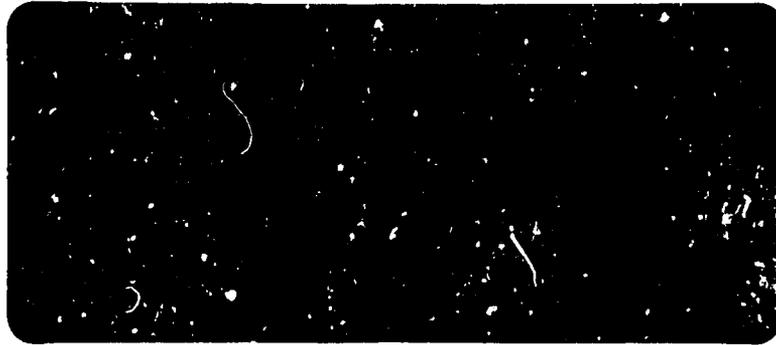


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OCCASIONAL PAPER #11  
SOME CRITICAL COMMENTS ON FORMAL VOCATIONAL  
TRAINING AND SUGGESTIONS FOR ALTERNATIVE  
APPROACHES

Joachim Lindau with Lynn Joesting

1983

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## FOREWORD

*Through its series of Occasional Papers, the NFE Information Center seeks to provide a forum for the exchange of ideas among those pioneering in the practice of non-formal education. In dynamic, relatively young fields of inquiry and experimentation it is especially important to bring budding "ideas in progress" to the light of public scrutiny. We intend the papers in this series to provoke critical discussion and to contribute to the generation of knowledge about non-formal education.*

*Based on the review of the formal vocational programs offered by over sixty church-sponsored training centers, the author argues that there is an urgent need for alternative approaches to vocational education. He points out that, typically, vocational training programs have tended to side-step the very people whom they were intended to help, that is the "poorest of the poor" in rural areas. Largely due to financial constraints and staffing considerations, many vocational centers are located in urban rather than rural areas. This situation has led to a continued expansion of and service in support of the modern sector, exacerbating urban problems while rural areas remain neglected. The author suggests that vocational training centers must re-think their objectives and activities,*

*and formulate realistic strategies in order to reach those who most need their services. He offers thoughtful guidelines which include making changes to focus curricula on community needs, establishing closer cooperation with local communities, and encouraging participation of training center personnel in community-wide development efforts.*

*We are most grateful to Joachim Lindau for allowing us to share his work with development planners and practitioners in the Non-Formal Education Network and to Lynn Joesting of the NFE Center who worked so diligently on the manuscript.*

*As always, we invite your comments and contributions to enrich the dialogue concerning important issues in non-formal education.*

*Mary Joy Pigozzi, Director*

*Non-Formal Education Information Center*

*This series of Occasional Papers is published by the Non-Formal Education Information Center in cooperation with the Agency for International Development (Science and Technology Bureau, Office of Education). The views expressed in this paper are those of the author and do not necessarily represent the NFE Information Center or AID.*

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SOME CRITICAL COMMENTS ON FORMAL VOCATIONAL  
TRAINING AND SUGGESTIONS FOR ALTERNATIVE  
APPROACHES

Joachim Lindau with Lynn Joesting

THE PREVAILING SYSTEM

If we could state an operating maxim in the developing world today, it might read, "the road to success is paved with opportunities for education." For better or worse, this operating assumption and the experience of most Third World people is that one's access to an education significantly influences his or her future well-being. Government and international development planners have long valued education as a key factor to progress. But access to education in the Third World has always been severely limited.

During the 1960's, the introduction of vocational technical education programs was celebrated as the developing world's answer to both meet the demand for increased educational opportunities and help develop manpower for the needs of an emerging modern sector. These programs came at a time when formal education was being criticized for widening the gulf between the rich and poor,

and the haves and have-nots of educational opportunities. Although formal education could boast of successful graduates, it was becoming clear that the few who made it through the schooling process were rarely looking back to help the remaining masses still deprived of education and other growth opportunities. Development planners began to suggest that non-formal and vocational education could help remedy this injustice by working directly with rural and other neglected peoples.

One response to the call for additional educational opportunities came in the form of church-supported vocational training centers (also referred to as technical schools, craft training centers, and technical institutes). The primary objective of these centers has been to teach practical skills and theoretical knowledge in order to prepare individuals for industry and government-based employment. Upon completion of a two or three year program, a student earns a certificate as a skilled worker or technician. This certificate is then recognized by private industry and government organizations for entry into their employment.

Such centers operate throughout the developing world today. Some have existed for twenty years or more, and continue to operate in much the same mode as when they began. Few questions have been asked about the type and quality of contributions these

centers have made to development needs. The purpose of this study is to examine how the work of vocational training centers receiving support from the Association of the Churches' Development Services (ACDS), and other non-governmental organizations (NGOs) relates to the needs of the world's poorest of the poor. The sobering social-economic conditions of the 1980's, and even more sobering projections for the future offered by the Brandt Commission Report and others, suggest a critical need for a radical reconsideration of present patterns of development efforts and policies.

#### Study Design

This report examines the contributions church-related vocational training centers are making to help guarantee members of developing countries at least a minimal, subsistence-level standard of living. The ideas presented here are a result of the author's personal involvement in formal vocational programs offered by over sixty church-owned or church related vocational training centers in Africa, Latin America, and particularly Asia. An intensive study of files on 64 existing vocational education institutions was supplemented by secondary information gathered from such sources as less detailed files, observation, and correspondence on an additional 30 governmentally and non-

governmentally-sponsored institutions. Reports from as long as twenty years ago and the author's ten years of experience in vocational training have provided helpful background information. Vocational training programs offered by church-related colleges or universities are not a part of this study. It may be assumed, however, that the current findings would be even more pronounced if such programs were also included. Four categories of criteria questions were used to assess the effects and usefulness of the vocational training centers:

1. Do the institutions work satisfactorily in light of their own declared objectives? Are the necessary means to meet these goals available? How well do available resources help meet institutional objectives?
2. Does vocational center training increase a person's chances of finding employment? Do graduates of these centers have increased employment offers?
3. Do the institutions help to emancipate the poorest of the poor? What impact do the programs have on the most marginalized peoples?
4. In what ways do the institutions help to create a just, participatory, and self-sustaining society?

Answers to these questions have provided information about the status and role of vocational training centers, their actual (as compared to ideal) operating objectives, funding, and personnel and student profiles.

#### The Status and Role of Vocational Training as a Form of Education

The boom in building vocational training centers came

during the mid-sixties as a reaction to much of what of colonial and post-colonial schooling was labeled distorting and developmentally irrelevant. Yet, in spite of the fact that a vocational education usually promises greater employment opportunities than do degree programs, such training has never gained the acceptance or status of formal schooling. Most of the young people entering vocational training centers do so only after their application have been turned down by the formal system. They feel cheated to have to settle for a second-best alternative.

Even though job opportunities may be considerably better for vocational trainees than for the majority of secondary school leavers or college graduates, the frustration expressed by vocational students is by no means irrational. Technical training does not provide access to prestigious white collar administrative jobs. Technicians are discriminated against everywhere. Even funding applications submitted by technical training centers to donor agencies reflect this discrimination by referring to their student population as secondary school drop outs and others unable to stay in the educational mainstream. It is not surprising, then, that trainees and their parents actively campaign to increase the academic offerings of these vocational centers. Furthermore, as "second best" members of society, vocational students are tempted to concentrate more on improving their personal status than

thinking about how they can care for the underprivileged masses. Responsible students feel torn between the two options.

### Objectives

The objectives of most training centers and technical schools are far from clear. At times the training objectives are even contradictory. In some cases, for instance, students are trained to handle modern (even automatic and semi-automatic) machinery in a town-based center that is officially designed to provide skilled manpower for rural areas. Another less drastic but common example of contradiction between theory and practice is found where self-employment is stated as an objective in centers where no provision is made for managerial guidance, assistance in obtaining loans, or any of the other basics needed to start and operate one's own business.

An examination of daily management in training centers whose activities are made possible with support from ACDS reveals the following rather startling set of operational assumption and objectives:

1. Almost without exception, the projects are oriented toward the modern sector. The modern sector is composed of small, medium and large-scale industrial manufacturing, governmental services, and, to some extent, large-scale

plantations and other agribusiness organizations. Those employed in the modern sector rarely represent even twenty percent of the labor force. Although the modern sector does make a large contribution towards improving a country's gross national product (GNP), it also consumes more than its proportional share of available resources. The modern sector prospers at the expense of those working in traditional, usually agricultural sectors of society.

2. The training at most vocational training centers is geared to methods of production that require extensive use of capital. Machine-oriented training far exceeds the technical possibilities of most rural and urban poor areas. It also fails to teach the technical skills required to survive in the urban informal sector. Examples of such necessary urban survival technical skills are seen in the slums of Nairobi where people make cheap shoes from old tires, cooking pans, and other household goods. An extremely conservative estimate of the per capital investment required to finance an industrial-oriented training center is US\$10,000.
3. There is a clear orientation towards energy-intensive methods of production. National modern industries and international corporations require location in areas capable of providing

extensive quantities of energy resources. Such a reliable and sophisticated infrastructure cannot be guaranteed in all areas of poor countries. The availability of reliable energy thus becomes a limiting factor for employment in peripheral areas.

In effect, then, the operational objective of the training centers studied are to 1) serve the modern rather than rural sectors; 2) train students for urban industrial employment (while spending a great deal of money per student in the process); and 3) rely on the availability of sophisticated urban infrastructure to provide extensive capital and energy resources needs for industrial consumption.

These observations lead to the inevitable conclusion that conventional technical training serves to increase dependency on imports of technology, raw materials, and energy. Doing so, it also increases the gap between modern and traditional sectors of the economy. Obviously, current technical training does not improve conditions for the masses who are too far removed to benefit from any possible "trickle down" effects of industrial growth. The actual outcome of urban-centered development is that the poor suffer even greater injustices. While, in absolute terms, the incomes and numbers of people employed in the modern sectors have increased somewhat, the real incomes of the poor are actually decreasing by a considerable amount. One could say

that the type of training linked with and supporting the capitalist modern sector means training against the true interests of the poor.

The failure to serve the poor is not a mistake of those people presently in charge of conventional training centers. Where the industry-oriented objectives of training are clearly stated and followed in practice, they do fulfill the purposes for which the institutions were established. That is, they are to:

- train young people as skilled workers, craftsmen, or technicians (in addition to technical trades, some courses specialize in farming, commerce, and domestic science).
- help graduates find employment, and
- contribute to the aggregate growth of the national economy as well as individual employment.

It has only been recognized at a very late stage that all this takes place in a sphere far removed from the daily sorrow and pressing needs of the poor majorities of the Third World.

#### Consequences of Locating Training Centers in Urban Areas

Vocational training centers have to be situated in the towns and cities where their "clientele" operates. Indeed, the vast

majority of church-run institutions in our sample are located in urban areas. The decision to locate training centers in urban sectors has led to at least four unintended consequences: urban migration, unavailable funding and personnel resources for rural sectors, an urban-employment mind-set, and the headaches of having to provide and maintain student housing facilities.

Locating training institutions in towns and cities encourages urban migration. Rather than battle the forces that push rural people away from the challenges of rural life, the centers instead exert the opposite force of pulling individuals toward the attractions of urban life. In effect, city-based vocational centers offer more than job training -- they provide an avenue for young people leaving the rural areas that currently offer few or no opportunities.

A second consequence of locating training centers in urban areas has been that of leaving only limited funds and lower-grade teaching staff for the rural sectors. In this respect, churches normally follow the pattern of decision-making already prevalent in government circles.

There are a few training institutions located in rural areas. It is extremely disappointing, however, to discover that when they do have rural locations their curricula are also predominately geared to train people for urban employment.

In effect, then, such centers are simply rural-based manpower supply systems to feed the needs of urban-based industries.

A fourth consequence of urban location comes from recruiting students from beyond the immediate communities of a training center -- housing facilities must be provided. Administering and maintaining student housing can become quite a time consuming burden for our ACDS partners.

### Investment

Most Third World countries cannot afford large scale formal or industrialized technical training. Only university programs in science, engineering, or medical subjects are more expensive than technical courses for skilled industrial workers and technicians. Excluding the cost of the necessary infrastructure, the estimated cost per place in a vocational training center is US\$10,000. In Germany the training of a qualified machinist or fitter in 1980 cost approximately US\$25,000. Even if we take into account the fact that the cost of teaching staff - the dominant cost factor in Europe - is considerably lower in Africa, Asia, and Latin America, the cost in relation to the GNP per capita is dramatically higher in all the countries of the three continents just mentioned. Although the ratio may be somewhat better for oil-producing countries, the fact remains that the

majority of developing countries cannot support large-scale industrialized training.

Costly measures are required to keep pace with technological developments in the industrialized sector as well as to maintain the standards of the industrialized "trendsetter" countries. Funds are required for constant reinvestment and renewal of equipment without which standards would fall. Replacement and upkeep of equipment plays a much more vital role in technical education than in any other type of formal schooling. Hand tools, for instance, have to be written off after only a year's use because they tend to break or just disappear. But financial constraints make it impossible to meet these expenses. As a result, our partners have to either allow their standards to fall, or constantly rely on contributions from foreign agencies. Government grants or other local contributions are rarely sufficient to keep a center running smoothly.

A number of conclusions can be drawn from a study of training centers' financial dilemmas:

- a) Projects of this kind are only feasible if the project holder is extremely well off (and churches rarely are), or where there is constant and substantive support from abroad.
- b) By comparison with other forms of education or skills formation, institutional technical training requires an enormous investment per student. This reality requires

that preferential treatment be provided for a limited number of selected individuals.

c) Western forms of formal vocational or technical training cannot serve as models for a free and compulsory school system in the Third World. Following the advice of the German government, the centers receiving support from ACDS propagated the "dual system" for many years<sup>1</sup>. Although this arrangement did in fact benefit those who had a chance to participate in it, it proved much too expensive for full adoption with the general public. This scheme does provide relevant and sophisticated training, but it is unrealistic to hope that sufficient funds can be found to provide all young people the opportunity to benefit from it.

d) If the teaching of technical skills is intended to help poor and destitute peoples to survive - and there should be little dispute about that goal - alternative forms must be found. We no longer have the option of choosing between a British city and guilds system or a German dual system. Neither is relevant to the task at hand.

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<sup>1</sup>In the German dual system vocational trainees between the ages of 14-18 are employed by companies while simultaneously attending school for two to three days each week. The latter is required by law.

Funding for Operating Expenses

Most church-run training institutions are not self-supporting. In some cases, government authorities pay the teachers' salaries -- often the most costly single item in a center's budget. But just the responsibility to pay upkeep, replacement, and financing depreciation itself leaves an enormous burden on churches and church-related project holders.

It is not uncommon for a diocese to "inherit" a couple of primary and secondary schools, one or two hospitals, plus a vocational training center. When the task of running an institution consumes the bulk of income, time, and energy, the proverbial image of a tail wagging the dog comes to mind. We must ask ourselves whether a church is meant to meet the needs of its institutions, or the other way around. Development must be oriented towards people, not institutions. Yet old habits, the scarcity of money, insufficient time for critical examination, or the lack of qualified or creative personnel serve as obstacles to people-centered development.

The average annual cost per capita of formal vocational training in India is approximately US\$1,500. This figure would presumably be much higher if other hidden cost factors were considered. For example, we have yet to see church administrative costs incorporated into a vocational training center budget.

There are no reliable data available on these and other hidden costs to date. It is anticipated that more will be available when "Skills in Progress," an association of some 120 church-related technical training centers in India, completes an in-depth study of its member institutions.

It is not surprising that vocational training centers rarely have sufficient funds to operate at an even minimally acceptable standard. Their needs are many. Centers often attempt to raise at least part of their revenue from local sources. Two particularly common approaches to local funding have been through school fees and local production units, neither of which has had great success.

#### Funding From Vocational School Fees

Perhaps the most common approach to local fund raising is to establish entrance fees. This practice is often defended by those who believe that free education is less appreciated. There may be some truth to that, but this argument conceals the evident fact that asking for fees at vocational training centers creates another barrier of social discrimination. Charging fees at this stage means continuing the process of social selection already begun in the earlier stages of the formal schooling system.

It would be helpful to dwell on this point in some detail because of its crucial importance to the whole debate of development goals and methods. Perhaps the greatest factor that forces students to drop out of the educational system is their parents' socio-economic status. The drop-out rate is significantly higher among the poor than among the middle and upper strata of any capitalist society. Schooling becomes an inaccessible answer to the educational needs of the poor. Varying from country to country, the drop-out rate during the first five years of schooling is approximately fifty percent. The majority of those who (have to) give up schooling come from poor backgrounds.

Bearing in mind that an average of five to eight years of formal primary and lower secondary schooling is the entrance qualification required for technical training centers, one can safely conclude that the children of the poor masses have little opportunity to enter this kind of institution. When attempts are made to help cover a center's running costs by demanding fees, those few poor people who have survived to this point are finally excluded by this latest hurdle. Some church institutions are guilty of having become completely elitist and of training a kind of "workers aristocracy."

#### Funding From Production Units

A second common approach to generating local funding is to

establish production units within a training center. In principle, these are the most suitable and logical way to generate sufficient, if not ample, income to maintain a center and support its students. Moreover, funding from production could be used to support needy students, thus making the institutions a little less socially selective. Experience indicates, however, that attempts to combine training and production have been largely unsuccessful. Given the framework of curricula required by the government, it is not feasible to combine training with production. One of the two is invariably over-emphasized. Occasionally, however, a production unit is profitable if kept legally separate from the training institution. Where a "sandwich system" has been established as a separate business, students do have the opportunity to acquire practical experience in an actual work situation.

Competitive production units face the dual problems of finding sufficient capital and able management. The latter is generally more difficult to attract than the former. Due to poor management, a few church-related production units (some the size of large factories) are constantly in the red. The risk is very high that, instead of proving to be a fiscal stronghold, these production units just add to a center's financial burdens. In fact, the chance of success for a production unit is less than fifty percent. Past experience has lead to the conclusion that

churches should turn their vocational training centers over to the government when finances become unbearable and not try to become self-supporting by means of adding a production unit. There are endless disputes among experts about these matters, and a detailed study of these problems is definitely in order.

#### Endowment Funding

One source of external support for vocational training centers often comes from endowment funds of large foundations. This type of funding has a major disadvantage in the fact that endowments require large amounts of capital. A special paper on this subject is ready for translation to English.

It is important to consider the impact that the sources of funding will have on a vocational training center and its students. A solid financial base is imperative. Contribution commitments from donor agencies should be clearly understood, and before their funding is phased out, new plans must be made to replace them.

#### Personnel

In addition to the obvious need for personnel with technical expertise, sound managerial ability is also required to run a vocational school. People with both types of skills are

especially difficult to find in the Third World. Qualified staff of the calibre needed for successful development of a vocational training center can draw salaries at a level which would completely upset usual church pay scales.

Churches have made serious efforts to prepare qualified individuals for leadership positions by providing local and foreign training opportunities. But excellent job offers from private and governmental sectors often draw these well-trained personnel to their sectors -- even when they previously sign agreements to return and teach at the church-related training centers.

When determining a center's effectiveness, the quality of the managerial and teaching staff is an even more decisive factor than are its facilities and equipment. Desired staff characteristics include proficiency in management and vocational skills, creativity, flexibility, and the ability to adapt to the changing requirements of the economy. The obvious and admitted difficulties of church-run training centers underline again how problematic and naive it was to transfer Euro-American systems of professional training to an environment not prepared to sustain them.

It will be a long time before there is a sufficient number of qualified technical teachers to meet current demands. It is

not uncommon for training centers studied to either lose their teachers to the temptations of working for better pay in private business, or find that their teaching efforts are limited to comply with the needs of the small and exclusive modern sector. This sector should be pressured to care for itself!

It would, of course, be unrealistic to think that the modern sector of Third World economies could be abolished altogether. Yet, why should churches be obligated to back a policy of alien industrialization that fails to reflect the objective needs of their constituencies? Finding and training qualified staff for alternative approaches to skills formation remains the most difficult task. But, if it helps ensure that the most needy will be trained, all the effort involved will be worthwhile.

### Students

Studies have revealed that students of technical schools run by or associated with churches clearly show a lower middle to upper class bias. It seems, then, that these schools are not an appropriate tool for churches to help fulfill their important role vis-a-vis the poor. Poor youth are most concerned about making a decent living. They dream about a regular and reliable source of income. Vocational centers help only an isolated few reach their goals.

The needs of the poor were overlooked in the sixties when foreign training systems were exported to Third World countries. Somehow, planners failed to realize that the experiences of the industrialized countries would not be applicable in the developing world. Nor did they understand that guidelines imposed from above would not be appropriate for radically different settings. Even two or three years into their operation, some projects looked as if they had been just installed by parachuters. It is simply not possible to establish, finance, and maintain the extensive and free vocational training system in the poor two-thirds of the world that is available today in most industrial countries (and even compulsory in Germany). Where such training does occur, the results are necessarily elitist. This statement does not deny the fact that in many developing countries even skilled workers are badly exploited. It rather emphasizes the reality that gaining access to the modern sector and having a regular job means being far better off than having to make a living as casual unskilled laborers, marginal farmers, tenants, or landless laborers.

The present situation has been brought about by a rather brutal selection process. We now find relatively privileged people in institutions that were originally intended to serve the underprivileged. And it is the donor agencies who are to

blame for not having been able to differentiate the phenomenon of poverty in Third World contexts. By European standards, for instance, a young fitter employed by a metal workshop in India may appear poor, but by the standards of an uneducated young rickshaw puller, he is almost a king. The conclusion about the root of the problem is quite clear: like any other form of formal schooling, vocational training is not being accompanied by a process of social emancipation. On the contrary, current vocational training practices are unfortunately both reinforcing and aggravating social differences.

Prospects for the future are anything but promising. The number of young people in Third World countries is growing drastically. In many of these countries more than half of the population is under twenty years old. This fact alone makes it very unlikely that formal education could ever become a valid instrument in the future. It is not even doing the job now. Most likely, the present selection process of formal education will become even more selective in the future. As a result, the poor will have even fewer opportunities to participate in any type of formal schooling whatsoever. Some radicals believe that schools will become social institutions which antagonize rather than integrate the segments of society. Instead of contributing to national development, the effect of competition for schooling

tends to turn latent class differences into a manifest class struggle. This is precisely what some cynics want to have happen.

Employment prospects for graduates of church-run schools are normally much better than for those who have undergone training in other private or public vocational schools. The ACDS has received very little feedback or hard data on how the qualifications acquired correspond with the requirements of industry. We only know that in the past, most graduates have obtained employment. Long term studies on whether they continue in their line of training and respective trades have yet to be conducted. Some feedback suggests that formal technical training has been regarded as a transitory period for greater aspirations. It is premature to say, however, that a substantial number of graduates have made their way into white collar jobs. This is of course a concern of considerable interest, because it may be that current training is not preparing graduates for work as the type of shop-floor technical personnel that industrialists so often claim are needed.

Formal technical training is an almost automatic guarantee for employment in Africa. In some of the more industrialized countries of Asia and South America, however, even well-trained young people fail to obtain employment. Industrialists sometimes claim that these people are not "employable" because their

skills are not up to expected standards. The real fact, however, is that there is a widening gap between diminishing rate of investment expansion and the increasing number of trained applicants for industrial employment.

#### In Summary

This first section has described the prevailing system of church- and other NGO-sponsored vocational education in Third World countries. We note that vocational education projects have usually turned out to be much more expensive than originally planned. They have furthermore taken far longer to begin functioning than expected, and have leaned heavily on the help of foreign experts for many years. The major findings of this study are summarized below.

Approximately one-half of the projects studied face serious financial problems just to meet daily operational expenses. It is difficult to predict what will happen when original equipment has to be replaced.

Vocational training that was originally intended to further the overall development of poor nations has clearly limited its contributions to that of strengthening the modern sector. It has failed to prevent further separation between the rich and poor sectors.

In its present form, vocational training does not foster structural change in the dual economies of the Third World. As long as church organizations continue to restrict their training to a few select individuals, they are spending their own educational funds to provide private industry with skilled manpower -- often free of charge!

The number of graduates from church-run vocational institutions is minimal compared to the number of graduates from private and government-sponsored training centers. This fact can be viewed positively, however, as it assures church centers the opportunity to embark on new training approaches without upsetting the whole vocational education system. And it is on this note of optimism that the next section offers our ACDS partners and others suggestions for a more relevant approach to church-sponsored vocational training.

#### SUGGESTED ALTERNATIVE APPROACHES TO VOCATIONAL TRAINING

Findings from this study reveal the clear need to re-examine the operating assumptions of church-sponsored vocational training centers in developing countries. Changes attempted should be based on programs with modest beginnings and an orientation toward the needs of the rural poor. Program planners must also acknowledge

the fact that working for rural development is more productive than fighting against current trends to exclusively develop the modern sector.

#### Focus Curricula on Community Needs

Significant changes are needed to focus vocational training on immediate and community needs of the poor people. To date, we have only a few examples of systematized alternatives to current practices of formal vocational training. Some programs, however, do show promise of offering relevant responses to the needs of the poor. The Community Training Center at Nyakabanda, Rwanda, for example, offers short courses to young villagers irrespective of their formal school qualifications. Vocational training projects for squatters in India and the Philippines, as well as centers within the Village Polytechnic Program of the National Council of Churches in Kenya all show promise of a start in the right direction. We have additionally heard about experiments started in Zambia, Zimbabwe, Guinea Bissau, and Caribbean countries. Descriptions and case studies of these programs should be completed in the near future and available for further examination.

An innovative approach to vocational education that has received much attention in the past ten years is that of the

Botswana Brigades Movement. Its initial emphasis on learning by doing and offering the kinds of technical skills that lead to self-employment were most impressive. Recent changes in the program, however, have led to the unfortunate development of rather conventional and socially exclusive training centers that now focus on providing the skilled manpower for the local and South African modern sector. They had begun an important move in the right direction for modest, but significant, change. Why the leaders of the Botswana Brigades have returned to the same traditions they initially rejected remains to be examined.

An extremely interesting approach to vocational training has been suggested by the Christian Council of Tanzania (CCT). In Rural Vocational Education in Tanzania, published in 1977, the CCT suggests a method to closely relate skills training to community development. In this approach, the people of the community first describe the needs of their area and then proceed to define the kind of training they believe can help meet community goals. At present, the CCT and its member churches are struggling with the practical implementation of their ideas. It appears that the chief obstacle comes from several important church people who are reluctant to leave the security of formal schooling to risk new community-oriented approaches. There is great danger that the whole exercise may result in a change of

wording with no substantive change of content.

Plan Training To Meet Community Rather Than Industrial Needs

The common response to the request for vocational education has been to build clean and neat training centers in urban locations in order to prepare young people for work in the modern sector. The impressive buildings and usually encouraging employment figures for vocational school graduates given an illusion of success to these projects. Yet careful examination of the data reveals that benefits are limited to a restricted number of urban-oriented individuals and achieved at the tremendous cost of ignoring the truly poor.

This situation must be remedied! An important first step is to refocus vocational training efforts toward people rather than industrial development. It will be necessary for training centers to cooperate with existing local and regional community planning programs as much as possible.

Decisions on where to locate vocational training will depend on the amount and extent of social cohesion in a given area. The key factors to consider are how well community members are able to fully participate in decision making opportunities and whether dialogue on needs, priorities, and solutions can be an on-going process throughout the system.

### Reorient Existing Training Centers

It is unrealistic to hope for revolutionary changes in the training centers where lessons, exams and graduation requirements are closely tied to formal education. Yet, even here, some changes can be initiated that have potential for significant improvements. The introduction of short courses or evening classes, for example, may open educational opportunities to individuals previously excluded due to job or other responsibilities.

The number and extent of revisions to the present system that can be introduced will depend on the flexibility of a given training institution. Whenever possible, it is better and more realistic to work for improving programs within the already existing systems. Small but significant changes can be carefully introduced to help a training center speak to the needs of the community. These include making changes to focus curricula on community needs, establishing closer cooperation with local communities, and encouraging participation of training center personnel in community-wide development efforts. Each of these suggestions is further explained.

### Design Appropriate Curricula

An in-depth needs assessment can be conducted to help

determine how a community defines its needs and what training opportunities it wants to offer its youth. Curricula should then reflect the goals of the community and incorporate locally available people and material resources. Student entry qualifications should be no more demanding than the current knowledge and skills of the people who could most benefit from the training. A training curriculum should be flexible in order to adjust to changing employment opportunities and avoid preparing skilled workers for an already over-supplied market.

Refresher courses for people who want to upgrade their job skills can be offered during the evening. Local self-employed craftsmen can be invited to help co-teach these courses.

Curricula should not include production of goods that are too complex or too expensive for the training center and community to handle. When it is to the community's advantage to participate in industrial production, it would be wise to consider making only those parts of products that can be produced with already available machinery and resources. Costly investments required to produce a finished product should be avoided whenever possible.

Encourage Positive Relations Between the Vocational Center and Surrounding Communities.

In order to assume the development of a curriculum that

responds to the needs of a community, a vocational training center must take the initiative to invite community participation and encourage positive relations with the community. Once the focus is redirected from industrial to community needs, the opportunities for cooperation and mutual benefits become quite obvious. We know, for instance, of a training center located in a village that is constantly short of water. That center happens to have a good well, and with it a great opportunity to develop positive relations with the surrounding populations. By offering to share its water resources, it can demonstrate its willingness to participate in community life, and invite villagers to meet the faculty and learn about ways they can become involved in vocational training.

There are many opportunities for training centers to serve community needs at little or no additional expense. When urban vocational centers re-orient their training toward local needs, dormitories will no longer be needed. They can be made available for people who want to begin small scale production projects on their own. Many centers have machinery they no longer use that could be sold or rented to local cooperatives. Modest income from these arrangements would be welcome to help operating expenses.

Encourage Vocational School Trainers To Participate In Community Development Efforts

Vocational education faculty are not known for active participation in community improvement efforts. They are, after all, a product of urban and industrial-oriented training. Yet, when given opportunities to learn more about community development and asked to lend their personal expertise to the process, there is little reason to doubt that they will be most willing to become involved. Vocational education trainers have tremendous potential to help communities understand the process and how-to's of development projects. Faculty sharing their knowledge of technical matters, for example, could help a community organize self-help measures to secure better water supplies and sewer systems. They can also offer advice about how to form cooperatives for jointly producing and marketing local products. Their knowledge about how to apply for a bank loan may be all the help needed to begin a process of self employment in the community.

Understand When Change Is Impossible

Many centers are so closely tied to their national formal schooling systems that the only way to change them would be to also change official government educational policies.. In some countries, training centers would be prevented from altering

their present programs by strict governmental curricular and accreditation requirements. It would be advisable in these cases to discuss the possibility of handing such institutions over to the government and, if possible, begin a new program less dependent on government regulations.

#### DEVELOPING A RURAL BASED TRAINING CENTER

In cases where new vocational training centers are being initiated there are opportunities to try very different approaches. The following section offers suggestions for a more relevant approach to church-sponsored vocational training.

A rural training program must base its operations on a comprehensive understanding of rural development processes. The curriculum, for example, will need to provide technical instruction in both agriculture and agriculture-related vocations. It should promote technologies that are appropriate to non-urban cultural and financial realities, while also seeking ways to help diversify the rural economy. In order for these centers to meaningfully address rural needs, they must assure that local citizens are actively involved in all aspects of planning, training, and production operations. Community participation in decisions about curriculum and appropriate technology are crucial to the success of rural based vocational training programs.

Participatory research projects are important to provide information about how people perceive and set priorities for their community needs, what they hope for the future, and how present socio-economic realities need to be considered. Information from such research, along with knowledge of the students' present skills and technical abilities should be used to determine a center's programs. Unfortunately, however, most centers fail to think through these matters. Many prefer to rely on some abstract manual that attempts to dictate such policies, as, for example, how many hours a student must file down pipes in order to become a pipe fitter.

A rural based training center in Nyakabanda, Rwanda, has learned that their community needs are best addressed by offering a wide variety of course offerings. There, agriculture and animal husbandry are taught along with metalwork, bricklaying and woodwork. Each community will need to decide how many kinds of courses to offer. It is of course not the number of offerings that most matters, but rather the way in which the curriculum speaks to the particular problems of a given community.

#### Meeting Community Needs

Four types of problems common to rural communities that rural training centers could address are problems with water supply, alternative energy sources, housing, and soil erosion.

Water supply systems. Clean water for human consumption, and water storage facilities for irrigation systems are two of the greatest needs found in rural areas. Training centers could design programs that include well digging and cheap surface water conservation techniques. A new trade could be introduced to construct and maintain community water supply systems.

Alternative energy supply systems. There is no dispute about the importance of finding alternative supplies of energy. While the availability of oil remains a worldwide concern, the lack of access to firewood is an even more important crisis in the rural areas of many Third World countries. Vocational education centers could consider the feasibility of rural bio-gas plants or any of the many other energy saving devices now available for testing.

Housing. Clean and safe shelters are high priority items among poor people. It is not necessarily expensive to construct better homes and grain storage shelters when local materials and builders are employed. Rural training centers can offer courses on improved thatching and brickmaking techniques.

Soil erosion. Courses in terracing hills could be introduced in areas especially susceptible to soil erosion. An especially effective terracing method has been recently developed that requires little physical labor.

### Planning Considerations

Rather than begin with formal classwork, a new center might want to first employ a few apprentices. These people will then learn their trade experientially by working closely with training personnel. By this method, both the students and faculty would then be better prepared to develop a program specifically adapted to the community it serves.

Once a center begins its coursework, it will be important to keep the courses as short as possible and never allow them to last longer than three months. They should preferably be offered during the agricultural off season. An on-going evaluation process is also necessary to continually examine the relevance of the programs to a given community.

The training center should avoid competition with local craftspeople and develop creative cooperation whenever possible. Craftspeople should be offered encouragement, assistance, and advice when appropriate to help them improve their products. They and the center may wish to discuss the possibility of joint marketing ventures as well.

A key task of rural training centers is that of adapting appropriate technologies to local circumstances. The needs of the people and their purchasing power should be carefully considered when determining which technologies to adapt for a

given program. Non-labor intensive technologies that put local craftspeople out of business or reduce job opportunities are to be avoided.

### The Use Of Appropriate Technology

Appropriate technology by itself does not cure development problems. If planners fail to consider the social context of the community in which new technology is being introduced, the improved technical devices will most likely be concentrated in the hands of a few powerful people. Appropriate technologies do not themselves liberate people from poverty or injustice! Thus, it is crucially important that the introduction of a new technology be done with, rather than 'to' a community. For example, if improved grain mills are available for adoption, they should not be introduced to a community until there are insurances that the community itself will have control of its adoption, usage, and profits.

The actual development of appropriate technologies (e.g. more efficient windmills or solar cookers), should be left to the work of a few central institutions in order to avoid duplication and reduce operating expenses. Cameroon has a Centre Technique in Maroua that has been specializing in appropriate technology development for several years. Its efforts to adapt technology

for poor rural areas have produced excellent results particularly as people adapt the Maroua inventions to their own contexts.

#### Other Considerations

Finding sufficiently qualified personnel for rural training centers will be a very difficult task at first. New faculty must be both competent and dedicated to working with the poor in rural areas. Obviously, those who are initially hired may have been already working in or for the modern sector. They will face the temptation of wanting to teach in the shiny world of modern, well-equipped workshops. Thankfully, however, we already have some examples of vocational trainers who, after some re-orientation, have grasped the idea of what it is to work with and for rural people. They are becoming excellent models for new trainers to follow.

Initially, the rural training center will have to face high costs. It could in time become self-sufficient if it were to work to keep operational costs at a level consistent with the community and use its resources wisely. Some centers may find they will still need to rely on national or international support to continue their operations. Their very existence and desire to help liberate the rural poor will in the end justify their dependency on outside support.

## RELATING RURAL VOCATIONAL TRAINING TO THE MODERN SECTOR

It is of course unrealistic to expect to be able to abolish the modern sector. Powerful elites control much of a country's political and economic life, and it would be against their interests to advocate anything but traditional modernist development strategies. So, rather than try to fight the system head-on, it would be more realistic to instead try to interest people in another alternative -- that of rural training centers.

The modern sector has much to offer rural people. It is of course necessary to make intelligent choices about how to adapt modern products and services to rural community development. For example, the introduction of electricity, better roads, and schools are most helpful when they complement rather than frustrate rural life. Whenever something new is introduced, it must be adapted in such a way as to be within the reach of the poor.

An excellent example of adapting modern technology to rural conditions is what occurred in the Terai of Nepal. There, a rather sophisticated water turbine was explained in such a way that a local community was itself able to decide how to use it and take control of its operation and maintenance.

How rural centers should relate to conventional vocational training institutions is still a matter of debate among rural-oriented trainers. Some believe it would be best for ecumenical

organizations to maintain one or two conventional centers in order to develop a resource base from which to recruit personnel for rural teaching. Those who oppose this idea believe that it is too expensive to run traditional institutions just for the sake of finding new personnel. They argue that it would be the same to hire personnel from the modern sector as it would to recruit from traditional institutions.

#### SUMMARY

There is no question about the urgent need for alternative approaches to vocational training. Given the frightening reality of ever increasing numbers of young people looking for some hope in life, and the fact that available funds are extremely scarce, we are faced with the dilemma of no longer having an option about what to do with current vocational training. If we sincerely want to assist in developing the skills of the poor, we must be willing to experiment with alternative approaches to our present less-than-effective system.

At present, most vocational training is oriented toward developing the modern sector of urban areas. While some people are learning useful trades and finding employment in the city, these gains are being made at a very high cost to the rural poor who have extremely limited access to vocational or any other form

of education. Most current vocational education curricula have the effect of pulling people from rural areas to the city in search of jobs in business and industry. As a result, cities are overcrowded while other areas steadily lose the manpower and incentives needed for rural development.

There are obviously no ready-made solutions to apply to the problem of meeting the vocational educational needs of the poorest of the poor. This paper is intended to discuss the problems inherent in the current system. I hope it challenges, and even provokes, vocational education planners to address the issues and work for meaningful rural development efforts.

The time has come to revise the conventional policies of industrialization that assume that its benefits will somehow trickle down to the poor. The needed revisions of the predominant system for technical training will, of course, take time. Although the resistance against alternative approaches will be very strong, churches have the opportunity to spearhead a movement towards more meaningful kinds of skills formation that respond in a fair and morally justifiable manner to the needs of the rural poor.

A number of experienced vocational trainers are becoming increasingly frustrated and disillusioned as they struggle to make their formal vocational training relevant to today's needs. These people need to be heard, and invited to discuss their

concerns with others in vocational training as well as with the donor agencies supporting their work. The situation of poor young people in the Third World requires bold decisions and a commitment to immediate and constructive action.

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