the shortcomings of existing educational systems in LDCs and by now we are familiar with the more obvious deficiencies relating to cost, coverage and curriculum content. Only recently, however, have attempts been made to analyse the functioning of these institutions within the socioeconomic and cultural context in which they exist. While the evidence is by no means all in, initial indications are that a number of widely held views concerning the effects of formal schooling on pupil attitudes and aspirations do not conform with the facts. To take an example from primary education, the long-standing opinion of most observers has been that the formal school contributes to aspirations which are way out of line with existing and future employment opportunities in the Third World. Upon this belief rests much of the rationale for providing non-formal alternatives which will lower pupils sights and, incidentally, bring them into contact with manual labour which, we have been led to believe, primary school pupils in LDCs are prone to avoid. Yet, on closer inspection we see that the functioning of primary schools, particularly in the rural areas, actually conditions the great majority of its participants

to the realities of rural life, i.e. informal employment, unemployment, functional illiteracy, etc. through such processes as repeating, dropping-out, non-selection and so on. Moreover, all the research to date indicates that rural primary school pupils are responsible for more regular work in the home than any other school age cohort⁶⁾.

The Social Function
of the School

The significance of such observations is not that they diminish the importance of curriculum and other aspects of the formal education structure which are clearly in need of change. Rather, as one begins to explore more closely the relationship between schools and the local community in these regions, the social function of existing educational structures becomes increasingly apparent and one begins to wonder if the fact, say, that in a given area 90% of the work force is involved in subsistence agriculture or petty production, while 90% of primary school entrants do not go beyond the first educational level is merely fortuitous?

Resistance
to Change

In focusing on these wider relationships between society and its conventional educational institutions, observers have begun to recognize the limitations of 'tinkering with the system'. At the same time, they have started to seriously question some of the traditional liberal mythology surrounding schools, which holds that they are liberating, egalitarian institutions, capable of uplifting depressed groups and spearheading change and development⁷⁾. On the contrary, it would appear that the school system in many LDCs continues to accommodate, with moderate increases, roughly the same percentage of the total school-age population as was served in the past, while the distribution of facilities still favours the urban and the well-to-do⁸⁾.

It is unlikely that the present interest in non-formal education in the Third World is entirely a function of the growing dissatisfaction with the school system per se. As indicated, most of these deficiencies have been the subject

of concern and investigation for several decades, yet it is only recently that any broad-based support for non-formal alternatives has been forthcoming. To a certain extent this may be a result of the fact that the development of effective and attractive teaching methods, delivery systems, support materials, etc. has only begun to replace conventional notions of non-formal education as some kind of second class learning system. In particular, the rather recent involvement of the major multi-lateral aid organizations in the development of skill modules and comprehensive learning packages for non-formal education appears to be one factor which has enhanced the traditional status of the non-formal approach among local educational authorities and policy makers.

Growth Strategies and
Employment Problems

A more important consideration, however, is to be found in the changing relationship between education and employment which began to be perceived in the early 1970s, and which was one of the factors that contributed to a re-appraisal of some of the basic development concepts in many LDCs at this time. Until very recently, 'development' has been viewed almost exclusively in economic terms and a nation was thought to be progressing if it registered a satisfactory GNP growth rate. When this goal was operationalized in national development plans it usually meant that priority in resource allocation was given to the rapid development of a narrow, urban-oriented and capital-intensive exchange sector, and to enterprises that would strengthen it. Thus, the educational enterprise was geared up to produce the middle and higher-level manpower to sustain industrial expansion, and the lower-levels of the educational ladder were, everywhere, designed to produce graduates capable of meeting the requirements of the next highest level. So long as opportunity patterns, recruiting policies and wage differentials reflected these priorities, the devaluation of the lower levels of education merely resulted in increased pressure from below to open up the higher levels. In practically every developing country, the past 30 years has been accompanied by a growth of secondary

and higher education which has been faster than that for primary education, both in terms of enrolments and in terms of educational expenditure⁹⁾. For those primary school pupils who reach the upper level of the primary school system, aspirations have, for some time now, ceased to be directly related to urban job opportunities and are concentrated instead on secondary selection from whence access to modern sector employment (most often in multi-nationals or government ministries) is sought.

Diminishing Job Opportunities

Yet, regardless of the growth strategy adopted, and despite conditions of widespread under-employment, the ability of the modern sector in most LDCs to absorb trained manpower became increasingly strained in the early 1970s. Particularly from African countries, reports of serious graduate unemployment began to come in¹⁰⁾ and there appeared to be little in the way of 'adjustments to prevailing educational structures' which would, even temporarily, alleviate the situation. What made it even more worrisome was the fact that substantial numbers of vocational school graduates were to be found in the ranks of the unemployed as well. Whereas earlier the problem of unemployed school leavers tended to be blamed on the irrelevant and academic orientation of conventional curricula, attention began to shift rather rapidly from the types of skills and competencies produced in the schools, to the context in which they were to be applied. Of special significance for proponents of non-formal education was the sudden interest which began to be shown at this time in the informal work sector and, in particular, the training requirements for self-employment as opposed to wage-employment¹¹⁾.

Non-Formal Education and Informal Employment

The perceived link between the informal work sector and non-formal training was largely a product of the disillusionment resulting from the inability of existing wage structures in LDCs to absorb the output of trained manpower from the formal education system. Yet very little was known at this time about the dynamics of the informal sector or, specifically, the

training requirements for self-employment. About all anyone could say for certain was that those working in informal employment (both urban and rural) tended to be those who left school earliest or didn't go at all. Nevertheless, the importance of the connection between these two less-formal systems, i.e. education and work, should not be underestimated. It came, in the mid-1970s, to constitute not only a major area of development research in LDCs, but also a potential policy instrument for dealing with saturated labour markets, rising formal school costs and what has come to be known as the widening aspiration-opportunity gap. Having recognized rather quickly that both the non-formal training sector and the informal work sector reproduced relevant skills at a fraction of the price paid by the Ministries of Education and Labour, local planners and international aid agencies began to look for ways in which these processes could be consciously and systematically encouraged and supported. At the same time, they began to explore the means whereby these new perspectives on education and work could be applied to the existing formal school system.

Surveying Non-Formal Education Projects

The initial step in such a process was to attempt to catalogue and inventory existing non-formal programmes, many of which had been operating largely unnoticed in LDCs for many years. Within the space of a few years a number of internationally supported research projects on non-formal education were carried out and a rather impressive amount of case-study material collected and analyzed¹²⁾. In keeping with the emphasis on rural development, research priority was directed mainly towards programmes aimed at increasing rural employment, productivity and income - in general, those programmes designed to improve the knowledge and skills of farmers, rural artisans and craft workers, and small entrepreneurs. The ICED studies carried out for UNICEF and the World Bank¹³⁾, the USAID-sponsored Program of Studies in Non-Formal Education¹⁴⁾, and the regional counterparts to ILO's World Employment Programme¹⁵⁾ represent several of

the more ambitious efforts to systematically examine and document aspects of the non-formal education complex during the early and mid-1970s. These, in turn, were accompanied by or gave rise to a steady stream of related research which covered the whole range of out-of-school learning and training activities in LDCs during this period.

Increased Aid to
Non-Formal Education

By the end of the decade, significant progress had been made in classifying this activity in relation to sectors, target groups, types of training and goals, and as indicated above, the development of corresponding methodologies and support materials was proceeding apace. Having taken the initiative earlier in financing these exploratory efforts, international and multi-lateral aid agencies began to follow this up in their allocation of resources and technical assistance to non-formal programmes, both as regards specific projects and in the context of sector support to education. Noticeable shifts of emphasis were recorded in World Bank lending policies in the early and mid-1970s. Whereas the proportion of lending aid to non-formal education in 1969 accounted for only 4% of total sector support, by 1978 this had increased to 17% and projections for the period 1979-83 put it at 24%¹⁶⁾. Among individual donor agencies a similar trend was visible and as early as 1974, for example, non-formal education was one of the top priority subjects in USAID's division of human resource development.

Developing New
Education Concept

To what extent, one may ask, has all this rather intense interest in non-formal education in the past ten years or so succeeded in influencing conventional views of educational development in LDCs, and what are some of the implications for those involved in aiding this process? To begin with, it would seem that the conventional concept which equated education with schooling began, if not to disappear, at least to give way to a broader one that regarded formal education as just one component in a life-long learning process. This approach to education was taken up by UNESCO

and others in the early 1970s and developed into a fairly extensive body of literature which stressed the need for re-current education to meet rapidly changing requirements in both developed and developing countries¹⁷⁾. Particularly as regard the need to re-train individuals to meet these requirements, the school was seen to be an instrument of limited effect in its present form, especially in LDCs.

The Non-Formal
Approach and
Basic Education

A second and related concept which appears to have stemmed from the renewed interest in non-formal education was that of a basic education package for the Third World. In its most abbreviated form, basic education sought to encapsulate in a much shorter cycle the really essential learning needs of developing countries and to make available some of the key features of the non-formal approach to the wider audience of the schools. Among the non-formal features which were particularly attractive to proponents of the basic education concept were its task-orientation and its close relation to the world of work. Present indications are that very shortly concrete steps will be taken to implement the basic education approach in several East African countries and that this will contain a number of elements previously associated with non-formal modes of training and skill-development¹⁸⁾.

Non-Formal Educa-
tion and Local
Learning Needs

A third important effect which the non-formal approach has had on the educational thinking in LDCs has been to focus increased attention on local learning needs and on the utilization of local resources to meet these needs. In particular, the identification of educational requirements, the allocation of the available means of satisfying them and the job of defining the proper relationship between the learning system and the local community are increasingly seen as a responsibility of the community itself and not, as has traditionally been the case, of central planning authorities alone. This recognition, which is by no means limited to the field of education, reflects a wider concern that until recently national development priorities have tended to take precedence over local

development needs in most Third World countries. While there are a number of strong arguments in favour of centralized approaches to nation-building in most LDCs, the practical effect of such a policy has often been to re-inforce inherited patterns of structural inequality by channeling human and other resources out of those areas which need them most. This is especially true of education, where academic success within the context of the local community has generally meant that the community loses the potential benefit of such talent which is siphoned off to centralized training and higher education facilities. In a very real sense then, the current interest in non-formal alternatives is seen as an attempt to rectify some of the dysfunctional aspects of existing rural learning systems.

Aid Implications

Both as regards the allocation of financial resources to non-formal education and the provision of technical assistance, the requirements from international and multi-lateral aid agencies are likely to be significantly different to those which characterized previous support to the formal education sector. Moreover, present attempts to design integrated rural learning systems encompassing aspects of both formal and non-formal education mean that even where some practical experience with the latter has been gained, the new context in which it is meant to apply will necessitate the application of new criteria within donor agencies when considering the nature and extent of support. In part, these requirements will be met as improved expertise in the planning, implementation and evaluation of non-formal programmes is acquired. As indicated above, a significant amount of empirical research relating to various aspects of these processes is already available and will be looked at in detail below. Here it should only be noted that the present preference for a sector approach to educational aid implies that a) more information will be required on the interactions between different modes of educational provision, and b) more attention will have to be given to the effect of exogenous factors, such as prevailing

rural credit facilities, land tenure systems, market infrastructure, etc. on specific types of non-formal provision.

The new approach to rural education, with its emphasis on the utilization of local resources for the satisfaction of local learning needs, implies that the working relationship between the traditional suppliers of educational services and the consumers of these services must also change. Especially as regards the planning of educational services in LDCs, much of the recent literature has stressed the need to do away with the top-down approach whereby educational directives are formulated at the national level and thereafter proceed downward to regional and local representatives for implementation, and instead, to promote what has come to be known as micro-planning¹⁹⁾. The essence of the micro-planning concept is local participation in educational decision-making and while many have pointed out the limitations of such a concept as it applies to formal school systems, others feel that it is particularly relevant in the context of non-formal education and training programmes. Where this can be shown to be the case it would appear to open up new avenues for project support which, thus far, have not been included in educational aid or technical assistance agreements. The potential, of course, is only part of a wider need to support local research capabilities in LDCs but, as recent experience in Tanzania seems to indicate²⁰⁾, the desire to increase local participation in the planning and implementation of basic and non-formal modes of education carries with it an obligation to develop and support the local machinery necessary for such a process.

These then were some of the factors which gave rise to and underly the present interest in non-formal education in LDCs. Whereas in the early 1960s non-formal training was widely regarded as a low status educational substitute for those who remained unaffected by formal school expansion, a decade

later it was felt by many to be a potential antidote for a wide range of ills associated with institutionalized learning. Initially, criticism of existing educational structures was confined to issues of cost, coverage and curriculum content and directed mainly at conditions in the rural primary school system. In the early 1970s, however, decreasing employment opportunities for secondary and vocational school graduates led educational planners to question some of the basic premises which had governed previous educational development. Where one justification for conventional primary school provision had been the chance it offered for secondary selection and subsequent wage employment, prevailing labour market conditions undermined much of the political rationale for such provision and enabled policy makers to seriously consider fundamental changes to existing educational systems. Two such proposed changes were embodied in the concepts of re-current education and basic education which began to evolve at this time. Both emphasised the need for education to be task-oriented and closely related to the world of work, and this served to focus attention on the potential of non-formal modes of training where these features were particularly evident. It also served to raise the traditional status of the latter and to directly connect it with developments in the formal school system. To local planners and educational policy makers the concern was to provide broad-based alternatives to primary schooling which were both affordable and oriented towards local development needs, while to those aid agencies involved in educational sector support, there was a perceived need for more information relating to the non-formal component in such support.

III. Definitions

Defining Non-Formal
Education

Although there is general agreement that the definition of non-formal education must take as its starting point the

out-of-school connotation, the latter by itself identifies a huge and amorphous field and does little to provide a means of discriminating among the components which make up that field. Attempts to achieve conceptual clarity have, therefore, largely given up the search for characteristics which would support a global definition of non-formal education and sought instead to allocate the problem to specific contexts. Defining non-formal education has thus become a functional issue which emphasises the grounds on which 'formal' is distinguished from 'non-formal' in a particular instance, or on which degrees of 'non-formality' are allotted to various types of non-formal activity. In some contexts, the grounds for discrimination might result in the educational activity being labelled formal, whereas in another context, using different criteria, a similar activity might be labelled non-formal.

Definitional
Contexts

The basis on which contextual definitions of non-formal education can be made are numerous, but several tend to re-occur in the literature more frequently than others²¹⁾:

a) Administrative Affiliation: In almost all societies some agent or agency is designated as having primary responsibility for education. These agents are usually quite visible and their functions are rather well delineated. At the national level they may be education offices, bureaux and ministries, while at the local level they are often education officers, schoolmasters and teachers. One way then in which non-formal education may be distinguished is to say that it consists of all those educational activities that are not discharged by formally designed educational agencies. If the qualification 'deliberate educational activities' is added, non-formal education may be effectively separated from informal or incidental education, such as that acquired in the family or the society as a consequence of individual or group membership.

b) Pedagogical Approach: A second basis on which the distinction between formal and non-formal education is often made

relates to the pedagogical style evident in the teaching-learning process of each. Whereas in formal education this process tends to be ridged, teacher-oriented, and measured in terms of adherence to established standards, the non-formal approach is more flexible, builds upon the needs of the learners and tends to be measured in terms of client satisfaction.

c) Educational Clientele: Perhaps the most commonly applied basis of discrimination between formal and non-formal education relates to educational clientele or target-group. Formal education not only initially selects specific groups on the basis of age and other criteria, but it continually screens out individuals, leading to ever-decreasing educational clienteles at higher levels. The resulting disaffiliated populations are, almost by definition, potential clients of non-formal education and frequently the particular attributes of this disaffiliation are the distinguishing criteria of non-formal programmes, i.e. school-leaver programmes, workers education, literacy retention programmes, etc.

d) Educational Function: Irrespective of the actual outcomes of formal education, the school is generally charged with performing certain core functions relating to cognitive learning and affective behaviour. Literacy, numeracy, respect for authority, mental discipline, etc. are some of the functional responsibilities delegated to the school. An additional core function is that of relating, or articulating these cognitive and other competencies to the prevailing social reward structure of society, something it does by means of its school completion credentials. Another way, then, of discriminating between formal and non-formal education is to treat as non-formal all those deliberate educational functions which lie outside the central core of schooling functions.

e) Relationship to Reward System: As indicated, the connection between formal education and the social and economic reward system is via a set of educational credentials attesting to

school completion. As such, the rewards of formal schooling are usually generalized rather than specific in that they are not a direct product of applied learning. Frequently, however, the rewards of non-formal education are immediate, specific, and directly contingent on what has been learned, i.e. employment, better pay, improved agricultural yield, reduced infant mortality, etc. This relationship to a reward system can, then, constitute an additional basis for distinguishing between formal and non-formal education.

Clearly, there are many more parameters which could be employed to discriminate between formal and non-formal education conceptually, but the above five are sufficient to illustrate the point that such discrimination depends on the purposes for which a definition of one or the other is being constructed. While it would appear that there is often a positive correlation between several parameters, i.e. between, say, administrative affiliations, educational function, and educational clientele, with regard to one type of education or the other, the strength of these correlations (and perhaps even the direction) will vary from case to case. Thus, for example, some types of skill-development programmes which, when measured or defined by pedagogical, functional and clientele criteria are clearly non-formal, may not be related to any immediate or specific pay-offs but, instead, provide the participant with educational credentials with which he can compete for more generalized rewards with the products of the formal school system²²⁾. In such cases, the reward system parameter would tend to negatively correlate with the other parameters used to define the particular programme or activity as non-formal. Ultimately, however, the selection of definitional criteria will be determined by the special needs of the situation so that, for example, the researcher will select one set of criteria, while the educational administrator will select another, and the funding agency a third.

A Working Definition
of Non-Formal Skill-
Development

For the purpose of this study the following definition of non-formal skill-development will be used: any systematic, structured non-school education or training activity aimed at improving rural productivity, income and/or employment for both young people and adults. Such programmes can be classified into three broad categories:

Types of Programmes

- 1) Education and skill-development programmes for employed manpower, such as agricultural extension, farmer training centers, on-the-job training of rural craftsmen, apprenticeship agreements, market and management education for rural entrepreneurs and co-operatives.
- 2) Activities designed to facilitate access to employment. Included here would be: youth brigades, village polytechnics, mobile training units, out-of-school vocational training courses, and other programmes to build skills for entry-level jobs.
- 3) Skill-development programmes associated with income and productivity but not specially connected to labour force participation. This would include adult literacy programmes, community development schemes, family improvement education, nutrition and primary health-care training, political education courses and the like.

The activities listed above are illustrative rather than definitive. Some are obviously relevant for all three categories of skill-development in employment, skill-development in preparation for employment and skill-development for improved productivity and income in a general sense. Farmer training centers and village polytechnics would appear to be two cases in point. As such, it may be useful to look at rural skill-development programmes from another classification perspective, namely the approach employed when implementing them in a rural development context. Here there would appear to be four main categories:

Approaches to
Rural Development

- a) The Extension approach, which emphasises the communication of information about technical practices to the agricultural sector.

- b) The Training approach, which emphasises the more systematic learning of basic and vocational skills and related knowledge, often in a quasi-institutionalized setting.

- c) The Co-operative Self-Help approach, which emphasises support for local institutions and local development initiatives through the provision of education and training in response to expressed needs emanating from the group or collective.

- d) The Integrated Development approach, which emphasises the combination of skill-development and educational services with other aspects of a coordinated rural development programme.

Here again, the specific types of skill-development programmes listed above do not all fit neatly into these four approach frameworks, but the latter do provide a possible analytical structure for examining some of the case material.

IV. Planning

Problems of Planning Non-Formal Education

An appreciation of some of the problems associated with the planning of non-formal education programmes can be gained by looking more closely at the modal characteristics which distinguish it from formal education²³⁾. It is on the basis of such factors that most contemporary planning methodologies are developed:

Structure

Whereas each component of formal education is considered to be an integral and interdependent part of a total coherent

	<p>system, non-formal education is seen as a motley assortment of separate educational activities, each with a life of its own.</p>
Control	<p>The control and responsibility for formal education typically rests with a central Ministry of Education and its regional and local representatives. Non-formal education, on the other hand, is sponsored and run by a wide range of individuals and agencies both public and private.</p>
Clients	<p>The formal school system addresses itself to fairly well-defined population categories, the size of which is generally predictable at any given time. Non-formal training encompasses all learner age groups and the size of groups of potential clients is not stable.</p>
Delivery System	<p>Formal education is institution-based in highly visible school facilities which tend to be isolated from the surrounding environment. Non-formal education takes place in a variety of settings which are not education-specific, i.e. place of work, home, etc. It is, therefore, environment-based and closely related to the community in which participants live and work.</p>
Content	<p>The content of formal education is input-centered and standardized across large groups of learners. It is predominantly academic, abstract, and oriented towards a well-defined package of cognitive skills. Non-formal education is task-oriented and related to the functional needs of individuals and small groups. It is practical and is designed to produce quite specific changes in the learner and his socio-economic condition.</p>
Method	<p>Formal education involves a labour-intensive technology and emphasises teaching rather than learning. Responsibility for the transmission of knowledge is vested in formally qualified and certified members of a teaching profession. Non-formal education utilizes a variety of technologies and pedagogical approaches. Emphasis is on learning rather than</p>

teaching and a wide range of personnel are employed as facilitators of knowledge transmission rather than as teachers.

Duration

Whereas formal education is both extensive and composed of several successive and long cycles, non-formal education is intensive and short cycle. Almost invariably the former is carried out on a full-time basis, while the latter is often a part-time activity which can be adjusted to the temporal constraints of the participants.

Costs

Formal education costs are standardized by level and increase moving up the structural hierarchy. At each level the utilization of expensive plant and staff produce high capital and recurrent costs. In addition, the full-time nature of formal education results in high opportunity-costs to learners. Most of the required revenue to operate formal education is drawn from outside the immediate community. Costs to non-formal education vary from programme to programme. While economies of scale are seldom possible, reductions are often achieved through the utilization of community personnel and facilities on a shared basis. Where non-formal participants are already employed, opportunity costs are lower than for formal education.

The extent of these modal differences between formal and non-formal education imply that many of the assumptions and methodologies associated with the planning of formal education are inappropriate in a non-formal context. In particular, the assumptions connected with centralized planning approaches to formal education would seem to have little validity given the heterogeneous nature of non-formal education structures, content and objectives. Evans²⁶⁾ has outlined some of the basic assumptions associated with the centralized approach and it might be useful to briefly list them and indicate their drawbacks as regards application in the non-formal sector.

a) Social Stability Assumption: Centralized educational planning assumes that the structure of society is stable and that educational systems in the future can be predicted by essentially linear projections from the shape of the existing system. While centralized planning does not rule out various types of structural reforms, it sees the system as composed of three levels with selection processes between each, and with promotion quotas based on a combination of demands from the economy and the pressures of popular demand for more capacity. Limits are then imposed by financial and personnel availability at any given level.

No such perceived relationship between a stable social structure and a non-formal education system exists, however, precisely because the latter is not a system at all but rather a sector which contains a wide variety of largely uncoordinated sub-systems, the structure, content and objectives of which are more or less constantly changing in response to changing needs. In such conditions linear projections on the basis of the existing structure of society would pre-suppose that the needs of the society remained essentially unchanged in all respects except their extent.

b) Economic Model Assumption: The second major assumption inherent in centralized educational planning is that such exercises must be closely tied to the economic model for the planned growth of a particular society. Whatever the assumptions contained in the economic model and whatever the consequences of such assumptions, they are included in the educational plan. One result of such an approach is that shortcomings in the economic model tend to show up as dys-functionalities in the educational system. Frequently, attempts are then made to deal with these by designing various types of non-formal programmes to deal with school-leavers or train for rural occupations. In effect, however, the planner is attempting to design non-system responses to what are at root economic system problems and educational system problems.

c) National Needs Assumption: As indicated in the introduction to this paper, national development priorities tend to take precedence over local development requirements in most Third World countries and this is especially evident with respect to centralized educational planning. Planners treat the education system as an instrument for satisfying large scale social and economic needs. The products of the system are essentially undifferentiated units of output, and they are assumed to have essentially the same skills and qualifications throughout the system. Where this is apparently not the case, there is no need to deal with local and regional needs in the planning process, it is felt. Rather, the problem is seen to be one of manipulating the incentive system so that, on average, the choices and responses of regions and localities all taken together meet the pervasive national needs.

Clearly, a national needs approach to the planning of non-formal education pre-supposes some rather major changes in the order of socioeconomic priorities in LDCs, not to mention the establishment of corresponding inventories detailing non-formal requirements at the national level. Of course, a number of national non-formal education programmes have been implemented on a long-term basis, which do reflect national needs²⁵⁾ but here the problem would seem to be that where such programmes run into regional, local or individual problems the opportunity to manipulate the incentive system rather than adapt the programme to the particular need is restricted by the expectation of a short-term pay-off which is central to most non-formal education efforts. As Coombs has pointed out, "non-formal programmes depend for their survival on meeting the immediate needs of the participant, otherwise they stay away in droves"²⁶⁾.

d) Human Resources Assumption: A final assumption connected with the centralized planning approach to education is that which directs people as though they were resources rather than consults them as conscious agents who have wills, desires

and needs. Where planners see their role as one of analyzing the situation and then providing the solution to policy makers, they naturally view themselves as the experts with the necessary technical skills to do the job. Such an assumption obviously conditions the direction of the information flow on which planning decisions are made and effectively precludes local-level participation in the planning process. Yet, it is precisely this type of participation which is most crucial in the planning of non-formal programmes, both as regards their initial design and practical orientation, and as regards subsequent adjustments occasioned by changing local conditions.

Approaches to Planning Non-Formal Education

As with formal education, planning approaches in the non-formal sector are conditioned by perceptions as to education's role in a particular context. In the context of improved rural development two schools of thought predominate. The first of these, and by far the most popular, views non-formal education and training as a potentially powerful force for rapid socioeconomic improvement and believes that, properly applied, it can eliminate or significantly reduce many of the existing disparities in income, productivity and living standards in LDCs. This view contends that the means of achieving these goals is, by and large, already available, but that the strategy for doing so is unformulated or poorly understood. By its own admission, this approach views the problem in 'functional' terms and systematically sets about to design an effective strategy to overcome existing dys-functionalities²⁷⁾. The ingredients in such a strategy or plan of action vary, but the principle steps involved in the process are usually the same:

- 1) Diagnosis of the target group/area and its learning needs.
- 2) Definition of learning objectives.
- 3) Identification of learning constraints.

- 4) Design of appropriate content, methodology, and delivery system.
- 5) Coordination of related learning activities.
- 6) Integration of learning activities with wider development efforts.

Each of these steps comprise a detailed investigation in its own right and the results at one level provide the guidelines for planning at the next level. In recent years this type of planning design has also sought to include at some stage various monitoring devices to provide feed-back for the planner and enable design changes to be effected when unforeseen problems arise. Such 'ongoing evaluation' may or may not be accompanied by a more comprehensive evaluation component designed to gauge the post-implementation results of the programme.

The belief that prevailing inequalities in LDCs are mainly a result of functional deficiencies in existing socioeconomic and educational systems is not shared by all those concerned with rural development in these regions. Where such inequalities are felt to reflect broader social-class conflict between the interests of the have and the have-not, opponents of the functionalist school regard the latter's prescriptive strategy for non-formal education mainly as a means whereby such inequality can be maintained and legitimized²⁸⁾. In the absence of fundamental social and political change, they maintain, the benefits of non-formal education will invariably accrue to those who conform to prevailing socioeconomic and political ideologies, for it is the representatives of these ideologies who direct and control non-formal education provision. Under such conditions, the assessment of learning needs, the definition of learning objectives and the design of appropriate non-formal programmes merely serve to reinforce the status quo and further the social control objectives of ruling elites.

Viewed from a conflict perspective, the planning of non-formal education for rural development is a somewhat different process than that implied in the functional approach. To begin with, it only accepts the potential of the non-formal approach in the context of fundamental social and political change. Given these prerequisites at the macro level, it then proceeds to design a planning strategy in which both the structure and content of the successive steps differs from that of the functionalist school. Although the empirical evidence is limited, the general outline of a conflict-based planning strategy for non-formal education would look something like the following:

- 1) Analysis of the local power structure and distribution of benefits.
- 2) Identification of the legitimate interests of different classes, strata and groups.
- 3) Determination of necessary structural and cultural changes to realize legitimate interests.
- 4) Design of appropriate delivery system, content and methodology.
- 5) Mobilization of population.

Perhaps the most distinctive feature of these two planning approaches, apart from their different points-of-departure, lies in the degree of adaptability which each displays with regard to perceived planning constraints. Whereas the functional approach generally seeks to adjust its strategy to such constraints in the belief that successful adaptation amounts to an elimination of the problem, the conflict approach tends to confront the constraint directly and make provision for its elimination in the plan itself. Where these constraints are of a structural or cultural nature, the latter approach would seem to result in rather less problems of integrating non-formal learning activities with wider development efforts.

These two planning strategies, of course, represent ideal types and in practice an examination of the respective contents of each would probably reveal considerable agreement as to what types of planning information were required and how it best should be secured. Particularly as regards the so-called functionalist approach, there is an increasing awareness of the need to include political considerations in the planning process and a recognition that increased equity and social awareness can only be products of non-formal education if they are built in to such activities from the outset. These and other aspects of the planning process will now be looked at in more detail. In so doing we will be primarily concerned with experiences in countries which have not experienced the type of political change associated with radical approaches to socioeconomic development, though some of our examples may be considered to represent such an approach.

Planning Procedures for Non-Formal Education

1) Determining Learning Needs: A major criticism of many non-formal training programmes is that the good intentions which motivate their initiations is not always accompanied by a realistic assessment of the learning needs of the local community or target group. Where the rationale behind such efforts is generally felt to be the visible lack of specific skills or competencies in a particular rural context, little attention is given either to non-school factors which contribute to this absence, or to the nature of existing village technology which might explain it²⁹⁾. As a result, many non-formal skill-development programmes fail to have any real impact in the local area for reasons which have little to do with the training arrangements per se. This is, of course, an old complaint which has, until recently, usually manifested itself in the form of appeals from those most closely associated with non-formal programmes for corresponding

improvements in rural infrastructure which would enable the products of these programmes to apply their new knowledge and skills. Perhaps understandably, there was little inclination on the part of those working for improvement in rural areas to play down the learning needs of these areas, and to many, the idea of tailoring local training activity to the existing level of village development, even if such a thing could be defined, seemed rather like trying to turn back the clock.

Lately, the need to develop effective rural employment strategies has focused attention on the production needs of local communities and led to an increased interest in identifying the learning requirements associated with existing levels and types of farm and non-farm technology³⁰⁾. Both as regards the provision of basic education to rural youth and in the context of non-formal training for out of school groups, the intention is not merely to broaden the base of traditional craft and farming practices but, hopefully, to build on them and to encourage innovations in intermediate technology in the learners. In a number of African countries these efforts are already underway, and especially in East Africa the ILO together with UNICEF and UNESCO have been actively engaged for several years now in the development of methodologies for the determination of local learning needs³¹⁾. Indeed, research in general has been giving increasing attention to this field and particularly to its implications for educational planning at the local level³²⁾.

These implications are far reaching for, as indicated, the determination of local learning needs must be based on much more than just the perceived training requirements of identifiable unskilled individuals and groups. Where the starting point for determining such requirements is the local community and its production needs, the planning process must include a rather detailed micro-economic survey together with some kind of assessment of village manpower needs. This, in turn,

implies not only the availability of personnel at the local level capable of carrying out such types of investigations, but in addition, an organizational structure which effectively links village-specific needs and resources to those at the district and regional level.

Clearly, the process of determining the local learning needs cannot rely on planning and subject specialists alone, but rather must involve local participation at all stages. One problem which arises here, however, is how to achieve a satisfactory working arrangement between representatives of traditional community authority and the numerous other individuals and groups whom it is meant should share in the planning and decision making process. With the focus of attention squarely on the traditional economy and its particular training needs, it can be assumed that traditional interests are going to be more prone to take an active role in the determination of learning needs than if these were formulated only in the context of schooling.

At the moment, the approach being taken to learning needs determination by ILO and others is essentially a fact-finding one in which local-level data relating to village skills and felt needs is systematically collected, analyzed and developed into various types of learning modules. We will return to look at these instructional packages later, but here it should be noted that the identification of both skills and needs, prior to the design of relevant training activities, is meant to be a comprehensive process covering both the school and out-of-school populations. As such, many of the resulting skill-classifications and learning-needs categories are not recognizable in terms of standard vocational or subject matter terminology. In the informal sector especially, it is often impossible to classify the local artisan as either a carpenter, a sheet-metal specialist or a blacksmith alone. Similarly, the cataloguing of learning needs generally begins

from a specific felt-need, e.g. a new well, or improved wheel-carts, and then must be translated into the design of a particular learning activity. The means whereby all this local-level learning needs information is collected is illustrated in the attached data forms from the ILO/UNESCO/UNICEF joint cooperation project on the Introduction of Technology in Basic Education in East Africa. It will be seen that these instruments cover pretty thoroughly the areas of investigation which Coombs and others feel to be particularly essential in the planning of all locally-oriented non-formal education programmes³³⁾.

2) Establishing Learning Objectives: Most conventional approaches to non-formal skill development (except perhaps various forms of on-the-job and in-service training) assume that the target group or individual is essentially unskilled when they begin their training and that all require a more or less uniform type and amount of a particular skill instruction. While it is true that frequently non-formal training assumed a minimum of literacy competence as a prerequisite, given this initial condition priority was placed on producing a relatively undifferentiated, 'trained' commodity. This approach to the imparting of skill stems, in large measure, from the conventional context in which most formal skill-acquisition took place, namely the vocational training institute or trade school. Here, the recipients of instruction were usually selected on the basis of some standardized examination system and the training itself was oriented towards specific and rather narrowly defined occupation categories. There was not, therefore, very much to distinguish one carpenter from the next, at least as far as training and formal qualifications were concerned, and those responsible for the instruction had a pretty clear idea of what was expected from them.

The relevance of universal approaches to skill-development in rural areas, even where these apply to specific skill

categories, is recognized to be limited today, not so much because such individual competencies are not required, but rather because of the diverse background characteristics of potential learners and the relatively broad context in which skills will be applied. This is particularly evident with regard to the present emphasis on modular learning in LDCs, where say, under the general heading of plumbing skills, the intention is to provide a whole range of different plumbing tasks which are essentially self-contained but which are at the same time related by common task-elements. A somewhat different approach, yet one which also reflects the need to provide a wider range of usable skills in one package, is that which has been reported in Tanzania where rural organizations are proposing the clustering of different trades together for training purposes. Thus, a skill package for the general builder would include elements of the four main skills needed in the village, i.e. plumbing, carpentry, masonry, and painting, while the general mechanic would combine training in motor vehicle repair, panel-beating, fitting and welding, and auto-electrical work³⁴⁾.

Both the breaking down of skill categories into specific tasks and the inclusion in training programmes of separate but related aspects of a general skill competency, facilitate the establishment of realistic learning objectives for non-formal skill-development programmes. This, in turn, facilitates the evaluation of learner performance and progress according to stated objectives or goals. Where, as in most rural areas, the potential clientele for many skill-development programmes will vary significantly with regard to cognitive ability, previous training and practical experience, the definition of specific learning objectives fulfils a double function: it enables the learner to understand more clearly what is expected of him or her in a particular learning situation, and, secondly, it takes some of the guesswork out of training by telling the learner at each

step what skill he or she is required to master. Perhaps one of the most important aspects of this pedagogical practice is that, through appropriate skill-analysis procedures (whereby a learning task or set of tasks is broken up into a series of cognitive and affective components), it can be applied in virtually any non-formal learning situation from one-on-one agricultural extension provision to the group-oriented rural training center or community development programme.

3) Identification of Learning Constraints: Obviously, a wide variety of constraints can effect the progress and ultimate outcomes of all types of non-formal education programmes and no planning procedure no matter how meticulous and thorough can anticipate them all. If, however, we concentrate on what might be termed 'inherent learning constraints', and ignore for the moment those restricting factors which could, if planning and priorities were altered, be eliminated, the following would seem to be of some importance as regards rural skill-development:

a) In some areas it is not inconceivable that existing levels of artisan-type skills are so restricted that non-formal attempts to build on them would not be feasible. Particularly in regions and among peoples where the historical impact of education has been negligible, the only alternative may be the introduction of a largely new set of craft and artisan skills with all that that implies for the establishment of local interest and demand. As King has demonstrated, skill-depth and the general level of village technology displays wide variation between regions and even in some cases within individual countries³⁵⁾.

b) Where, on the other hand, local crafts and artisan skills have a long history and have given rise to an intricate network of social and economic relations, the ability of village-oriented skill-development programmes to expand the employment potential of this sector through training may be effectively blocked by the class or caste nature of certain types

of skills. The situation in many parts of the Indian sub-continent and in North and West Africa with regard to weaving, printing, carving, and jewelry making is illustrative of this kind of potential problem, but it also exists with regard to less exotic trades such as pottery and blacksmithing in Ethiopia and parts of Kenya.

c) A third potential learning constraint in many LDCs may stem from the prevailing pattern of social relations in a particular area and its effect on the recruitment of target groups to certain types of non-formal training. There is some evidence, for example, that home improvement and family-planning programmes often run up against such social constraints in rural Moslem areas and that extension education among subsistence pastoralists faces similar obstacles. Frequently prevailing social relations in a particular area are a function of existing economic practices so that even where the latter represents a viable base for local skill-development, factors such as the division of labour affectively preclude the participation of key target groups³⁶⁾.

Socio-cultural and economic constraints to learning such as these are largely immune to planning influences and, as indicated above, the tendency is for non-formal programmes to try and adapt their provision to such obstacles rather than attempt to eliminate them. Thus, for example, many skill-development programmes for rural women seek to build on production patterns in the home³⁷⁾, while in some Arab countries the focus of family planning education is directed largely to the male members of the local community. As regards low levels of skill-depth and closed-shop conditions, there would appear to be little alternative in the planning stage except to attempt to include provision for relevant remedial training where appropriate and work for an opening up of restrictive guilds along the lines recently attempted in Ethiopia³⁸⁾.

4) Content, Methodology and Delivery System: On the basis of information relating to learning needs, objectives and constraints, appropriate content, methodologies and delivery systems will be designed. At this point, however, a number of exogenous factors enter into the planning process, among which are considerations of cost/effectiveness, extent of coverage, equity of coverage, quality of service, convenience to clientele, and administrative viability. These are some of the ingredients of a decision matrix which invariably must be employed where a range of different alternatives to training provision presents itself. Such criteria are, of course, highly subjective and a lot of the recent work on planning non-formal education has sought to replace such yardsticks with an all-inclusive measure for determining which approach should be adopted in a particular case, namely, cost-benefit analysis³⁹). The problems in applying such techniques in a non-formal setting, however, is that, while they may be useful in comparing the results of resource allocation between different types of training provision, i.e. measured, say, in terms of subsequent employment or increased income, they provide little information which explains these results. Nor does a reliance on cost-benefit techniques generally take account of other considerations which are essentially non-economic, but nevertheless, important goals of many non-formal education and training programmes. In the context of rural skill-development for increased productivity, income and employment then the choice of appropriate content, methodology and delivery system will depend partly on the goals (and perceived constraints to their fulfillment) of a specific programme, and partly on the feasibility of different alternatives in terms of wider efficiency and other criteria. Essentially, the problem is that of being able to select an approach from a number of possibilities where each is seen to fulfil some of the aims associated with a learning activity. Obviously, this implies that a certain trade-off must occur where no alternative succeeds in fulfilling all such aims, but awareness of the alternatives

and consequences provide increased manoeuvring room for both the planner and the policy maker.

a) Content: We indicated earlier that one of the distinguishing features between formal and non-formal education is that where the content of the former is a well defined set of cognitive knowledge standardized across large groups of learners, the content of the latter is functional, task- or skill centred and designed to meet the practical needs of individuals and small groups of heterogeneous learners. Yet, as also mentioned above, the desire to base such training on existing village technology implies that within a particular skill area there is likely to be a great deal of diversity among potential clients with regard to cognitive ability, previous training, practical experience and so on. Thus, while it may be quite feasible to set up specific training goals with regard, say, to local agricultural practices or village artisan requirements, the content of such training must attempt to satisfy a variety of learner needs stretching from those whose basic prerequisites are deficient, through those who require some degree of re-training, to those who have a relatively advanced yet still incomplete skill competency in the particular field.

It is precisely this kind of situation that the present emphasis on learning modules attempts to deal with. Designing the appropriate content or developing the relevant curricula is, therefore, a matter of considering each skill in turn and identifying the knowledge that should be presented to the respective learners. During this process reference is made to the information gained through the previous 'task analysis' stage, giving the broad areas of work and the elements involved in each task. The skill analysis stage will have detailed in precise terms the cognitive, psychomotor and affective requirements contained in each element and hence, the general content of each element will have been decided⁴⁰⁾. In the ILO Modules of Employment Skills⁴¹⁾,

knowledge, i.e. content, is organized under a series of subject headings which include theory, technical knowledge, graphic information, calculations, and safety and hygiene. Thus, the content of each learning module goes beyond the mere technical aspects of skill-development and includes learning elements associated with the wider behavioural characteristics of learners such as attitudes, values and safe working habits.

Although the modular approach to skill-content determination is expected to find a wide application as the cataloguing of rural skill needs develops, it is unlikely that it will be appropriate for all of these needs. Where the focus of attention is less on transmitting a body of technical knowledge associated with a particular occupational category, and more on developing problem-solving capacities, the content of the specific learning activity will be determined more by the needs of the particular situation than by the desire to systematically order the components of an activity in a pedagogically advantageous way. Rural apprenticeship programmes, on-the-job training schemes and various other learning-by-doing situations would appear to be cases in point. Where the responsibility for training is delegated to those whose main concern is other than training, the content of the learning activity is likely to be a good deal less structured and less predictable than that of the modular approach.

Finally, there are increasing indications that in a number of LDCs deliberate efforts are being made to include aspects of social and political awareness in all skill-development programmes. The means whereby this is done varies from country to country and from situation to situation, but often, as in Tanzania, it consists of relating particular skill-development activities such as adult education and farmer training to new concepts of local decision-making

and community participation in development⁴²⁾. In Botswana, an integral part of the curriculum of the Brigades consists of a development studies component which is designed to provide a broader rationale for the activities and training of these units. Similarly, in Ethiopia and Somalia the emerging systems of Community Skill Development facilities stress the ideological component in rural training programmes and the need to fundamentally alter peasant perceptions regarding education and socioeconomic improvement at the local level⁴³⁾.

It would seem, therefore, that the content of rural skill-development programmes will be conditioned by three major factors, namely, the extent of pre-training competency among trainees, the perceived production needs of on-the-job training, and the degree to which training seeks to increase social, political and economic awareness on the part of target groups.

b) Methodologies: An integral part of the modular approach to rural skill-development is its emphasis on a learner-centered methodology as a means of involving the client in a dynamic educational process⁴⁴⁾. Recognizing that the effectiveness of traditional teaching methods depend, to a inordinate extent, on the ability and ingenuity of the particular instructor and generally result in little meaningful interaction between the latter and his pupil, a declared aim of those involved in designing and implementing rural skill-development programmes is to redefine the relationship between the recipients of knowledge and information, and those charged with imparting it. Clearly, there are strong pedagogical reasons which support such an approach, but in the context of building on local skill patterns and utilizing existing community resources, the learner-centered approach recommends itself for a number of practical reasons as well:

i) Where a particular skill programme seeks to expand or improve on existing technology it is likely to also involve village practitioners in this endeavour. Indeed, given the wide range of vocational and basic skills which it is intended to develop in many rural areas, it is inconceivable that trained personnel could be provided for such purposes even if such training were available, which it usually is not. While there are some examples of local artisans being provided with basic teacher-training instruction in connection with local skill programmes, the great majority will not be given this opportunity and will rely instead on the establishment of informal learning arrangements which stress mutual cooperation and group participation.

ii) Learner-centered methodologies are also necessary because of the wide range of background characteristics which learners will display in many programmes. There is, therefore, a need for individualized instruction which takes into account differential levels of literacy, cognitive ability and previous training. The degree of personalized instruction which can be incorporated in a given methodological approach will, of course, vary but where the aim is to eliminate dropping out which results when the pace of instruction is too rapid for a proportion of the learning clientele, some type of pupil-monitoring device (other than examination results) will have to be incorporated in the teaching methodology.

iii) A third factor supporting learner-centered methodologies and greater pupil involvement in the learning process is that much of the envisioned training in vocational and basic skills will take place in a working environment and be directly related to the practical application of training in a rural setting. Many programmes, for example, will be part of specific rural development projects and in others it is intended that theoretical instruction in a rural training center or a community skill-development facility will be combined

with practical instruction on the job. In such a situation, the experiences of those undergoing a particular type of training are likely to be significantly different when it comes to applying this knowledge and this, in turn, is likely to lead to the identification of certain specialized requirements within a specific training programme, which only a learner-centered approach can deal with.

iv) Finally, where the content of rural skill-development programmes includes not only skill instruction but information relating to broader social and political questions and behaviour patterns, the educational process must necessarily be in the form of an inter-active dialogue among all those who participate. If this seems to be out of place in a skill-development context, one only has to look at some of the recent experiences with rural training programmes in Cuba and China to see that great emphasis has been placed on involving the recipients of such training in discussions regarding the wider social and political implications of their specific training activities.

These then are a few of the considerations which the planning of an effective methodological approach to rural skill-development training seeks to deal with. Obviously, an effective relationship between the instructor and the trainee is only one part of a larger process which includes appropriate learning materials, delivery systems, training equipment and so on, but it is often on the basis of a particular teaching methodology that these other ingredients are constructed.

Delivery Systems: The selection of an appropriate delivery system for rural skill-development is, by and large, a practical problem based primarily on considerations of cost effectiveness and convenience to the clientele. This is particularly evident with regard, say, to the rural extension approach to farmer training where demonstrators act as change agents on the spot, usually with very little equipment or

additional manpower at their disposal. More recently, new approaches to extension training have relied heavily on radio broadcasting, not only as a means of disseminating information relevant to the local farmer, but also in the context of correspondence training in specific farm-related skills. Where it is clearly impossible for farmers to participate in extended training programmes away from the farm, short courses and seminars are often arranged at local farming training centers where the content generally tends to be thematic rather than skill-oriented.

As many skill-development programmes are meant to operate on a part-time basis, planners are often anxious to explore opportunities for sharing delivery systems with other rural education interests. Frequently, arrangements are made with local primary schools to utilize existing personnel and facilities for part-time or evening courses, while in some countries attempts have been made to share non-formal delivery systems between several different ministries responsible for different non-formal programmes in the same area.

An advancement on the principal of sharing delivery systems is represented by the multi-purpose training and development centers which have sprung up in a large number of LDCs recently. The model for many of the latter has been the Thana Development Centers of Bangladesh's Comilla Project⁴⁵⁾ which contain all the different training activities and rural services associated with the project, i.e. credit facilities, agricultural inputs, health services, etc. In Kenya, the Farmer Training Centers which came into being in the mid-1960s closely resembled those of Comilla, although plans to extend these multi-purpose centers to the sub-district level in Kenya, thus facilitating daily access by local families, were not fully implemented.

Where the nature of skill training is more properly vocational and requires access to appropriate equipment and facilities,

it is difficult to get away from the need for rather conventional delivery systems of the trade school type. This is feasible in fairly heavily populated areas where instruction can be carried out on a shift basis for more effective use of facilities but it is impracticable in sparsely populated rural districts. In such conditions, two potential alternatives present themselves, each of which has been tried extensively in connection with formal education provision. The first is to maintain the centralized facilities but to provide boarding accommodation to trainees who come from remote areas⁴⁶⁾. Previous experiences clearly show, however, that residential facilities are extremely expensive and where those coming from remote regions also tend to be the poorer of the rural population, unit costs are even higher. The second alternative, and the one employed in the well known national training programme in Colombia SENA⁴⁷⁾, is the provision of mobile facilities. Here too, the cost factor appears to be considerable and, in addition, this approach presents special problems stemming from the need to transport equipment and materials over rugged terrain, to organize the local programmes in advance, to arrange for follow-up training at a decent interval, and above all, to secure trained personnel who are prepared to spend much of their time away from home under hard conditions.

In the end, the selection of an appropriate delivery system for skill-development programmes will, as indicated above, have to weigh a number of factors against each other and settle for the approach which satisfies the largest number (or the most important) efficiency and other criteria by which various alternatives are measured. An example of how such a decision matrix might look is presented below. The values in the respective cells are illustrative only, as are the various criteria long the horizontal axis. We assume a relatively remote and poor rural area with low population density:

Delivery System	Criteria of Efficiency			
	Cost- Effectiveness	Convenience to Clientele	Quality of Service	Administrative Viability etc.
Centralized Facilities	good	poor	good	good
Mobile Facilities	fair	good	fair	poor
Boarding Facilities	poor	fair	good	good

The Systems Approach to Rural Training - Truga

Each of the above planning considerations represents a specific type of training programme input, and where such programmes are designed to produce a particular kind of output, i.e. trained manpower, they can be viewed as training systems. The systems approach to training has long been used by business, industry and the military to deal with training problems which have arisen as a result of the increasingly complex nature of commercial procedures, industrial processes, and weapon system technology. Essentially, the systems approach to training is a set of principles emphasizing the clear definition of training objectives and the specific design of the means of reaching those objectives. It views the training process as an organized whole, consisting of individual components which, if properly ordered and structured, will produce the desired training objective.

Recently, attempts have been made to apply the systems approach to the design and delivery of non-formal skill-development programmes in the rural areas of LDCs. Beginning with the identification and analysis of rural learning needs, the ILO's "Training for Rural Gainful Activities" (TRUGA)⁴⁸ then goes on to define its desired output in terms of specific

learning objectives, and its input in terms of the existing characteristics of the training target group. This allows for the specifying of necessary training content to close the gap between the existing situation (input) and the desired training objectives (output). Next comes an examination of the operating conditions within which training programmes will function, i.e. learning constraints, facilities, personnel, materials, etc., followed by the design and production of the various training components, the execution of the programme, and the evaluation of results.

Truga consists of eight major components, each representing a step in the process of designing and delivering an effective rural skills-development programme. We have already dealt with most of these in a planning context but it might be worthwhile to briefly look at them again in relation to the Truga concepts:

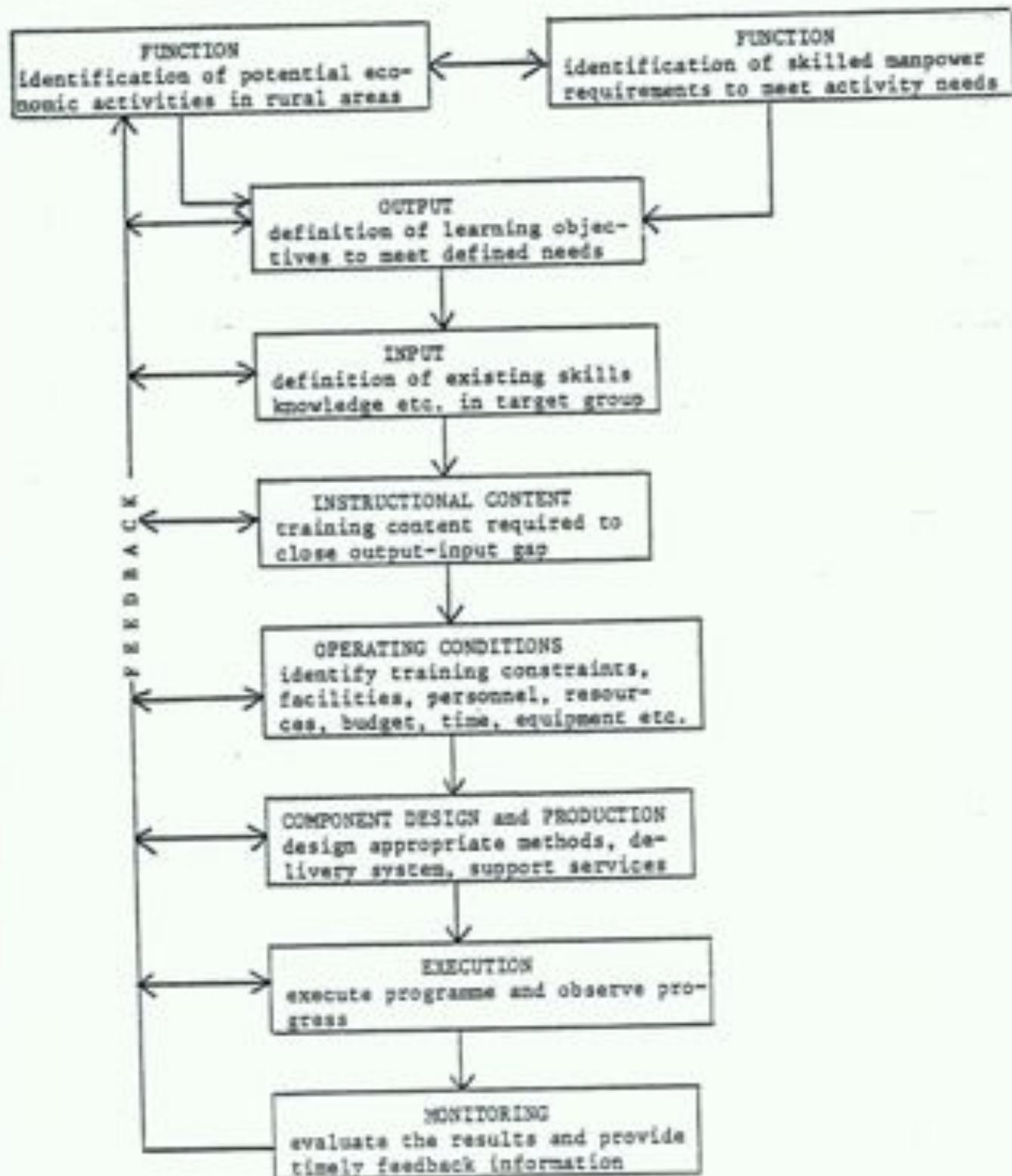
<u>Planning Considerations</u>	<u>Truga Concepts</u>
1. Determination of Learning Needs	Training System's <u>FUNCTION</u>
2. Establishing Learning Objectives	Training System's <u>OUTPUT</u>
3. Characteristics of Target Group	Training System's <u>INPUT</u>
4. Content of Training	Training System's <u>INSTRUCTIONAL CONTENT</u>
5. Learning Constraints	Training System's <u>OPERATING CONDITIONS</u>
6. Designing Methodologies and Delivery Systems	Training System's <u>COMPONENT DESIGN</u> and <u>PRODUCTION</u>
<hr/>	
7. Implementation	Training System's <u>EXECUTION</u>
8. Evaluation	Training System's <u>MONITORING</u>
<hr/>	

These then are the main components in the Truga approach and, as we have already seen, each is associated with specific types of information relating to specific conditions in the rural sector.

The functional relationship between the Truga system components is presented in the following diagram:

Training for Rural Gainful Activities

(TRUGA)



Thus, the system's function implies the collection of data relating to skill needs in the local community, while that relating to input refers to the existing educational and skill levels in the target population. In each case, the components will reflect a number of overriding considerations common to all rural skill-development programmes, e.g. the need for the community to participate in the determination of skill needs, instructional context suited to the learning characteristics of the trainees, instructional materials designed to facilitate the learning process at the training site, etc.

Coordination and Integration:

Coordination

While the non-formal training process can be viewed from a systems perspective, the resulting individual programmes are themselves only components of a wider rural learning system comprising a formal, a non-formal and an informal sector. Traditionally, the objectives of these three training sectors have differed significantly so that attempts to coordinate their various activities for practical or other reasons have not met with any substantial success. However, with the present emphasis on the common objective of rural development, the need for such coordination is clear. Moreover, given the recent efforts to reform the rural primary school, and to build on traditional learning systems in a number of LDCs, the prerequisites for coordination would also appear to have improved significantly. As regards non-formal programmes per se, the increasing support for multi-purpose rural training centers encompassing both a wide range of skills training and a rational approach to the utilization of facilities, personnel and resources is a particularly good example of such coordinated efforts. With regard to the coordination of formal and non-formal learning activities, the inclusion of the latter in post-primary,

community education, and community skill centers in Tanzania, Ethiopia and Lesotho⁴⁹⁾ not only serves to make better use of existing education and training resources, but provides a direct link between the content and objectives of the formal school and those of the respective non-formal programmes connected to the school. Indeed, where properly planned non-formal programmes can be shown to lead to improved employment prospects, linking them directly to the primary school system would appear to be the quickest way of gaining greater support for such programmes from primary school populations.

Integration

In order to facilitate popular support for non-formal training and to insure that such training has an impact on rural development problems, it must be integrated with development efforts outside the educational sector. Where one of the major failings of previous non-formal training efforts has been its isolation from real world conditions and its fragmentation into a myriad of separate programmes each with its own particular goals, facilities, methodologies, sources of support, etc., integration should seek to relate non-formal training to other developments at both the local level (i.e. horizontal integration) and at higher levels (vertical integration). At the local level the direct connection with community development programmes serves both a training and a functional purpose and, as we shall see below, the combined impact of training with production is both greater and more immediate than where non-formal programmes provide training and then practice. In terms of vertical integration, the main aim should be to establish links with organizations and programmes operating at higher levels in order that the latter may be able to support and nourish training and development efforts at the local level. Of particular importance here are regional research facilities which are engaged in developing and providing relevant training methodologies and training hardware to meet local needs.

but these connections should also be established with the potential users of trained manpower including specific Government departments engaged in rural development projects and private businesses and industries operating at the local level. The means whereby attempts have been made to both coordinate and integrate non-formal programmes with other development oriented organizations and projects will now be looked at in the context of programme implementation. Rather than attempt to look at the whole range of training programmes in the rural sector, we will concentrate on two broad categories, namely, those dealing with the agricultural population and those concerned with the production of, essentially, non-farm skills.

V. Implementation

Training Programmes in Agriculture

Perhaps the most fundamental difference between training programmes for the farming population and those for most other segments of the rural community in LDC's is that the former seek to improve income and living standards through increased agricultural productivity rather than through increased employment opportunities. While this distinction may appear to be self-evident, it has important implications for both the content of skill provision to the farming population and the manner in which the content is organized and transmitted. Thus, for example, where training is designed to facilitate the effective application of an appropriate technology, the training process is likely to be less concerned with transferring a standardized body of knowledge (with regard, say, to various agricultural practices) than it is with adapting that knowledge to the specific needs of the individual farmer. Secondly, while training requirements for the non-farm population cannot be viewed as static, those of the agricultural community are more visibly changeable as a result of the diverse nature of farming practices, crops, seasons, etc. In such circumstances the training component must constantly attempt to

adjust to new agricultural conditions and requirements and this requires, in turn, an effective system of communication between the recipients of training and the providers of technological and other input factors on which training is based.

Knowledge System

Viewed from this perspective, agricultural training programmes represent diverse components of a larger knowledge-generation and delivery system⁵⁰⁾ whose successful implementation is also dependent on a number of essential non-educational input factors. Moreover, the appropriate mix of these ingredients in a given rural context is likely to be highly area specific, not only as a result of the existing production characteristics of the area, but also as a consequence of the social characteristics of the target group and the development potential of the particular agricultural zone in question. Where the individual farmer is only one link in this system, the effect of the training component on increased productivity is likely to be a function of the following four major factors:

- 1) the kind of support which training efforts receive from other components of the knowledge-generation system, i.e. research facilities, in-service training of staff, media-support, information services, adult literacy provision, etc;
- 2) the economic, ecological and social conditions in the specific agricultural area and the latter's potential for development;
- 3) the characteristics of the farmers themselves and the relevance of the training provided to their interests and aspirations;
- 4) the presence or absence of complimentary development factors such as credit facilities, fertilizers, access to markets, transport facilities, favourable pricing systems, etc. and how well the training input is geared to these.

Milieu of Potential
Constraints

These then represent the factors which are likely to condition the success or failure of a given agricultural training programme. Whereas some of these are amenable to manipulation so as to favourably influence the achievement of training objectives, many are not, so that frequently training programmes will be implemented in a milieu of potential constraints over which the planners have little or no control. The effects of increasing population pressure on the land, national development priorities, budgetary restrictions on agricultural education, prevailing land tenure conditions and the like all represent external or exogenous constraints which, while generally not directly related to training activities nevertheless often have a direct bearing on the success of these activities.

Organizational
Frameworks

Using the above discussion as a frame of reference we will now look more closely at some of the case study material relating to agricultural training programmes in LDCs. In doing so we will distinguish between approaches on the basis of organizational criteria, i.e. extension services, farmer training centers, integrated agricultural development projects, although it is recognized that such a division is an artificial one where many countries are concerned. Here again, however, the available material tends to reflect these three major approaches to agricultural development in general and agricultural training in particular. However that may be, we are primarily concerned with determining how effectively these three training approaches (a) identify the learning needs of farmers, (b) generate knowledge to meet these needs and (c) disseminate and apply this knowledge to improve farming practices and agricultural output. These then are taken as representing the core-functions of all agricultural training activities and we will be especially interested in seeing how the performance of such functions in each organizational context is influenced by the wider conditioning factors listed above. Table 1 on the next page illustrates the relationship between these factors, functions and organizational frameworks in terms of desired training outputs.

Table 1: Factors, Functions and Frameworks in Rural Training Programmes

Conditioning Factors	Training Functions	Organizational Frameworks	Desired Outcomes
Support Services for Knowledge Generation Socio-economic Conditions and Development Potential Farmer Characteristics, Interests etc. Complimentary Development Factors	Identification of Farmer Needs Generation of Appropriate Knowledge Dissemination and Application of Knowledge	Extension Services Farmer Training Centers Integrated Agricultural Development Projects	Improved Farm Practices and Increased Agricultural Production

Extension Approach

Conventional agricultural extension services seek to promote 'recommended farming practices' via group demonstrations and individual consultation with farmers at the local level. The methodology employed relies on a combination of pedagogical, communications and merchandizing theories, the effective implementation of which is felt to consist of five separate but related stages or phases:

- 1) the achievement of 'awareness' among local farmers, often via communications media but, in some areas through the efforts of so-called 'rural animators' whose job it is to facilitate both awareness of, and interest in the aims of extension efforts;
- 2) increasing farmer interest through local meetings, posters, exhibitions and other organized means;
- 3) the provision of additional information and demonstrations as a means of impressing on interested farmers the benefits stemming from the adoption of recommended practices. A key

element in this stage is often the organization of field demonstrations on experimental plots;

4) convincing interested farmers to experiment with such practices on their own farms on a trial basis;

5) adoption of recommended practices by convinced farmers on a regular basis.

Communications
Problem

Responsibility for determining farmer needs and for providing the training and other input to meet them in LDCs usually rests with the respective ministries of agriculture. The local field agent or extension officer's duties generally consist of passing along pre-packaged technical messages which tend to reflect the priorities and objectives of national agricultural policies rather than the perceived or felt needs of individual farmers. There is, therefore, frequently a communications problem between the change target and the change agent. Moreover, this appears to be most pronounced in areas of subsistence agriculture where traditional self-reliance is often accompanied by a more or less inherent suspicion of outside elements (especially those representing the Government) who advocate radical change in conditions where the margin for error is small or non-existent. In part, this explains the widespread tendency of extension services to concentrate their efforts on what are felt to be the more 'progressive' members of the agricultural community. In addition, of course, progressive attitudes towards extension efforts is often a reflection of relative progress in other respects, i.e. education, size of land holdings, reserve of farm capital, etc. and in the context of local-level extension work such factors are often necessary pre-requisites to a successful training activity. In India, for example, Hunter has reasoned that there is a positive correlation between size of farm, education, and likelihood of adoption of new farming practices⁵¹⁾ and it would appear as if these relationships are widespread:

"...the existing extension work, farm advisory services, etc. operate mainly in very narrow production promotion schemes among a very limited number of selected farmers and farm groups... In too many countries, however, little attempt is being made either to make increasing farm income the main consideration, or to extend the benefits of farm advisory services to include the general subsistence farm producers"⁵²⁾.

Facilitating Farmer Participation

While it would appear from this that the major problem faced by extension services is establishing contact with small subsistence farmers, much of the recent literature seems to feel that the only way this is likely to happen is if such farmers organize themselves at the local level and thereby exert pressure on extension services to become responsive to their special needs. One of the more popular means of doing this is through the creation of village committees, whereby direct farmer participation in agricultural extension activities is facilitated for all farming categories. Not only does this increase the probability that groups who are traditionally bypassed by extension efforts can be reached, but indications from some of the recent farmer participation projects initiated by FAO⁵³⁾ seem to show that increased local participation is also accompanied by increased adoption of recommended practices, compared to conventional demonstration approaches.

Field-Workshops

Indeed, the implications of direct farmer participation in the planning and implementation of extension services (including training) are both far reaching and very much in line with parallel efforts to involve the local community in related aspects of rural development. In a number of Asian countries, for example, an apparently successful extension planning methodology has been developed which ensures the participation of the small farmer. Known as the 'field-workshop'⁵⁴⁾ technique, it is based on a problem identification, problem solving approach to agricultural

development which is multi-disciplinary and involves representative participants from different departments and different levels of the bureaucracies concerned from top administration officials through field-level staff to small farmers and even landless agricultural workers. It is reported that national extension services are particularly enthusiastic about this approach as it reduces the time and energy needed to convince small farmers to participate.

Generating Knowledge

Direct farmer participation via such organizational means as village committees, field work-shops, operational seminars and so on represent important attempts to orient extension efforts towards the needs of small farmers. A second emerging trend in these efforts relates to the generation of relevant knowledge and training to meet these needs. Traditionally, extension activities consisted primarily of attempts to disseminate improved production technologies to the farming community and responsibility for developing and applying such technologies accrued to specialists in the ministries of agriculture, university research organizations and graduates in agricultural sciences. Clearly, these remain important components of the agricultural knowledge generating system but there is general agreement that, thus far, their most impressive contributions have mainly benefited the cash-crop farmer who is well placed to provide the additional input that research miracles often demand, i.e. increased fertilizer and labour requirements associated with fast-maturing rice and wheat strains.

Local-level Research Facilities

In part, the problem of adapting research to the needs of small farmers is felt to be very much one of relocating such facilities in closer proximity to these farmers and in several countries (most notably India), networks of Agricultural Polytechnics or Farm Science Centers have been established in the past five or six years⁵⁵⁾ which seek to

establish a closer contact between the change target, the change agent and the latter's research support services. At the same time, where one of the major shortcomings of conventional extension approaches is seen to have been the manner in which research results were conveyed to the local farmer, increasing attention has been placed on developing new training methodologies for extension personnel. Particularly in Africa, a number of innovative training approaches applying to both extension personnel and local farmers are presently operating which go significantly beyond the mere passing-along of technical information to interested individuals and groups in the agricultural sector. Thus, for example, the trend in Botswana in in-service training of extension agents and demonstrators is beginning to move away from the upgrading of the technical expertise of such individuals and more towards the provision of training in effective extension methods in rural areas⁵⁶). Here special emphasis is given to the social science component in extension training (particularly elements of rural sociology) and participants are required to carry out field surveys which provide permanent records of each farmer's 'minimum essential needs' so that extension efforts can be both more comprehensive and individualized to cater for individual farmers' problems. In this connection, a pan-African Center known as INADES Formation, has been engaged for over a decade in preparing and supplying extension personnel and groups of farmers with training and self-instruction materials relating to a wide variety of agricultural topics. The latter range from agricultural apprenticeship courses by correspondence for adults engaged in farming and animal husbandry (translated by FAO into English and Arabic) to training manuals for local-level extension personnel and rural animators. In all cases materials attempt to pay special attention to the socio-cultural context in which they are to be applied and the group approach is designed to involve even the least developed farming categories:

"The group serves not only as a means of involving illiterate farmers in studies, but also gives them a definite training. In fact, forming groups to acquire new technical knowledge encourages the collective application of cultural methods, and then the establishment of groupings of a pre-cooperative type".⁵⁷⁾

Some Results

As indicated earlier, the increasing involvement of small farmers in the planning and implementation of extension activities seems to be associated with a greater willingness on their part to experiment with innovative practices. Moreover, in those areas where this type of extension approach made provision for other important input factors, i.e. improved seed, fertilizers, chemical weed-killers, etc. substantial increases in small farm yields were often recorded. This was the case with the FAO sponsored extension programme in dry land wheat farming in Iran⁵⁸⁾, with a scheme to raise potato production in Lesotho⁵⁹⁾ and, initially at any rate, with the SATEC groundnut scheme in Senegal in the mid-1960s⁶⁰⁾. Each of these extension projects combined training with technological and physical input which sought to create some of the necessary pre-conditions not generally available to the small farmer in LDCs. As such, they represent innovative rather than conventional approaches to extension provision in that they integrated training with other input factors from the outset.

Farmer Training Centers

While the recent trend in agricultural extension is to provide the small subsistence farmer with a more comprehensive package of knowledge and services to meet his special needs, this transformation is likely to be a lengthy process in many LDCs as a result of the bureaucratic and other organizational constraints which national extension services must contend with in their respective

ministries of agriculture. Indeed, it was largely in response to such constraints that Farmer Training Centers became a popular complement to and/or substitute for extension services in many LDC's in the 1950s and 60s. Initially, FTCs were envisioned as a means of providing a more systematic and institutionalized approach to farmer training than that represented by extension methods. The early centers established in Kenya, Senegal and India offered one to two year courses for model farmers engaged in cash-crop production and while the emphasis tended to remain on improved production techniques, importance was also placed on education related to various aspects of farm management such as: the use of available credit facilities, marketing techniques, labour utilization, record-keeping procedures, and a host of other farm-related skills which contribute to the more effective and efficient running of family-based agricultural concerns. In this regard, farmer training centers were frequently able to offer other members of the farming family useful and important training, i.e. home economics and other domestic education, in conjunction with their more agriculturally-oriented programmes.

Localizing FTCs

In recent years, farmer training centers in a number of countries have undergone a number of changes designed to increase their accessibility vis-a-vis the subsistence and small-scale farmer and to improve their ability to function as a local-level resource facility to the farming population. Thus, in Kenya and Tanzania the move has been away from regional centers towards local, i.e. district-level facilities, and much of the training now consists of short 3-5 days courses instead of those which required several months or years previously⁶¹⁾. In India, the Coordinated Farmer Training Programme launched in the early 1970s made provision for local training centers to be attached to field research stations, where both long-term and short-term training courses could be offered to farmers depending on their special needs⁶²⁾.

There are several more or less inherent advantages to providing training in FTCs, some of which reflect essentially practical considerations, others which are more closely associated with the training process per se. Thus, for example, FTCs are generally less labour intensive forms of training than are extension services and costs can often be further reduced by involving the centers in various types of commercial production as well as training. In addition, it would appear that staff recruitment to training centers is usually easier than for field level extension personnel and the partly classroom methodology employed reduces unit costs. On the training side, effectiveness is often enhanced by the fact that FTCs supply many of the input factors on which successful agricultural education depends - factors which are not generally available to the individual farmer in the context of his normal work. A further advantage of training centers for the farming population, and one which reflects a growing trend in Africa and Asia, is that they can act as a focal point for the provision of in-service training to extension staff and thereby bring the latter into closer contact with the socioeconomic environment in which they will be working. Thus, FTCs are able to act as a local resource facility not only to the farmer but to other related services involved in agricultural development.

Broadening
FTC Content

Just as conventional extension services in many countries are striving to provide their clientele with a more comprehensive package of agricultural assistance, so too are FTCs increasingly broadening the nature and type of skill provision to local farmers. In Kenya, the setting up of district development centers in the mid-1970s sought both to improve the effectiveness of existing farmer training activities and to ally these with skill development for rural co-ops, improved health, community development and the general needs of rural youth and adults. An important implication of the DDC approach was that it facilitated

the bringing together of technical and other expertise from many government departments at the local level. This, in turn, led to a better coordination of agricultural and other development efforts, improved course quality by providing a greater pool of training staff to draw upon, increased the availability of financial resources in the training center and generally represented a more realistic orientation of training to meet the many-sided needs of agricultural development.

Literacy Requirements

One problem faced by many FTCs stems from their desire to provide farmers with both practical training in demonstration fields and theoretical instruction in classroom conditions. Where many small-scale farmers have little or no education, low literacy levels constrain the provision of modern agricultural training and in some regions this has led to the setting up of educational requirements as a pre-requisite to acceptance in training centers. In Uganda, for example, most participants in the District Farm Institutes in the late 1960s represented those who had received some formal education or were fluent in English, while those who had received no schooling (the majority) or could only speak the local language were in a distinct minority⁶³. This problem has also been experienced in the Coordinated Farmer Training Programme in India, but here special provision has been made for functional literacy teaching for participating farmers.

Follow-up Services

A second problem which the FTC approach has experienced in several countries has been the lack of follow-up services whereby participants could effectively apply the training received in the centers to their own benefit. As indicated above, attempts are being made to remedy this shortcoming by integrating extension services at the local level with farmer training in the FTCs, but there would also appear to be a need for making available to participants in the centers more of the modern implements and equipment which FTCs use in their training activities. Here

it is perhaps significant to note that while substantial effort is being made to diversify and expand the training capability of FTCs and Rural Training Centers, this has not been accompanied by similar efforts to provide these centers with physical resources (including credit) which could be made available to local farmers on an individual and group basis⁶⁴⁾.

Some Results

Notwithstanding these deficiencies, the available evidence indicates that FTCs do have an impact on agricultural production in those areas where they are operating. Reports from the Senegalese centers in the early 1970s tell of yield increases ranging from 50 to 100 per cent among FTC participants⁶⁵⁾, while in Kenya and Uganda FTC farmers displayed both a higher adoption rate of recommended practices than other farmers and higher cash incomes⁶⁶⁾. Perhaps the most prevalent effect of FTCs has been with regard to their function as a source of information for local farmers in a given area. Thus, in a number of East African and South Asian countries where farmer training centers provide short courses for local farmers, surveys indicate that such centers are the major source of agricultural information for these populations⁶⁷⁾.

The Integrated Approach to Farmer Training

Both the extension approach to farmer training and that represented by FTCs, while differing in several respects, are dependent for success on a number of common factors. Among the latter are: a well functioning communications network linking the individual farmer and his needs to the extension agent and/or the training facility; a responsive research capability able to focus on a wide range of agricultural problems at the local level and, the availability of related input whereby that which is learned or taught can be effectively implemented. The latter constitutes a broad category and includes physical equipment and materials, access to agricultural credit at

reasonable rates of interest, availability of follow-up advisory services both on aspects of farm production and farm management, information of marketing facilities, pricing systems, raw materials and so on. Depending on the particular context, each of these factors can be shown to have had a crucial effect on the achievement of training objectives in any number of extension or FTC programmes, and towards the end of the 1960s much of the attention of multilateral and bilateral aid agencies began to focus on ways of strengthening the training component in agricultural development projects and combining it with the full range of input factors on which successful training was seen to depend. In part, this concern reflected some of the early disappointments with the application of green revolution technology in a number of South Asian countries - disappointments which served to underline the importance for agricultural development of factors besides research breakthroughs. At the same time, it became increasingly apparent that the latter would not be the catalyst of increased agricultural productivity for the great majority of farmers in the Third World. Rather, while it was hoped that improved research would continue to contribute to this process it was recognized that:

"...most of the increases in agricultural productivity are going to have to come from small, steady increments based partly on fuller and better application of existing technologies, partly on new research findings and largely on improvements in input supplies, credit, markets and prices"⁶⁸⁾.

In itself, the attempt to combine all of the essential ingredients in a comprehensive agricultural development effort was nothing new. The Gezira cotton scheme in the Sudan was one of the earlier attempts to achieve such an aim, having been initiated in the 1920s⁶⁹⁾, and the extensive Comilla project in Bangladesh has been operating since the

1950s⁷⁰⁾. What does distinguish these earlier efforts to implement integrated agricultural development projects from the more recent ones in Ethiopia (CADU), Afghanistan (PACCA), Mexico (Pueblo), Malawi (Lilongwe) and elsewhere, seems to be that the latter:

- 1) received from the outset substantial aid from external aid agencies both as regards planning and implementation;
- 2) made provision for a much greater education and training component than the earlier schemes;
- 3) sought to alter aspects of prevailing social as well as economic conditions in the project areas.

Thus, as regards the SIDA-sponsored CADU project in Ethiopia⁷¹⁾, training activities were directed towards all participant groups in the scheme, from the Ethiopian staff recruited from agricultural colleges and schools, to local level extension officers (including women), leaders of the proposed co-op societies, and individual farmers themselves. Similarly in the FAO/SIDA project of agricultural credit in Afghanistan⁷²⁾, training programmes were an integral part of each phase of the scheme and no less than 81 individuals out of a total staff complement of 91 attached to PACCA were primarily engaged in training and/or extension activities⁷³⁾. In addition, both of these projects anticipated the carrying out of major land reform measures in the respective countries and SIDA support of phase two of the Afghanistan scheme was made conditional on the passing of relevant legislation necessary for the coming into being of cooperatives which were to constitute the future organizational framework for this project as well⁷⁴⁾.

The Lilongwe Land Development Programme in Malawi and the Pueblo project in Mexico⁷⁵⁾ were two more integrated development schemes which sought to increase yields among small-

divity, that in the non-farm rural sector is squarely on the provision of village-level skills to meet the existing basic and vocational needs of local communities. In most areas this responsibility has traditionally rested with the informal training sector where an almost invisible process of skill transfer has taken place via indigenous apprenticeship systems, labour-exchange agreements, family-based craft industries and a host of other informal work contexts which characterize rural subsistence economies.

Yet, while there has always been a certain fascination with the ingenuity and resourcefulness of the rural artisan or the village entrepreneur, it is only recently that people have begun to look more closely at the development potential of these informal work categories and to examine the process whereby such skills and knowledge are passed on from one generation to another in a seemingly effortless and uncomplicated manner. While this research has only just begun in most areas⁷⁶⁾, there is already general agreement that, as regards skill-transmission, the informal sector fulfills at least two important criteria for an effective and broad-based training system, namely, it is cheap, and it tends to be closely attuned to the skill needs of the area in which it operates. In addition, many observers think that they see in the informal sector a potential for rural skill development which does not appear to be associated with migration to urban areas, saturated labour markets or unrealistic trainee aspirations. Hence, much of the recent interest in rural skill development has centered on ways of building on existing informal training patterns, of upgrading them through the introduction of elements of intermediate technology and of replicating their training function in a more systematic way in non-formal community skill centers.

Early Rural
Training Centers

If direct support for indigenous training systems in the Third World represents something of a new approach vis-a-vis the rural informal sector in these countries, the interest in reproducing such skills in rural training centers certainly is not. The provision of RTCs for both farm and non-farm skills was a feature of the colonial period, particularly in India and Anglophone Africa, and in the immediate post-independence period most of the new nations established some brand of national youth service, village polytechnic, industrial training center, etc. where the intention was to provide what was felt to be practical training relevant to the needs of the rural sector. There are, however, a number of important differences between these 'first generation' training programmes and the 'second generation' community skill centers which are presently coming on line in many developing countries. We will have occasion to go into these differences in more detail later, but for the moment they can be listed in general terms:

- 1) Whereas earlier skill development centers addressed themselves to primary school leavers who had been unable to gain entry to secondary or vocational schools, community skill centers (CSCs) are meant to serve all age groups in the rural community, the young as well as the old, the literate as well as the un-schooled.
- 2) Whereas first generation training programmes concentrated on providing relatively well-educated youth with entry-level job skills, CSCs are much more interested in the self-employment potential of skill provision and with its application to aspects of community improvement.
- 3) Whereas earlier programmes were often part of a regional or national system of youth training, thereby reflecting these wider priorities, CSCs are organized along local lines and tend to reflect a decentralized approach to development problems.

4) While earlier skill development programmes made little provision for the exercise of local control over the planning and running of individual centers, the CSC approach stressed the need for local-level participation in all aspects of the training process. Indeed, where the aim is to utilize existing technologies and practitioners as a basis for such training, this becomes a practical necessity.

5) Most conventional skill programmes in rural areas tended to assume that employment would follow training and therefore there was relatively little attempt to integrate training with production from the outset. Partly through its upgrading activities, and partly as a means of financing CSC training at the local level, the new centers are closely tied in with existing production patterns in the community and are actively seeking to start new ones.

6) A particularly important distinction between first and second generation rural training centers lies in their relationship to the local formal school system. Whereas the earlier skill development centers were often regarded by all concerned as second rate compensation for rural drop-outs, recent moves to reform and practicalize the primary school curriculum have served to narrow the traditional gulf between formal and non-formal training and, in some areas, CSCs are increasingly looked on as an integral part of the emerging basic education system, comprising instruction in both schools and skill centers.

Various Types of Skill Centers

These then are some of the features distinguishing the recent approach to rural skill development from that employed during the 1960s and earlier. If the impression, however, is that CSCs represent some standardized form of skill transmission in all LDCs, this is misleading. While 'community' and 'non-formal skill' are common elements in all of the recent national programmes, the actual framework in which these programmes are planned and implemented varies from country to country depending on national policies

and priorities. Thus, for example in Lesotho's programme to provide 21 Community Skill Centers in the rural areas, the intention is to attach 6 of these to existing secondary or vocational schools while the remaining 15 are to function as satellite centers hooked in with the country's on-going Outreach Programme which seeks to bring skill training to the remoter portions of the country⁷⁷⁾. This desire to tie in skill development with existing educational facilities is also apparent in Sri Lanka where a network of 40 Technical Training Units are being established at vocational training schools to provide self-employment oriented skill provision for school leavers during the day and artisan-upgrading for employed adults in the evening⁷⁸⁾. In Ethiopia, on the other hand, the continued shortage of formal education facilities in the rural areas implies that many of the country's proposed 561 Community Skill Training Centers (117 presently operating) will not only be unable to draw on local formal school resources, but will also be required to initiate a wide range of educational activity in addition to skill provision. Indeed, with the rural phase of the country's National Literacy Campaign slated to begin in 1981/82 great reliance is being placed on the role of CSTc in this effort⁷⁹⁾.

Common Elements
Common Problems

There is, therefore, no standard approach to rural skill development emerging but rather one which contains a number of common elements reflecting common problems. The former tend to be represented by various types of artisan upgrading programmes, craft-training projects, and multi-purpose skill-development centers for youths and adults. They concentrate on improving and reproducing both existing village-level skills and those required for community improvement and they are anxious to involve local practitioners in the training process. Most stress the need for a large measure of community control over these efforts and in some cases this is being facilitated by a decentralized approach to development policy in general and educational

scale farmers (for both consumption and cash purposes) by combining improved production technology with credit facilities and related physical input. In the former, the training of project staff was carried out both in existing agricultural institutions in the area, and in specially designed project training facilities which offered a wide variety of pre-service and in-service courses for staff members at all levels. These were complimented by one-week specialized courses for local farmers and their wives at the local FTC, one-day programmes for large numbers of farmers at designated educational centers, and a multi-media programme including daily broadcasts over a P.A. system, mobile vans, and the production and dissemination of bulletins, pamphlets and extension information in the local language.

In the Mexican project several novel (and apparently successful) training approaches were employed both as regards project staff and as regards the latter's training activities with local farmers. All extension personnel were trained in the field, working alongside experienced specialists. Moreover, research trainees and technical assistance trainees received in-service training together, thus forming a functional inter-disciplinary team directly linked to the individual farmers. While the primary responsibility of technical assistance personnel in the Pueblo project was to convince farmers that increased production (maize) was possible and acquaint them with the relevant 'package of practices' which made this possible, they also fulfilled a number of additional roles. One of these was to teach farmers how to use credit facilities and, equally important, how the repayment of such loans from production increases was dependent on adherence to recommended agricultural practices. In this connection, extension staff and their assistants encouraged the organization of local farmers into credit groups and, when necessary, served as liaison between such groups and the

banking system. In many respects these local credit groups were counterparts to the village committees and other farmer participation examples cited earlier, being both the learning and the lending unit for the project. There was no specified criteria for group membership or group size, formation being largely on the basis of existing informal social organizations in the area.

Any attempt to compare the effects of these very different training approaches associated with integrated agricultural development projects must take account of the equally different objectives, target groups, staffing procedures and base-line situations which characterized each project. By the early 1970s per acre yield increases were reported in each area but, especially as regards PACCA in Afghanistan, the continuing lack of infrastructure facilities, together with problems of integrating other aspects of the scheme (particularly the credit facilities and the management structure) into the existing national framework of agricultural development, meant that production increases at the local level could not fully be exploited for market purposes or be extended to include all groups in the target areas. While each of the projects achieved considerable success in the creation of local farmer organizations and locally trained extension personnel, there was some concern from each country as to whether these often impressive training systems could be maintained and financed following the withdrawal of external aid. Particularly as regards the dependence of the proposed co-ops for CADU and PACCA on high cost physical input, the financial potential of these organizations to assume these burdens remained in doubt, although some aspects of the CADU scheme had begun to turn a profit as early as 1970.

Skills Training for the
Non-Farm Population

If the present emphasis in the agricultural sector is on providing appropriate types of external input to make farmer training an effective catalyst of increased produc-

policy in particular. Recognizing the need to link skill development with employment and production at an early stage, all countries are attempting to involve existing producers, cooperatives, rural industries, employers associations, etc. in local training programmes and, especially, to encourage the establishment of productive enterprises by creating conditions favourable to rural self-employment.

The Cost of Up-
grading Rural Skills

Earlier we indicated that one of the initial attractions of informal sector training was its apparent cheapness compared to, say, vocational training programmes sponsored by government ministries. Yet, it soon becomes clear that any attempt to systematically upgrade informal training through the introduction of improved technology, implements and materials, credit injections, new production facilities and so on implies that a considerable value-added must result. This is even more apparent when such training is brought into the organizational framework of Community Training Centers, although it hoped to be able to offset costs all along the line by increasing the productivity of trainees and progressively shifting the financial responsibility for skill provision as well on to the local community. Initially at any rate, skill-center costs are likely to be high and the ability of local subsistence economies to defray them low. While initial projections tend to be unreliable, they also tend to under- rather than over-estimate the actual cost so that, for example, the figure of US\$ 20,000 per Community Skill Center in Lesotho and that of US\$ 9,00. for CSTC in Ethiopia must be handled with care. In any case, it should also be remembered that in a number of countries the financial burden of these emerging skill development programmes must be shouldered at the same time as other costly educational efforts are being carried out. Here again, Ethiopia appears to be in a particularly difficult situation. With a primary school enrollment rate under

30 per cent, the country is seeking to achieve full enrollment in 10 years and this alone will require an additional 90,000 new primary level teachers⁸⁰⁾. At present, local communities account for a third of the costs of primary schooling and the proposed expansion can only be achieved, it is felt, if this proportion is raised further. Admittedly, many countries in the region are well on the road to UPE but here too the current wave of reform efforts and primary-level vocationalization programmes imply an increasing cost factor which must be taken account of when planning and implementing skill development schemes.

External Aid

Given this situation, together with a growing belief that educational development in LDCs is finally on the right track, the role of external aid agencies in these rural skill programmes is a very visible one and there is every indication that the major multilateral and bilateral donors are prepared to increase this support in the coming decade. At the moment, the ILO/UNICEF programme for the Introduction of Technology in Basic Education is preparing to implement Phase II of the project (with SIDA assistance) in a half-dozen East African countries, while the World Bank, having financed the first 100 CSTCs in Ethiopia, is involved in a number of similar projects in Tanzania, Sudan, Somalia, Papua New Guinea and several other developing countries. The Danish aid agency DANIDA has, for a couple of years now, been supporting the proposed network of Post-Primary Centers in Tanzania, while SIDA is presently considering an Ethiopian request for aid in the building of an additional 125 CSTCs and the equipping of 150 over the next two years. Lesotho's Community Skill Centers and Outreach Programme (supported by World Bank loan) have already been mentioned, as have Sri Lanka's Technical Training Units (SIDA). The list could be extended to include Craft Training Centers in Swaziland, Skill-Upgrading programmes in Uganda and Youth Training Centers

in Zambia, all of which are to receive external assistance within the ILO/SIDA sponsored Skill Development for Self-Reliance program. In addition to these already functioning or soon-to-be-implemented projects, a number of others are on the drawing boards in India, Kenya, Philippines, Pakistan and Bangladesh. In India, for example, a comprehensive rural training programme for rural youth (TRYSEM) is about to be launched which aims at equipping 100,000 young people per year with self-employment skills and which will assist them to get started by supplying facilities, tools, institutional credit and marketing support. Similarly, in Bangladesh, a new large-scale project to provide rural skill training centers will soon get underway with a \$20 million loan from the Asian Development Bank⁸¹⁾.

Increased Financial
and Technical Assistance

It would certainly seem, therefore, that there is no lack of interest in, or support for, rural skill development programmes at the moment. Nor, judging by the scope of many of the programmes and the efforts being made to design new materials, methodologies and approaches to skill provision, is it likely that financial and technical assistance requirements will decrease in the foreseeable future. On the contrary, most of the programmes mentioned above envision a rather long-term commitment to rural skill development both as regards curriculum reform in the primary school and non-formal skill provision outside of it, and this changing emphasis is increasingly mirrored in the educational aid programmes of external agencies. At the same time, however, there is a perceived need to learn more about the process of non-formal training in LDCs, especially among educational aid specialists who have not been accustomed to dealing directly with the production and employment-generation aspects of education. Certainly, vocational training experts have always tried to keep a close eye on the projected manpower requirements in LDCs but, as we have indicated, the present approach to rural skill development

implies a very different kind of forecasting and matching process. Accordingly, we will now look a little more closely at some of these implications, concentrating particularly on the following themes:

- 1) the range of rural skills and their relevancy
- 2) the utilization of local resources for skill development
- 3) the development of training methodologies and materials
- 4) the organization and management of rural skill training
- 5) local participation in the training process

Rural Skills

Implicit in much of the current literature on rural skill development is the need to redefine skill itself. No longer, it is felt, can one refer to skill categories on the basis of the narrow occupational categories suggested by the terms plumber, carpenter, mechanic and so on. Where training in rural areas is likely to be associated with a wide range of occupational responsibilities, the skilled individual must be one who can call on specialist services when necessary but who, in the main, relies on a collection of basic abilities which allow him to fix a pump, build a shed, dig a well, fence a plot, or fashion rudimentary (but adequate) agricultural implements. He is, in a word, a jack-of-all-trades. In fact, however, most of the skill training programmes envisioned thus far for rural areas do not approach the skill element from this angle at all. Rather, they tend to create categories of training which contain groups of rather specialized skills such as pottery, thatching, weaving, tailoring and so on for rural women, building, tanning and leatherwork, stonemasonry, etc. for rural men plus often the more traditional training in carpentry, electricals, mechanics and metal-working for smaller groups for whom there is still room in the wage sector⁸²). Thus, artisan training schemes and community skill centers are dealing with four or five broad areas of skill development each of which often reflects divisions of labour at the local or village level, and more or less traditional

skill roles as between men and women, youth and adults, literates and illiterates. This, of course, does not take away from the fact that the new approach to skill development is attempting to cater to the needs of all these groups. It does, however, seem to suggest that this approach is more concerned with broadening the range of village level skills than it is with producing some new kind of multi-purpose village artisan or craft worker. The general skill categories we are most likely to run into then are the following:

- 1) traditional rural skills of the craft or trade variety associated with existing cottage industries and individual artisans;
- 2) newly introduced crafts and trades which can be applied in a particular area but are not presently practiced;
- 3) modern sector trades for which there is a continued demand or for which there is a need stemming from local development activities;
- 4) managerial skills reflecting the needs of small entrepreneurs, petty producers, cooperatives and the self-employed;
- 5) community living and home improvement skills dealing with sanitation and hygiene, water supply, pest and disease control, literacy, child care and the like.

Applicability

Clearly, some of the content of these categories will have community wide application while others will be primarily directed towards specific groups. How the different training activities are to be allocated throughout the community will be determined partly on the basis of the needs analysis which is to precede training activities, and partly on the interest in and perceived utility of the particular types of training offered. It can perhaps be assumed that practicing artisans have a fairly good idea as to the local demand for their services and that, consequently, any attempt

Community
Adjustments

to proliferate a particular trade via a training center could run into artisan opposition if the latter are not sufficiently informed regarding the basis on which specific skill needs are projected. At the more general level, community-oriented skill programmes reflect not only an attempt to meet visible needs at the local level, but they can imply as well some rather far-reaching changes in the structure of the community and, as recent experience in Senegal indicates⁸³⁾, the community must be prepared to deal with this situation. This is not just a reference to necessary economic changes to enable, for example, rural skills to be applied or to ensure that skill-leavers find local employment. It also refers to the social function of education and skill training and the need to avoid associating various types of training with specific classes, castes, ethnic groups, economic interests, etc.

Skills for the
Future

It is unlikely that skill requirements at the local level will (or should) be a response only to present or existing needs of the community. For one thing, where the aim is to bring the village into a wider economic relationship with the district, region and country, skill requirements will reflect new and/or expanding markets in the surrounding area and it is with this in mind that many skill programmes include a more comprehensive analysis of economic opportunities at these higher levels. In addition, however, skill provision will have to keep an eye on the future requirements for the community and, particularly as regards basic services, training schemes will be increasingly connected with various public works projects in the rural sector. In the past, such projects have generally relied on local labour but have imported most of the technical skill requirements from the relevant government ministries and departments. While many of these projects will be relatively short-term affairs, they provide opportunities to learn and apply a wide range of semi-technical skills which seldom get a mention in the literature. Simple land-

survey techniques, water analysis methods, soil-testing procedures, elementary drafting and design courses, etc. could profitably be provided at the local level and contribute to the communities ability to plan and design for infrastructure improvement. Some of this kind of thinking appears to be evident in Bangladesh where, in connection with the country's proposed rural electrification programme, plans are underway to train youths in a wide range of technical skills associated with the implementation and maintenance of electrical facilities⁸⁴⁾.

Local Resources and
New Patterns of Assistance

Common to all of the recent skill development programmes in rural areas is the belief that the training process should rely, to as great an extent as possible, on the utilization of local resources. Indeed, the impression given in much of the literature is that the new centers must expect a minimum of help from outside sources and, in particular, from central government. On closer inspection, however, it is seen that it is not so much a question of no external assistance to these local level programmes as it is of a different kind of assistance from that implied by regional or national allocations of finance, equipment and personnel. The operative word regarding local resources seems to be utilization and the type of support envisioned is one which facilitates this utilization. Thus, for example, the intention in Ethiopia, Lesotho, Tanzania and elsewhere is to use, where possible, local practitioners, i.e. village artisans, master craftsmen, etc. for training and animation purposes but in most cases special district or provincial level facilities will be provided to train this personnel. The latter will, therefore, function as a resource center not only for short training courses but in the preparation of materials and equipment for the local centers. While responsibility for building and maintaining local skill centers will probably rest with the local community, the more sophisticated district level facilities (which will provide back-up services much in the same way

as Brigade centers in Botswana) will be more a part of a national programme of skill development and responsibility divided accordingly.

Local Resources and New Technology

Similarly, it is unlikely that the emphasis on using local raw materials and physical resources should be interpreted merely as an economic measure - important though self-sufficiency is. Where prevailing types of skill and levels of technology often reflect a widespread unawareness of local possibilities, directing attention to new sources of raw materials can provide an effective catalyst for technological change at the local level, at the same time as demonstrating to others the potential for replication. This has been seen to be an important consideration in some of the recent Brigade schemes in Botswana:

"Boiteko (a Brigade-sponsored self-employment scheme) has all the characteristics of replicability, at least in economic and production terms. Inputs of external finance and expertise have been strictly controlled. The emphasis of the programme has been on the use of inexpensive technologies, techniques and tools of production, on maximizing the use of local materials, and on the co-operative use of plant."⁸⁵

Stemming the Urban Drift

But perhaps the strongest argument for stressing a local resource approach to rural skill development stems from the need to keep the products of these training schemes in the rural areas. Where earlier rural training facilities relied heavily on imported equipment, machinery and materials together with formally trained vocational teachers and instructors, skill provision soon ceased to reflect the real needs of the area in which it was taking place. Student pressure for skill parity vis-a-vis recognized trade schools, together with the not unnatural desire of instructors to prepare their trainees in accordance with their own established standards, militated against a type of training oriented to the local environment, and in favour of one which could only be utilized in the urban wage sector.

Of course, now it is recognized that local resource utilization is only one of the factors required to insure that skills learned in the rural areas are applied there but, at the same time, it appears to be central to many of the other elements which must be stressed if an appreciation of the potential for skill application in these areas is to be gained. The importance of this recognition has recently been underlined in connection with Tanzania's Post-Primary Centers:

"... it seems to the mission and many other observers that the post-primary centers are steering the students away from instead of attracting them to the rural environment. There are no courses for animal or crop husbandry, nothing on soil conservation, irrigation and the utilization of local raw materials... in fact no encouragement to young people to stay on the land".⁸⁶⁾

Generating
Employment

Finally, it should be mentioned that in addition to the training advantages which derive from using local resources and materials, the latter will, from the outset, fulfill an employment-generation function as well - particularly as regards those who are not involved in the training schemes. While much of the interest in local resource utilization seems to assume that it will be controlled and carried out by individual entrepreneurs, village cooperatives and training center participants themselves, there would appear to be every likelihood that as such enterprises develop they will increasingly prefer to engage local labour to fulfill their raw material requirements. At present, it is this rural unskilled labour which constitutes the bulk of both the rural and urban unemployed, and while migration is often regarded as a function of the higher wages available in the urban sector, to the unskilled labourer the motive for migration is probably more closely related to the fact that, for him, there is little or no opportunity for wage employment at all in the rural sector.

Methodologies
and Materials

The present approach to rural skill development is directed towards a wide range of socioeconomic needs and clienteles in these areas. Nevertheless, regardless of the specific skill to be transmitted or the particular rural sub-group involved, the type of training scheme employed should meet certain common criteria. These criteria, which are taken to reflect some general characteristics of rural populations in LDCs, have recently been reiterated at an ILO/SIDA regional seminar on rural vocational training and, as they form the basis of much of the work that has been done in the past few years in developing appropriate training methodologies for rural skill provision, it might be worthwhile to list some of them and examine their practical implications:

- 1) the training method should emphasize learning by doing
- 2) training should take place where the people live
- 3) training should be adjusted to the convenience of the clientele
- 4) training content should relate explicitly to working requirements
- 5) training must be oriented towards the problems of the trainee and contribute to a solution of those problems
- 6) training content must be delivered in a language that is at a level which the trainee can fully understand
- 7) tools, equipment, training supplies, materials and instruction aids should be readily available and utilize locally available materials

Learning 'Packages' As indicated earlier, part of the present attempt to meet these criteria centers on the development of learning packages or skill modules which seek to break down specific skills and competencies into individual learning elements that can then be directly related to real life situations at the village or community level. Based on a local level analysis of skill needs, the modular approach seeks to adapt the content of training programmes so that they can fulfill a production function while at the same time con-

stituting a learning-by-doing exercise. Thus, in the ILO sponsored SDR project for Eastern and Southern Africa:

"... training or technology is considered as a comprehensive learning exercise designed to inculcate the appropriate skills (knowledge, dexterities, and attitudes) through undertaking meaningful projects. Hence, it could be considered as "on-the-job" training or "learning-by-doing", with an emphasis given to developing problem-solving abilities in the learners"⁸⁷).

Modules for Whom?

Yet, while this sounds like a very sensible approach to rural skill provision, it leaves a number of important questions unanswered. Is the intention, for example, to develop skill modules for the entire range of non-formal training activities envisioned for rural areas or will it be confined to those with an artisan character? Who will be responsible for constructing modules and how will one be able to ensure that local level artisans will be able to employ them? Where a particular type of skill training will be provided both in Community Skill Centers and in an on-the-job context, will the content of the modules have to be re-adapted? Finally, who will determine what modules are to be developed for different areas and target groups?

Some Indications from SDR

Partial answers to these questions are beginning to emerge from the African countries involved in SDR. Thus, in the Lesotho project, module development is primarily on manual skills and attempts are being made to apply the cluster approach whereby a number of basic skills, i.e. measuring, cutting, drilling, filing, shaping, etc. common to several specialized skills are provided in a separate module. The latter then functions as a basic course for those who wish to go on to be carpenters, construction workers or sheet metal specialists. An added advantage of clustering basic skills in a separate learning package is that they can more readily be conveyed to areas and groups which have

little access to skill centers and they can, therefore, be used to select individuals from such regions for further training at community centers.

As regards the construction of training modules, much of the initial responsibility has lain with technical advisors and short-term consultants with specialized expertise in training methodology and curriculum development, most often working at the regional level. Thus far, there appears to be a rather limited amount of local input in module development although it is intended to establish this capacity at the national level. The question remains, however, who will be involved in this process? Are they to be prepared by a teacher or instructor for direct use in his center or will they be prepared by specialists and then distributed to the learning centers? If local instructors are to prepare the modular units, it then becomes a national teacher training exercise with all that that implies, whereas if it is intended to employ a limited number of 'writers' for this purpose, the latter must first be trained and the teacher/instructors educated in the use of the modules. In the Ethiopian CSTCs, where the module approach is being adopted, special Awraja-level Pedagogical Centers (of which 90 of a proposed 106 are presently operating) will be charged with developing skill modules for the local centers and with training instructors in their use. In other areas, e.g. Somalia, the intention is to prepare local learning packages and then to provide village level artisans with short but intensive courses in module implementation and basic pedagogical practices, while in still other countries full-fledged curriculum development centers are envisaged for this purpose.

A particularly attractive feature of the module approach to skill development is felt to be the apparent ease whereby these short-cycle learning packages can be adapted to some

of the constraints which traditionally plague non-formal education programmes in rural areas. Not only can they be applied on the job, thus reducing or eliminating the opportunity costs which hampered participation in many earlier skill development programmes, but, being composed of essentially self-contained learning elements, trainees can 'slot in' and 'slot out' of courses (within certain limits) according to the time which they have at their disposal or depending on the amount of training they require. This is especially important for practicing artisans who require a measure of upgrading but who are not that interested in re-learning the basic skill elements associated with their trade. It also is a valuable facility for the self-employed entrepreneur or rural petty producer who would like to receive some instruction in managerial techniques but who cannot afford to be away from his business for any length of time to participate in longer courses.

Local Participation in Module Design

Decisions regarding the types of skills to be provided or the types of modules to be developed are intended to come from various kinds of consultative committees who will participate in the local-level needs analysis. Most of these bodies make provision for local-level representation, although the tendency is to limit this to instructors and perhaps one or two skilled artisans and/or craftsmen. With Sri Lanka's Technical Training Units, for example, the consultative committee responsible for each unit is charged with preparing suitable areas of training, preparing instructors, and setting up the training schedule, and it is comprised of local educationists, experienced craftsmen, businessmen and entrepreneurs⁸⁸⁾. In other areas these functions are carried out by 'skill coordinators' and village 'facilitators' who identify local training needs and then, in cooperation with specialists and the local population, develop suitable training content and programmes.

Organizing Skill-
Development: NGOs

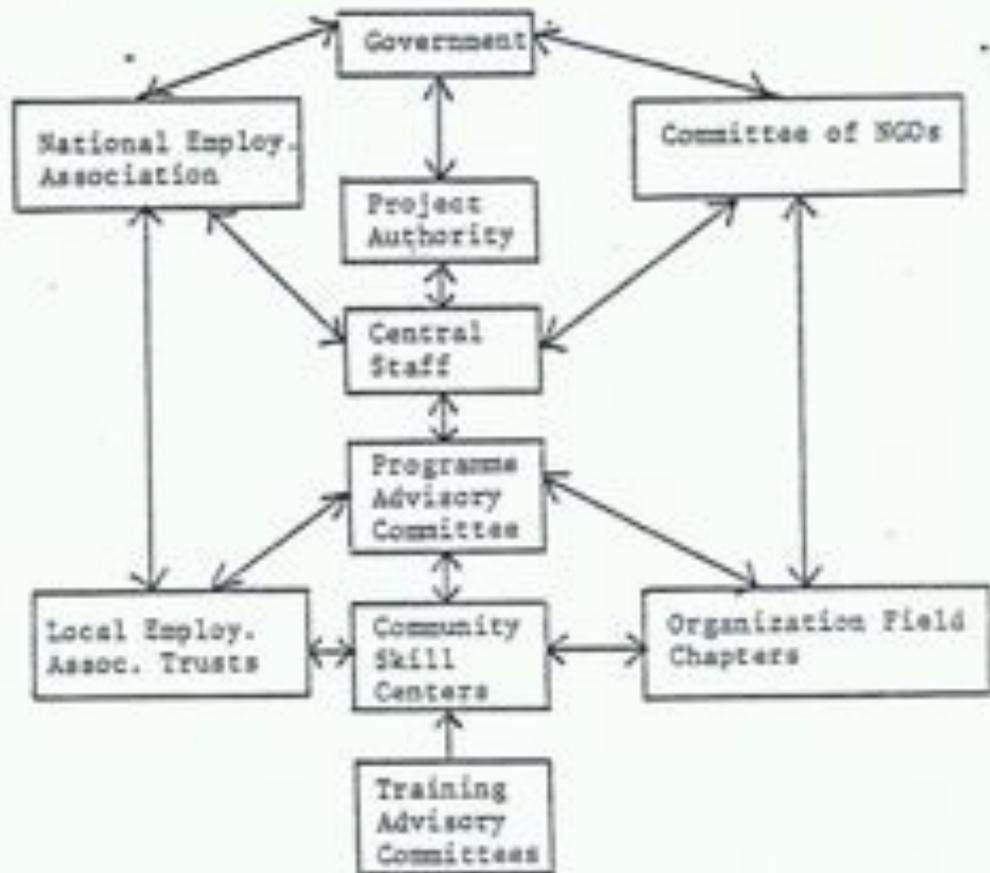
A characteristic feature of non-formal training programmes in many LDCs is the wide range of government and non-government organizations responsible for providing them, and in many of the more recent projects attempts are being made to coordinate activities both in the field and at the decision-making level in order to optimize resources and avoid unnecessary duplication of effort. There are a number of potential advantages to involving NGOs in rural skill development programmes: in most cases they are national or international bodies with a strong grassroots organization; secondly, they contain individuals with a good local knowledge of the area and the people; thirdly, they encourage and make provision for popular participation in their activities in the rural areas and, finally, through their national organizational structure they are in a position to influence government officials and to draw support for their activities from other groups in the society who may not themselves be that interested in rural skill development efforts.

Community Employment
Associations

In addition to involving NGOs in the organization and implementation of skill development, provision must be made at the local level for some type of community employment association whose responsibility would be to act as a direct link between existing production and employment requirements and the training facility. Local employers, shopkeepers, small business, craft industries, etc. are all potential employers, but at present they have little influence over the training of available manpower in the local area. Such an association, comprised primarily of local entrepreneurs, could also be instrumental in establishing new production units for trainees and, if such an association (or Trust as in Botswana) became incorporated, it would then be a legal entity and thus, in a position to seek outside assistance for proposed employment-generation projects. This type of organizational

structure is particularly popular in African countries few of which have an existing national apprenticeship programme to build on but are well endowed with non-governmental and voluntary organizations. An example from Lesotho's Community Skill Development programme is illustrated below:

Community Skill Centers in Lesotho - Organizational Framework⁸⁹⁾



According to this type of setup, the project authority is made up of senior government officers and would act as a board of directors for the Central Staff and as a policy formulating body for relevant activities of the National Employment Association and the Non-governmental organizations. The Central Staff would liaise with the Employment Association and the NGOs on the approval and funding of activities through the central organization or, where funding occurred independently, only approval would be

required. The Central Staff would directly administer the programme input for the non-formal education in the Community Skill Centers. The National Employment Association and the Committee of NGOs would liaise with Local Trusts and individual non-governmental organizations respectively to develop and implement projects for Central funding. At the local level, the Trusts would also organize on-the-job training programmes in the local area while the local NGOs would manage their field chapters and programmes. Finally, each Community Skill Center would be supported by a local Training Advisory Committee comprised of community members who could directly influence the nature and type of training offered at the CSCs, and this could be supplemented by a Programme Committee with responsibility for facilitating the sharing of training experiences among the various field activities.

VI. Evaluation

The Need for Evaluation

Given the wide range of innovative approaches to non-formal education which are currently being tested and applied in LDCs, plus the fact that the survival of most of these efforts is directly dependent on their ability to demonstrate that they are fulfilling their intended function, the development of appropriate evaluation techniques for such programmes is recognized as an indispensable third step in the planning and implementation process. Yet, while there is a growing body of literature⁹⁰⁾ on educational evaluation which underlines the importance of such a component for all educational programmes, it is only recently that attempts have been made to define the specific evaluation requirements of non-formal programmes and to devise methodologies which meet these needs. In this section, then, we will examine the evaluation requirements of the non-formal

sector and look both at attempts to adapt conventional evaluation techniques to the latter, and at more recent efforts to develop new approaches for evaluating non-formal programmes.

The Purpose of Evaluation

Traditionally, the purpose of evaluation in education has been to detect, assess and weigh the importance of the consequences or effects of what has been done. How well, how much, for whom and at what cost, are the typical questions asked in educational evaluation efforts and, on the basis of the answers to these questions, decisions are generally made regarding the continuation, alteration or termination of a particular education programme or policy. Recently, however, the concept of evaluation has undergone important changes and today it is recognized as being valuable for two different sets of purposes. The first of these concerns evaluation's role in providing information about the consequences or end results of a given educational programme or learning experience. The basis for assessment in this type of summative evaluation is usually the intended outcomes of a particular programme and, by comparing actual outcomes with the latter, judgements are made regarding the effectiveness of the programme.

In addition to this conventional end-result approach, evaluation is also designed to serve as an aid to the planning and implementation process by providing feedback information that can be used to improve an educational programme during the period of operation. Known as formative evaluation⁹¹⁾, this approach is primarily concerned with the evaluation of input factors which can be altered so as to improve the operational aspects of programme planning and implementation. The basic assumptions underlying the formative approach are:

- 1) An educational programme is an imperfect venture, achieving less than its operators intend;

2) The most important aspects of the programme to be evaluated are those which can be altered or those which relate to aspects which can be altered.

Thus, the important distinction between summative and formative evaluation is that the latter relates to systems in process, whereas the former concentrates on judging the value of the ultimate effects of the process.

Implications for Non-Formal Programmes

As regards the evaluation of non-formal programmes, the distinction between the summative and formative approach would appear to have a number of important implications:

1) Where, as is often the case, it is difficult or impossible to measure the ultimate effects of a non-formal programme by cost-benefit, cost-effectiveness or other conventional evaluation yardsticks, concentrating on the learning process rather than the results of that process can be a substitute to no programme evaluation at all.

2) Even where some kind of output evaluation is attempted in non-formal programmes, summative approaches may disregard deficiencies on the input side - deficiencies which not only effect actual outcomes but which should be accounted for when establishing the intended goals of a particular programme.

3) Where evaluation is concerned with providing information on a particular non-formal programme which can be used to improve the latter, the possibility of including participants in the evaluation process is enhanced.

4) Summative and formative approaches to programme evaluation can require the collection of very different types of data and this can imply, in turn, the asking of very different kinds of questions by the evaluator.

5) Dealing, as it does, with heterogeneous target groups, and carried out in markedly different socioeconomic

environments, non-formal programmes often have difficulty in applying established standards of competency and this tends to increase the difficulty of summative evaluation in particular.

Distinguishing Between
Formative and Summa-
tive Purposes

Yet, in noting a few of these implications it should not be assumed that there is any inherent advantage to using one or other of these two main evaluation approaches. Each is intended to fulfil a specific purpose and, while it would appear that the formative approach is particularly relevant to the conditions which characterize non-formal programmes, this should not imply that attempts to evaluate the overall worth of such programmes are fruitless, or that one should ignore such important policy variables as cost-effectiveness, cost-benefit, internal efficiency, etc. in the evaluation process⁹²⁾. Rather, it suggests that in selecting a particular evaluation methodology for non-formal programmes the distinction between evaluation's summative and formative purposes should be made explicit from the outset and that the questions to be asked, the data to be collected, and the value judgements to be applied, be consistent with these different purposes.

Appropriate
Methodology

In general, however, the selection of an appropriate evaluation methodology for non-formal education and skill-development programmes will have to observe the following four rules-of-thumb:

1) The methodology will have to take account of limitations in skills, resources and time which can be devoted to the evaluation process in a non-formal context. This is particularly important as regards local-level evaluation in which local participation is envisaged.

2) Such a methodology must have a pragmatic view of what constitutes sufficient quality in a non-formal programme and this view must be based on an appreciation of the quality of inputs associated with the programme.

3) Allowances in the methodology must be made for an evaluation of the non-quantifiable indicators of success which result from the programme, e.g. increased participant motivation, altered aspirations, etc.

4) An appropriate methodology should be flexible so that it can be adapted to deal with a variety of programme needs and constraints. This is particularly relevant to the non-formal sector where similar programmes are frequently carried out under very different administrative and financial conditions.

What to Evaluate

While the question of what is to be evaluated in a given programme will vary from one context to another, as regards most of the non-formal programmes described earlier, two priorities appear to be more or less self evident, namely, an evaluation of the learning aspect of the programme, and an evaluation of how this learning is transferred to real-life situations. Indeed, it is this latter aspect which forms the justification for most non-formal programmes and it is the one which is of particular importance to those who support non-formal education and skill-development efforts.

Learning Evaluation

The evaluation of learning addresses itself to the changes in the learner which can be attributed to a given educational experience. However, valid claims about observed changes in learners must be based on comparisons of data from tests or observations at the end of the learning experience and comparable data from the beginning. This, in turn, implies that there should be a high degree of consistency between the objectives of the learning experience or programme and the items which are to be tested. Yet, in many non-formal programmes, particularly those which are of the community development type, specific objectives are not always apparent, and frequently the learning goals of such programmes consist primarily of strongly worded

statements relating to various types of generalized behavioral change. In such cases, the evaluation of the learning experience must begin by posing questions which are inferred from the value positions implicit in the programme. Thus, for example, where a community development programme seeks to stimulate local involvement in development via village seminars or rural workshops, the learning component of such non-formal efforts can be evaluated by focussing on the interest of the participants which is assessed by comparing immediate and long-term recall of course content, or by comparing the intended and realized degree of responsiveness of a learner or a group of learners. In general, as the learning objectives in non-formal programmes become more specific, the evaluation of the learning component of the programme or experience becomes more amenable to measurement and testing.

In evaluating the learning component of non-formal programmes both the formative and summative approaches have a role to play. Where one purpose of learning evaluation is to provide information as to which of the learners are learning and which are not, formative evaluation can be used to alter instructional strategies or materials during the operation of the programmes, while summative evaluation can indicate the extent to which the programme achieved its ultimate learning objectives and, at the same time, can be used to determine to what extent the instructional strategy, materials, etc. should be applied in the future. Moreover, summative evaluation, when carried out at different stages of the learning experience can also provide input for the learner by indicating to him the extent to which he has mastered a particular learning task or fulfilled a particular learning goal. As we indicated in an earlier part of this paper, much of the emerging work on skill modules attempts to include just this type of built-in

evaluation facility⁹³⁾.

Evaluating Learning Transfer

In attempting to determine the degree of transferability resulting from a particular non-formal learning programme, the evaluator is seeking to find out the extent to which the learners new skills or competencies can be applied in a real world situation. It is not concerned with examining the extent to which, for example, carpentry skills are required in a local building project, or with attempting to determine how relevant other types of specialized non-formal training are in the context of development or labour market needs. Rather, it focuses on how well or poorly a carpenter's training prepares an individual to work as a carpenter in the real world. While the most appropriate manner of evaluating transferability would be on the basis of a longitudinal study, this may be impractical given the fact that an encounter with real world conditions may be months or even years away for many participants in non-formal programmes. Of course, in the case of on-the-job training programmes, artisan upgrading schemes and project-related training courses, the evaluation of transferability is facilitated by the proximity of the actual working environment. Where, however, this is not the case, the evaluation of learning transfer should attempt to simulate real life situations so as to be able to test the applicability of new skills gained in a learning experience. To a large extent, the need to develop non-formal training programmes into production units can be regarded as an attempt to simulate such conditions and to thereby allow for an assessment of the degree to which the student or participant can competently deal with problems in a new but related situation reflecting real life conditions.

Here again, the evaluation of learning transfer should fulfill both a formative and summative purpose. Where, either as a result of information gained through simulation or feedback from job-related training programmes,

observations indicate that the degree of transfer is not satisfactory, steps should be taken to redesign the programme to increase learning application. Thus, the underlying assumption associated with transfer evaluation is that the problem faced is in adapting the learning component to the real life situation and not the other way around. Of course, data concerning the degree of transferability achieved can be used for making a decision as to whether or not the learning experience, in terms of cost, time etc., can continue to be used or extended to other groups, areas, situations, etc.

Limiting Evaluation to the Programme

Typically, the evaluation of non-formal education programmes includes both the assessment of learning competency and an assessment of the degree to which the competency is being applied in a post-programme situation. Yet, from what has been said above, low levels of application can result both from low levels of acquired learning competency and/or insufficient adaptation of the learning experience to conditions in the real world. Unfortunately, where an evaluation exercise finds acceptable levels of learning ability, but low levels of actual application, it often tends to interpret such inconsistency in terms of the absence of support facilities to make learning effective. This, in turn, usually leads to recommendations regarding the need for external conditions suitable to allow the application of the learning or training competency to be facilitated. Certainly, such recommendations can provide important insights into complimentary factors which condition the ultimate effects of a particular non-formal programme but it can also serve to direct attention away from factors which the authorities responsible for a particular programme can influence. Moreover, it presumes a much more extensive evaluation of the relationship between non-formal learning programmes and their socioeconomic effects than we have been

concerned with in this paper, with all that this implies for data collection, assessments, value judgements and so on. Ideally, a consideration of such wider relationships should be included in the planning phase of non-formal programmes and evaluation related to the assumptions contained therein, rather than attempting to define or analyze such relationships as a part of the evaluation process.

Focusing on the
Learner and the
Learning Experience

Earlier we indicated that the question of what to evaluate varies from one context to another but that as regards non-formal programmes most concentrate on the level of learning ability achieved (in terms of specified learning objectives) and the degree to which that ability is transformed into desirable socioeconomic activities and/or behavioural practices. As regards the design of an evaluation instrument for a given educational programme, the common tendency is to attempt to include as many measurement criteria relating to learning achievement and its impact as possible, resulting in most cases in long lists of intended indicators, indices, socioeconomic variables, etc. for which data must be collected or otherwise provided⁹⁴⁾. While clearly the amount and type of material required will depend, in part, on the objectives of a particular evaluation exercise, it should also be closely related to specific questions which evaluation is attempting to answer. In a non-formal context, evaluation questions - just as planning and implementation questions - should be focused on the learning exercise and on the needs of the learner himself rather than on macro-factors which are not likely to contribute very much to programme improvement. Certainly, in non-formal programmes as in formal programmes, questions of learning effectiveness must seek to relate the latter to such conventional types of programme data as enrollment rates, drop-out rates, transition rates and other specific indicators,

but such data cannot itself be used to evaluate the learning outcomes anymore than employment data alone can be used to evaluate the degree of transferability of learning. Behind each of these phenomena and the data that appears to be related to them, complex relationships, which can only be uncovered by posing additional evaluation questions, exist and, as we have attempted to argue, such questions are primarily concerned with the learner and the learning experience.

Indicators for
Formative Evaluation

While it is generally agreed that educational evaluation consists of four separate but related stages, i.e. description, measurement, assessment and evaluation, the assessment stage of the evaluation process is often only concerned with data pertaining to indicators of results, e.g. proportion of participants who successfully completed the course, increases in participant's earnings or productivity, increases in social and civic participation, etc. As such, the purpose is clearly summative and the evaluation questions this approach attempts to answer are:

- 1) What changes have occurred during the programme period?
- 2) Are these changes satisfactory?
- 3) Do the changes conform to the desired objectives?

Yet, while the answers to these questions are important in any evaluation exercise, the exclusive concentration on indicators of results or effect can preclude the asking of questions (and the collection of data) concerned with other important evaluation goals. Of special significance here are questions dealing with: (1) the relationship between programme objectives and programme treatment; (2) the similarity between the planned or assumed situation and the real situation; and (3) the modification or change of the programme during implementation. It will be seen that such evaluation

goals are meant to fulfill primarily a formative purpose and that they thus imply the collection and assessment of data more closely related to the learner and the learning experience than those indicated earlier. In particular, the evaluator's concern for relationship, congruence and modification will require the employing of indicators which enable him to assess the purpose of training, the content and process of training, and the resources for training, as well as indicators which facilitate the assessment and evaluation of results. With regard to the first three of these categories, examples of potential indicators and corresponding evaluation questions which might be employed are presented below⁹⁵⁾:

<u>Indicator</u>	<u>Evaluation Question</u>
1. <u>Purpose of Training</u> (a) Produce skilled artisans (b) Meet community skill needs	1. <u>Relationship</u> Was there a close relationship between training purpose and community need?
2. <u>Content and Process of Training</u> (a) Nature of content (b) Pedagogical approach	2. <u>Congruity</u> Did the content and approach conform to the characteristics of the target group?
3. <u>Training Resources</u> (a) Techniques for resource utilization (b) Techniques for adaptation of materials	3. <u>Modification</u> Was use made of feedback during the programme to alter resource utilization techniques and to re-adapt materials?

The three examples cited above are only representative of the type of important indicators and questions which should be included in a non-formal evaluation exercise. Not only do they enable a number of additional dimensions to be assessed, but they can directly condition the summative results of such evaluations.

Participatory Evaluation As with the planning of non-formal programmes, current evaluation approaches increasingly stress the need to include the participant in the evaluation process and to transfer greater responsibility for such efforts to the individuals and groups most closely associated with such programmes. There are, of course, a number of reasons why such an approach should be supported, not least of which is the need to promote the development of evaluation skills and techniques at the local level, just as this need applies to a wide range of other competencies, e.g. research, planning, administrative, technical, etc. At the same time, it would appear that in terms of programme effectiveness, local-level participation in the evaluation process can be an important factor contributing to participant motivation, and also one which can shed light on why individuals and groups involved in non-formal programmes often fail to utilize the learning experience for the kind of goals which the programme is aimed at. Moreover, in keeping with our emphasis on the formative purposes of evaluation, the inclusion of participants in the evaluation process clearly facilitates the aim of continuous feedback for programme improvement.

Yet, having said this, it should also be emphasized that participatory evaluation cannot be viewed as a substitute for evaluation efforts which include individuals, groups and agencies other than those who directly participate in a given programme. Not only would such an exclusive reliance present a number of practical problems with regard to the need for evaluation to be linked with decision-making outside such programmes, but it would tend to preclude the application of objective criteria with regard to such important aspects of the evaluation as the selection of goals and the assessment of outcomes. It is, therefore, only in conjunction with wider involvement in the evaluation

process that the participatory component has any real meaning. But, given this involvement on the part of the facilitators, policy-makers and the local community, the contribution of programme participants represents important evaluation information for policy-makers, especially as regards such aspects as non-quantifiable outcomes, unintended results, and subjective factors directly related to programme operation and improvement.

Prerequisites for
Participatory Evaluation

If we accept then that participatory evaluation does not imply self-evaluation, but rather a collaborative effort in which the input from practitioners and participants complements that from other individuals, groups and agencies, the focus of attention should be on the following points:

1. The creation of a favourable context for participatory evaluation. In particular, such a context should be able to demonstrate to participants at an early stage of the programme that there is a need for evaluation and that, as regards formative evaluation, results will be acted upon and changes made. In addition, the basis for such evaluation should not reflect a hierarchy of interests or responsibilities such that participants fear that negative evaluation will be accompanied by administrative or political reprisals.
2. The development of appropriate methodologies and training conditions for practitioner/participant evaluation. Where the intention with participatory evaluation is to involve all members of a given non-formal programme in the evaluation process, the focus should be on aspects to which all participants can relate and to which all can provide some kind of evaluation input. Moreover, evaluation should be explicit and emphasize the elimination of programme weaknesses and the improvement of programme

effectiveness. Frequently, the initiative for participatory evaluation will have to be taken by the facilitator and while, to a certain extent, the success of such initiatives will depend on the ability of the facilitator to stimulate his clientele, it will also be dependent on the amount of experience and training the former has received in evaluation techniques. Where facilitators are primarily instructors and not evaluators, there is a need for training modules which provide evaluation guidelines for practitioners and which are graded according to different types of course content, levels of difficulty, availability of time and resources, etc.

3. An appropriate means for incorporating practitioner/participant evaluation into more comprehensive evaluation exercises. In part, the problem of incorporating the results of participatory evaluation into wider evaluation exercises stems from the mistaken belief that methodologies which do not employ sophisticated evaluation techniques and advanced levels of skilled personnel in the evaluation process are not really evaluation methodologies at all. In essence, this belief reflects a situation whereby there has been very little effort made to scale down existing methodologies so that they can be applied to evaluate the same phenomena despite the existence of different constraints from programme to programme. Thus, for example, where the availability of skilled evaluators and sufficient financial resources facilitates the detailed assessment of participant motivation in one programme context, the absence of such facilities in another context would require a suitably scaled-down or simplified methodology which could be applied by the facilitator to measure or assess motivation. While the development of such a methodological continuum should not be regarded as a substitute for improved evaluation facilities in the field, it does provide a

means whereby practitioner/participant evaluation, particularly in less well endowed non-formal programmes, can be included in the wider evaluation process.

VII. Conclusions

The purpose of this paper was to look at some of the recent experiences in non-formal education and skill development which have taken place in the last decade or so, and which have sought to provide a new approach to the problems of economic development and socio-economic equality in Less Developed Countries. We traced the origins of the non-formal concept and suggested that, as regards education and training, it represented a response to the perceived weaknesses of conventional schooling and conventional vocational training programmes. Essentially, these weaknesses were characterized as an inability either to meet all the training needs of people in these countries, or to meet the training needs of all people in these countries. The distinction is important in that it stresses the dual role which non-formal programmes must attempt to fulfill. In part, they must continue to be, for some time to come, an alternative means of conveying useful skills and competencies to those who are denied access to the formal school system. At the same time, however, this system continues to only partially meet the training requirements for rural development so that even for those who are able to participate in it, non-formal training must be seen as a necessary complement to formal education.

With these two themes in mind, we went on to look at their implications with regard to the planning, implementing and evaluating of non-formal training programmes in LDCs.

concentrating in particular on such key considerations as: the determination of local learning needs, the development of relevant training methodologies, the role of local participation in the training process, and the integration of non-formal training with other aspects of education and development in rural areas. In each case we attempted to identify the important factors which must be taken account of by both policy makers and aid specialists if programme failure is to be averted. Thus, for example, as regards learning needs, these must reflect the felt needs of the target population and target area, and not just the desire to provide unskilled individuals and groups with some kind of recognized training. This implies, in turn, that learning needs be identified and specified prior to any decision being taken on learning objectives, and that the latter be based not only on an assessment of particular needs, but also on an awareness of potential constraints in meeting those needs. As we indicated earlier, many skill development programmes start from the assumption that skill provision is the objective and they frequently fail to relate that objective to actual target group needs.

Similarly, with regard to relevant training methodologies and delivery systems, the particular characteristics of the target group are all-important. Youths and adults, primary school leavers and illiterates, farmers and tradesmen, are all potential candidates for non-formal training and each brings to the training exercise its own learning and teaching requirements. While it is unlikely that separate methodologies can be developed to deal with each particular category of learner, all approaches should be learner-centered - if only to facilitate continual feedback whereby methodological shortcomings can be detected and corrected early.

Each of the above questions underlines the necessity of including the target population in the decision making process when attempting to determine what kind of training to provide and how to provide it. Yet, where these populations have, traditionally, had little or no say in the decisions which effect their daily lives, the means of facilitating local participation is by no means apparent. Moreover, where prevailing social relationships are conditioned by factors of class or caste, the practical effect of local participation could be to reinforce existing prejudices as regards specific groups and individuals. As such, the concept of local participation must be qualified to include representativeness and, in terms of application, it must be seen to reflect the interests of all sections of the target group and/or local community. In most cases this implies a decentralization of political power from the central and regional authorities to local representative bodies and, as we mentioned above, the expansion of non-formal skill development programmes in both Ethiopia and Tanzania, is directly related to such a process. Still, even where centralized structures maintain a monopoly on political power and authority, the ability of local organizations to influence decisions regarding non-formal programmes can be substantial. Cooperative societies, farmer organizations, church bodies, and local branches of voluntary agencies often are well representative of community interests and, as such, they constitute legitimate organizational frameworks within which local participation in training programmes can be effected.

Both in terms of its own survival as a viable programme and as regards its ultimate impact on local development, non-formal skill development efforts must seek to establish early ties with related programmes,

projects and learning institutions at both the local and regional levels. Indeed, while the coordination and integration of individual programmes into a wider organizational framework facilitates the effective utilization of scarce training resources, it also serves to define the specific role of non-formal training in the total rural learning system, and to functionally relate that role to the broader objectives of rural development programmes. Yet, moving towards better integration must be a step-by-step process, beginning with attempts to create favourable conditions for minimum linkages, exchanges and informal collaboration between the specific programme and representatives of other local institutions, agencies and organizations. The initial purpose of such contacts should be to exchange information regarding the objectives of the various activities involved and to determine whether a basis of cooperation does in fact exist. Only then should efforts be directed to establishing formal ties and commitments.

The need to integrate non-formal training with other aspects of the rural learning system is particularly important as regards primary school reform. Where the rural primary school continues to be the dominant educational influence in these areas but, at the same time, is seen to contribute very little to the economic development of the rural sector, improving the relationship between school and skills is recognized to be an urgent priority. The creation of Community Education Centers in a number of LDCs in the past decade, incorporating both formal and non-formal instruction, represents an important attempt to improve this relationship. At the same time, however, it often results in serious problems of adjustment, stemming in large measure from the need to restructure educational bureaucracies and streamline administrative procedures so as to conform

with the practical objectives of the new training system. Moreover, where such changes are not accompanied by corresponding efforts to alter the educational reward system in favour of practical qualifications, traditional patterns of alienation between the school and the community re-assert themselves and, as experienced in Senegal, Upper Volta and a number of other LDCs has shown, it is the non-formal component in the learning system which is most affected.

Similarly, where the ultimate justification for any non-formal education programme must be its perceived utility to both the individual and the society of which he is a part, altered reward systems which improve the status and income of the former should, in part, be a result of the application of individual skills for the betterment of the community. It is, therefore, incumbent on those responsible for training programmes to insure that the latter not only impart relevant and useful skills on the individual but that this investment provide a social return as well as a private one. In this sense, non-formal training programmes should seek to establish a close relationship with ongoing development projects in the local community and particularly with so-called 'highly visible' projects such as dams, irrigation projects, health centers, schools, etc., which are both the focus of community attention and a potential source of community improvement.

Having examined a wide range of factors which appear to be important in the planning, implementation and evaluation of non-formal skill-development programmes, it now remains to translate these observations into practical suggestions aimed at improving the effectiveness of external support for such programmes. Here it should be mentioned that several of the following

recommendations reflect the results of a recent SIDA seminar which, although it did not deal exclusively with non-formal education, sought to include the non-formal component in a discussion of policy guidelines relating to support for vocational training in general.

VIII Recommendations

1. Given the choice, most LDCs are likely to maintain their preference for conventional vocational training programmes. The latter are easily fitted into existing administrative and organizational frameworks in these countries and they imply the provision of relatively modern equipment, together with highly qualified technical assistance personnel. At the same time, however, many such programmes, if adapted, could be applied in a non-formal setting as well through, for example, the inclusion of mobile units, the provision of basic skills training to other groups on week-ends, or the establishment of satellite workshops in neighbouring villages and communities. Thus, when considering support for a formalized programme of vocational training, SIDA should attempt to explore, with the relevant authorities, the possibility of including a non-formal component in such a programme. Such a component could be directed to individuals and groups either in rural or urban areas.

2. Similarly, before deciding to support any non-formal programme, existing formalized vocational training programmes should be examined to determine whether they can fulfill the required non-formal function. The experience appears to indicate that starting a new non-formal programme and then attempting to integrate

with existing ones is more difficult than adapting and building on the latter in order to fulfill a non-formal role.

3. Considerations of support for new non-formal programmes should begin with an assessment of target group and target area needs. In most cases, these have tended to be defined in terms of programme objectives - something which is generally misleading and reflects a preoccupation with training per se rather than with learning requirements. It is only in terms of the latter that programme objectives can be properly assessed.

4. SIDA should continue to support multilateral efforts to design and develop suitable methodologies for the determination of non-formal learning needs. Further, it should examine the progress made thus far in this field and attempt to incorporate the results into discussions with the relevant authorities in recipient countries. Both SIDA and the latter would then have a common base on which learning needs data could be collected and assessed.

5. Careful consideration should be given to the organizational structure within which a non-formal programme is to operate. Is the particular ministry or responsible department organized in such a way as to facilitate communication between the providers and the recipients of training? Are there inter-ministerial or inter-departmental links at the local level which can be used to promote cooperation across ministry or department lines? Does a decentralized system imply less help from regional and national authorities as well as less interference? What, in other words, are the implications of the prevailing organizational framework for programme effectiveness?

6. As a means of off-setting programme costs and to ensure that training is closely associated with productive employment, job opportunities and production possibilities should be examined in all non-formal skill development programmes. Thus, as part of the needs analysis, a survey of the local labour market should be included together with an assessment of self-employment possibilities given the availability of rural credit facilities. Attempts to combine production with training should be encouraged both as regards implements, tools and materials to be used in the training process, and as regards market products for use in the community.

7. Careful consideration should be given to the types of material and equipment provided for non-formal skill-development programmes. Not only must such equipment reflect a level of technology which will be available to trainees after the training process, but it should not become a substitute for materials which can be produced locally with local resources. Priority should be given to equipment which facilitates the self-production of tools, implements and materials either at the local level itself or in resource centers which support local programmes.

8. Where possible, skill programmes should be incorporated into more extensive Community Education Centers where non-formal skill development is only part of a wider training programme including basic education, adult literacy programmes, primary health care instruction, etc. Such centers facilitate the coordination of various formal and non-formal efforts and, at the same time, allow for resources to be concentrated at the local level.

9. The practical advantages of local participation in the planning, implementation and evaluation of non-formal training should be stressed to the relevant authorities in recipient countries. In particular, the importance of such participation as regards the determination of local learning needs should be emphasized, as well as the importance which the donor agency places on the opinion of participants with regard to the value of such training.

10. The most important criteria of local participation should be target group and/or community representativeness. Where possible, local participation should be based on existing or indigenous social organizations. These should not, however, reflect class or caste biases. Where no such organizations are available, attempts should be made to create local training committees composed of the various target group/community interests. With regard to local participation within particular training programmes, this should be facilitated by learner-centered training methodologies and formative evaluation techniques.

11. As regards external technical assistance to non-formal skill development programmes, emphasis should be placed on the development of skill modules or learning packages for such programmes (at the regional level), on the training of instructors or facilitators (at the national or sub-national level), and on summative evaluation of programme results.

12. Increased support should be given to local research on non-formal training in recipient countries and this should be included in SIDA's sector support for education in these countries. Local researchers are well placed to provide important information both with regard to the development of appropriate learning methodologies,

and as regards the effectiveness of ongoing programmes. At present, very little research on non-formal education and training originates in the LDCs, largely because very little is commissioned there.

13. Support for indigenous training should concentrate on supplying such schemes with types of input which will make them more effective and broad based. Such support should, however, make a careful assessment of the market potential for increased productivity in the local area first, so as not to create disruptions in the local economy.

14. Efforts should be made to enlist the aid of Non-Governmental Organizations (NGOs) and voluntary agencies in non-formal training at the local level. Many such organizations have both facilities and personnel at the grass-roots level which could be utilized for non-formal training purposes. In addition, the fact that most of them are also national organizations is also important as regards linkages between local level programmes and non-formal activities at regional and national levels.

15. Where non-formal training seeks to promote self-employment or is aimed at small entrepreneurs and businessmen, the provision of necessary credit facilities should be accompanied by training in the use of investment credit, together with information regarding marketing procedures, pricing systems, accounting methods and other follow-up services to ensure the most effective application of both training and capital. The experience with such programmes in both Nigeria and India suggests that where such complementary services are not provided, the provision of credit can turn out to be more of a burden than a boon to those who receive it.

16. Inasmuch as donor agencies such as SIDA support the development of skill modules for non-formal training purposes, the emphasis should be on both broad-based skill-packages for basic needs application, and more specialized skill categories aimed at preparing individuals for specific types of employment. Ideally, the former should allow for subsequent specialization following the attainment of general competency in a range of basic skills, while the latter should seek to produce specialists who are able to apply their trade in a variety of infrastructure and resource conditions.

17. Finally, where a major problem of following the progress of non-formal programmes stems from the lack of communication between the local level and responsible authorities at the regional and national levels, an effective system of monitoring programme developments is required. Such information is vital to the external donor who must be prepared to provide assistance as soon as problems arise, but who often remains unaware of them until the programme has ceased to function. Particularly as regards donor agency representatives on the spot, periodic visits to, and reports on, individual non-formal programmes must be systematically carried out. In part, such visits should seek to determine what problems are being encountered in the implementation stage and their primary purpose should be to identify problems, not necessarily solve them immediately. Secondly, however, periodic visits should also attempt to collect basic information regarding the progress of the programme and should employ simple check-lists whereby such important items as enrollment and attendance rates, production figures, test results, etc. could be obtained.

NOTES

- 1) For the purpose of introducing the study, Coombs' general distinction of NFE is used. This will be refined before proceeding to the main body of the paper.
- 2) See for example, the standard work from the sixties by Harbison and Myers Education, Manpower and Economic Growth, McGraw-Hill, New York, 1964.
- 3) Kenneth King, "Education and Self-Employment", IIEP Working Paper, Paris, 1978.
- 4) Unesco Statistical Yearbooks, 1975-77 (Annual) Paris.
- 5) King, K.J. "Minimum Learning Needs for the Third World" in Prospects, Vol.VI, No.1 1976, pp.39.
- 6) See for example, "Education for Kagisano", Report of the National Commission on Education, Gaborone, Botswana, 1977.
- 7) See Illich, I. Deschooling Society, New York, 1970 and Carnoy, M. Education as Cultural Imperialism, Longman Inc., New York, 1974.
- 8) See "Universal Primary Education: A Statistical Review" in Prospects, Vol. 8, No.3 1978, pp. 371.
- 9) For Africa, see Economic Survey of Africa UNECA, Part 1 "Education and Employment", Addis Ababa, 1977 and 1978.
- 10) "Employment, Incomes and Equality in Kenya", ILO, Geneva, 1972.
- 11) See the Working Papers from ILO's World Employment Programme which relate to 'Urbanization and Employment'. Especially, Aryee, G.A. "Effects of Formal Education and Training on the Intensity of Employment in the Informal Sector". Case Study of Kumasi, Ghana. Geneva, 1976.

- 12) For a critically annotated bibliography of non-formal programmes up to 1972, see Roland Paulston, "Non-Formal Education", Praeger Special Studies in International Economics and Development, New York, 1972.
- 13) Coombs, P. Attacking Rural Poverty: How Non-Formal Education Can Help, International Council for Educational Development, Essex, Connecticut, 1973 (Draft).
- 14) Program of Studies in Non-Formal Education, Michigan State University, East Lansing, 1973 -
- 15) ILO, World Employment Program (WEP) op.cit.
- 16) IBRD Education Sector Paper, 1979, Washington, D.C. pp. 66.
- 17) "Lifelong Education and the School": Abstracts and bibliography, Unesco Institute for Education, Hamburg, 1973.
- 18) ILO/SIDA Multi-Bilateral Programme of Technical Cooperation, Introduction of Technology in Basic Education, Phase Two, Geneva.
- 19) See for example, the papers presented at the IIEP/SIDA/IIIE Seminar on Research and Educational Reforms, Uppsala, Sweden, September 3-4 1979. Unesco, Paris.
- 20) Court, D and King, K. "Education and Production Needs in the Rural Community: Issues in the Search for a National System", IIEP Working Paper, 1978, Paris, Unesco.
- 21) For a more thorough treatment of contextual definitions see, Grandstaff, M. "Non-Formal Education as a Concept" in Prospects, Vol. VIII, No.2, 1978.

- 22) Many non-formal skill development programmes have run into this difficulty. For a description of one of the better known see, Court, D. "Dilemmas of Development: The Village Polytechnic Movement as a Shadow System of Education". Comparative Education Review, Vol. 17, No.3 1973.
- 23) Similar modal typologies are found in Paulston, R. and Le Roy, G. "Strategies for Non-Formal Education", Teachers College Record, Vol. 76, No.4, May 1975 and in Simkins, T. "Non-Formal Education and Development - Some Critical Issues", Monograph 8, Department of Adult and Higher Education, University of Manchester, 1977.
- 24) See, Evans, D.R. "Responsive Educational Planning - Myth or Responsibility", Occasional Papers No.47, Unesco, IIEP, Paris 1977.
- 25) See for example, the experience in Columbia in Negri, Armando N.L. "The Colombian National Apprenticeship System (S.E.N.A)" in Prospects, Vol. VI, No.2, 1976.
- 26) Coombs, P.H. "How Shall We Plan Nonformal Education?" in Brembeck, C. (ed.) New Strategies for Educational Development, Lexington Books, Lexington, Massachusetts, 1973.
- 27) Coombs, P.H. and Ahmed, M. "Attacking Rural Poverty: How Nonformal Education Can Help" (Draft), ICED, Essex Connecticut, 1973.
- 28) See, Paulston, R.G. "Strategies for Non-Formal Education", op.cit.
- 29) Court, D. and King, K. "Education and the Production Needs of Rural Communities: Issues in the Search for a National System", IIEP Working Paper, Unesco, Paris, 1978.

- 30) Ibid
- 31) See, ILO/UNESCO/UNICEF Joint Cooperation Programme "The Introduction of Technology in Basic Education". UNICEF Regional Office, Nairobi, 1977.
- 32) See for example, the work being done at IIEP on Rural Learning Needs, in Gill, Dhara "Some Problems in Determining Learning Needs". Occasional Papers No. 49, Unesco, IIEP, Paris 1977. Also Kinunda, M. "Experience in Tanzania in Identifying and Satisfying Local Needs in Education". IIEP Unesco Seminar Paper No.14, Paris 1975.
- 33) Coombe, P.H. and Ahmed, M. "Attacking Rural Poverty: How Nonformal Education Can Help", op.cit.
- 34) Court, D. and King, K. "Education and the Production Needs of Rural Communities: Issues in the Search for a National System", op.cit. pp.19.
- 35) King, K.J. "Education and Self-Employment", Unesco IIEP Working Paper, Paris 1978.
- 36) See. ILO/SIDA Eastern and Southern Africa Sub-Regional Seminar on Vocational Training for Rural Youth. Gaborone/Serowe, July 1977, Geneva.
- 37) See for example, the ILO project "Craft Training for Rural Women in Pakistan", ILO, Geneva, 1979, and a joint ILO/UNICEF project entitled "Training of Women for Skills Instruction (Bangladesh)", ILO/UNICEF, Dacca, 1979.
- 38) "Basic Working Principles and Strategy for the Development and Implementation of an Expanding Programme of Non-Formal Education and Community Skill Training Centers", ILO/SIDA Eastern and Southern Africa Sub-Regional Seminar, op.cit. pp. 93-116.

- 39) See, Ahmed, M. "The Economics of Nonformal Education: Resources, Costs and Benefits", Praeeger Special Studies in International Economics and Development, New York, 1975.
- 40) ILO/UNESCO/UNICEF Joint Cooperation Programme, op.cit. pp. 78.
- 41) See the ILOs "Modules of Employable Skills (MES)". Training Department ILO, Geneva. Note: These should not be confused with the learning modules being developed for basic educational needs and services.
- 42) Court, D. and King, K. "Education and the Production Needs of Rural Communities", op.cit.
- 43) See, "A Brief Commentary of the National Experience in Adult Education Programmes in Ethiopia" in ILO/SIDA Eastern and Southern Africa Sub-Regional Seminar, op.cit. pp. 107.
- 44) For a detailed description of the teaching-learning implications of the modular approach see "The Modular Instruction System as the Teaching-Learning Strategy in the Indonesian Development School". Seminar Paper No. 31, Unesco, IIEP, Paris 1977.
- 45) See, Raper, A.F. Rural Development in Action - The Comprehensive Experiment in Comilla, East Pakistan. Cornell University Press, Ithica, New York 1970.
- 46) This approach has been used in Senegal for rural vocational training. See, Coombs, P.K. and Ahmed, M. "Attacking Rural Poverty: How Nonformal Education Can Help", op.cit.
- 47) See, Negri, Armando N.L. "The Colombian National Apprenticeship System (S.E.N.A)", op.cit.

- 48) See, "Training for Rural Gainful Activities (TRUGA)", ILO/SIDA Regional Seminar on Vocational Preparation of Rural Youth for Development, March 18 - April 2, Colombo, Sri Lanka, ILO Geneva.
- 49) For the relevant materials relating to these programmes see the footnotes referring to Implementation below.
- 50) See, Coombs, P.H. "Attacking Rural Poverty: How Non-Formal Education Can Help", John Hopkins University Press, Baltimore, 1974, Chapter 8.
- 51) FAO, Provisional Indicative World Plan for Agriculture, Vol. 2, Chapter 10, Part 4, pp. 382. Quoted in "Non-Formal Education for Agricultural Development". World Yearbook of Education, 1974, London.
- 52) Ibid. pp. 93-96
- 53) See for example, Moczarski, S.Z. "Getting the Farmers Together: A Successful Project in Lesotho", in, Training For Agriculture and Rural Development, International Labor Organization, 1976. Geneva.
- 54) See, Clark, G.C. "Agricultural Extension: A New Look Required" in Training for Agricultural and Rural Development, op.cit. pp.9.
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- 59) Moczarski, S.Z. "Getting Farmers Together - A Successful Project in Lesotho", FAO/UNESCO/ILO Training for Agricultural and Rural Development, 1976, op.cit.
- 60) Coombe, P.H. "Attacking Rural Poverty - How Nonformal Education Can Help", op.cit. pp.35.
- 61) See, Watts, D.R. "The Educational Needs of Farmers in Developing Countries", World Yearbook of Education, 1974, op.cit.
- 62) Coombe, P.H. "Attacking Rural Poverty - How Non-Formal Education Can Help", op.cit. pp.36
- 63) Watts, D.R. "The Educational Needs of Farmers in Developing Countries", op.cit., pp.157.
- 64) See also Coombs' criticism of FTCs unequal distribution in Kenya in "Attacking Rural Poverty - How Nonformal Education Can Help", op.cit. pp.221.
- 65) Ibid., pp.43.
- 66) Watts, D.R. "The Educational Needs of Farmers in Developing Countries", op.cit. pp.156.
- 67) Ibid., pp.152, Table 1, and Ahmed, M. Education for Rural Development, Praeger Publishers, New York 1975, pp.524.

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- 69) For an account of the Gezira scheme during the colonial period see Gaitskill's Gezira: A Story of Development in the Sudan, London, Faber & Faber, 1959.
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- 71) Grabe, Sven "CADU Ethiopia" ICED Case Study No.13 (unpublished).
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- 73) Coombs, P.H. "Attacking Rural Poverty", op.cit. pp.103 Table 7.3.
- 74) Ibid, pp.105.
- 75) See, Swanson, B.E. "Coordinating Research Training and Extension: A Comparison of Two Projects", FAO/UNESCO/ILO Training for Agricultural and Rural Development 1976, op.cit. and Coombs, P.H. "Attacking Rural Poverty", op.cit.
- 76) See some of the work done by the ILO's World Employment Programme (WEP) on the informal work sector in Urban areas. Especially Aryee, G.A. "Effects of Formal Education and Training in the Informal Sector: A Case Study of Kumasi, Ghana", September 1976.
- 77) See, Training for Productivity - Report of the Action Study on Income - Oriented Non-Formal Education and Training, Maseru, Lesotho, January 1976.
- 78) Ministry of Education, Colombo, Sri Lanka - Memo on Technical Training Units, 1979.

- 79) ^a Primary Education and Non-Formal Education in Ethiopia, SIDA, 1980.
- 80) Ibid
- 81) For a survey of some of the Asian programmes see the countries papers from the recent ILO/SIDA Asian Regional Seminar on Vocational Preparation of Rural Youth for Development, Vol. II, Colombo, March 18 - April 2 1980, Geneva 1980.
- 82) For examples of these types of programmes see the ILO/SIDA Regional Seminar on the Vocational Preparation of Rural Youth, Gaborone, Botswana 1977.
- 83) See, Kenneth King "Education and Self-Employment", IIEP Working Paper, Paris, 1978.
- 84) ILO/SIDA Asian Regional Seminar, Bangladesh Country Paper.
- 85) "Youth Training and Entrepreneurship in Rural Communities", ILO/SIDA Eastern and Southern Africa Regional Seminar, op.cit. pp.53.
- 86) See, United Republic of Tanzania "Vocational Training and Technical Education" 1978, pp.38.
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- 91) Much of the recent work on formative evaluation has come from the University of Massachusetts' studies programme on Non-Formal Education. See, Kinsey, D.E. Evaluation in Non-Formal Education, No.3, Center for International Education, Amherst, Massachusetts, 1979.
- 92) For a discussion of cost-benefit techniques as applied to non-formal education see, Borus, Mannan and Hunter "Economics of Non-Formal Education", Program of Studies in Non-Formal Education, Michigan State University, East Lansing, Michigan 1974.
Also, Ahmed Manzoor's book of the same name, op.cit.
- 93) See above, Planning.
- 94) Unesco evaluation instruments in particular attempt to employ large numbers of evaluation indicators for which data is often very difficult or impossible to obtain. See, in regard to the evaluation of work-oriented literacy projects, General Concept of Evaluation for Work-Oriented Adult Literacy Pilot project, Lake Region, Tanzania, 1970, UNESCO.
- 95) For a fuller treatment of formative indicators see, Ward, T. and Bersog, W.A. Effective Learning in Non-Formal Education, Program of Studies in Non-Formal Education, Michigan State University, East Lansing, Michigan, 1976.

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