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DEVELOPMENT DIGEST

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Money values will be expressed in U.S. dollars unless other-
wise specified. The spelling "tonne" will be used to indi-
cate metric tonnes (1000 kilograms), and "ton" will refer to
traditional U.S.-U.K. tons (2000 lbs. or 2400 lbs.).



PRIVATE ENTERPRISE
AND THE MARKET

Private Enterprise and the Market

Gordon Donald, Editor of the Development Digest

The advantages of private enterprises as vehicles for stimulating economic growth rates, and for inducing the peoples of less developed nations to learn new technologies and develop new personal capabilities, can be approached in several ways. A general statement on this subject appeared in the Development Digest of January 1982, beginning on page 116, some aspects of which will be summarized here. In the three articles that follow, each takes a different kind of look at the subject. But before embarking on the presentation of these issues, it is necessary to make clear the view of the subject that is taken here, and that connects the variegated contents of the three articles below.

The advantages of private enterprise do not flow from an assumption that private ownership is by its nature morally superior, or that government ownership is inferior. Instead, the virtues of private enterprise arise from the effects it can have on peoples' behavior, and the ways in which these effects can serve the developmental progress of nations. In other words, it is not the privateness of ownership that matters so much as the behavioral characteristics that should appear when private producing, transporting and selling enterprises are striving to serve the needs of a nation's consumers. In general, those engaged in private activities generally try harder to seek out consumers, and to find the goods and services they want, than do the people engaged in the same kind of activities in government enterprises. This difference in effort and dynamism is found in different degrees throughout the world, at various income levels, in large and small countries, and in situations where natural resources are abundant as well as where they are scarce. This difference is not clear and consistent 100 percent of the time, but the tendency for a greater dynamism in the private sector is strong--strong enough to justify consideration of why it should exist, and what its meaning for national development may be.

We will speak of the behavior of private enterprises striving to serve the consumer as "market" behavior, a shorthand term used by economists to indicate the kinds of actions stimulated by a search for private profits in competition with others who are similarly motivated. Profits are increased by the ability of an enterprise to sell more than its rivals; to produce goods or services more efficiently and thus at lower cost--or perhaps goods of a better quality at similar cost; to find new products to present to the public--ahead of other sellers; to

seek buyers in out-of-the-way places who have not previously been approached, or not very attentively. Attempts to take these kinds of action will generally be rewarded by higher profits--though of course mistakes may be made that can have an opposite effect. But, there are no corresponding rewards for the civil servants working in state enterprises performing production, transport and marketing functions. They do not have the material or personal incentive to search for new ways to do things, or new places to do them; rather, the emphasis is on staying out of trouble, making political or organizational contacts, and being repetitively reliable. Such people are more likely to get civil service promotions than those unpopular fellows who are disturbingly restless and wish to try out novel ideas in a search for improvement of their operations.

Less frequently discussed, but pertinent to the subject as defined here, is market behavior by consumers. This consists of not accepting passively the first alternative they meet, but actively seeking the cheapest item, or the preferred quality, in what they buy. Beyond that, and in connection with services that may be hard to organize in low-income rural areas, consumer market behavior could--depending on circumstances--be shown by a willingness to pay for the full costs of services that are sufficiently valued, and to maintain a consumer organization that will keep the services coming. This aspect will be discussed further below.

The preceding rather simplified account of market behavior in response to the profit stimulus has to be understood in light of the circumstances in which producers, traders and consumers find themselves. Competitive efforts to please consumers cannot be expected where there is no competition: a monopolist seller of a product or services can comfortably assume that all customers must come to him or do without, and they will have to pay his price (or offer a bribe in cases of regulated prices). This is a feature of monopoly power, whether or not the monopolist is a state corporation, or a private firm which has been given a monopolistic license in its market by a government. This is why economic behavior is considered more important than private ownership per se.

State enterprises can exist without having monopoly privileges; and if they truly depend for survival on selling their services or goods to a public which has other alternatives, and if their expansion (or contraction) in sales is reliably rewarded (or punished) inside the organization when it occurs, then such a state enterprise will have the same economic incentives as a private competitive firm. Therefore, one could expect a comparable dynamism in its market behavior, and some state enterprises--in Brazil, for example--have in fact proved highly dynamic and innovative. But the question of private ownership is not irrelevant. This is because governments seldom allow their state

enterprises to fail. They generally provide subsidies in event of financial loss; and the people working in these organizations know this, so that their behavior comes to resemble that of the comfortable monopolist--even where they do not have a complete monopoly position. Beyond this, governments also tend to put requirements on their state enterprises that work against efficiency and against positive economic motivation. Some examples are that state enterprises must hire and promote in accordance with governmental methods (including a virtual impossibility of dismissing inadequate employees), must often accept politicized appointments to leading positions, may have to buy from favored suppliers and supply favored customers, and generally find their activities overregulated. As a result, both the rewards and the punishments of "the market" are very often absent from state enterprise operations and political considerations other than efficient service to the public will dominate their reward system.

These points are developed further in the January 1982 Development Digest article, which also takes up aspects that cannot be dealt with here. Some of these are moral questions about profit-oriented motivation (it is indeed selfish, but is more reliable than is idealistic motivation); the question of impacts of selfish motivation by government officials on service to society, as against selfish private entrepreneurs--which can be made to serve society; the question of income inequalities, and the justice of financial rewards and punishments. These questions are not unrelated to the central issue of economic efficiency, which is emphasized here. Another point made, which cannot be adequately argued here, is that development ought not to be measured only by what people have as a result of national production, but should reflect what a nation's people can do with the resources that nature has given them (very unevenly among countries). This implies that development is a process of learning by doing--in which private enterprises have an important role.

The three articles that follow attempt to do the following things. The first, by Jerome Wolgin, takes a look at comparative developmental progress at the national level, and he singles out for examination four nations which have done better than most during 1960-80. He does not focus on the largest countries--India, Brazil or China--which tend to be unique, nor on the much publicized achievements in the Far East--by Korea, Taiwan, Hong Kong, Singapore--which are very unusual, but focuses on middle-sized countries in three continents which did not appear to have special advantages but have shown up well in practice. The two from subSaharan Africa are especially interesting. He goes on to explore the role of various kinds of enterprises, and of government policies relating thereto, in an effort to see the ingredients of success. He finds that policies conducive to encouraging private activities have been generally helpful not only in stimulating economic growth but in fostering other aspects of development in these countries. Although none of them has a "perfect" record in either policy or performance, the results are positive.

The article by John Schiller goes from the national to the local level and deals with the promotion of private enterprises in a rural area of Upper Volta--one of the lowest-income countries, located in the African Sahel. He recounts the experiences of his organization, Partnership for Productivity, in promotional efforts using modest levels of funds loaned only after certain actions have been performed by would-be borrowers indicating that they are serious and have some probability of success. Some of the author's observations are particular to the region; many are valid illustrations of what can be done with limited resources in what many might consider a highly unfavorable environment. One lesson that might be derived from these results is that, with some guidance and not too large financial inputs, new economic activities can be expanded in even remote areas without using up government resources.

The third article by Abby Bloom deals with the prior failure and subsequent success of a village health program in Senegal--another low-income Sahel country. Since the health program was mounted by the government and not by any private enterprise, readers may wonder why it is included in this topic. The answer is that it is a significant illustration of the value of consumer market behavior. The villagers were badly in need of health services; but the initial program presented them with services at low service fees that failed to cover true costs; the local health units lost money, many of them were closing, and the rest would predictably have to do so. However, the program was turned around by a change of policy: fees were charged that covered full costs; and village committees were formed, given brief training, and proceeded to successfully take over the financial and logistical management of their village health units.

One may say: that's all very fine, but what does it have to do with private enterprise and the market? The connection is this: poor as they were, the villagers truly valued the health services they were getting. Initially these were a partial gift from the government, one with very uncertain duration prospects. Later, however, villagers could see that health service was becoming a reliable going concern, so they were ready to pay more for it and to take on and seriously perform the management functions. Why this big change of heart? I would suggest that they were given the opportunity to identify themselves with the health service, to feel it was their own activity--where before it was not.

This is important because throughout the Third World there are vast rural areas where basic services like health, education and sanitation are either absent or erratically and weakly performed, and where governments simply cannot afford to provide services in a "proper" manner to all who need them. If ways can be developed to achieve local financial self-sufficiency in provision of rural services--even in poor areas--then the overall picture could gradually be

improved. The exact form of Senegal's outcome may not necessarily be as useful elsewhere, but its success is suggestive in an area where successes have been relatively few. Development of consumer market behavior may have more uses than have yet been exploited.

In conclusion: the values of private enterprise and market behavior deserve to be recognized for increasing the pace of economic growth and raising the skill and experience levels of individuals. This does not, however, imply merely that government should stay out of development and leave the private sector alone. On the contrary, an activist rather than a passive government policy is needed, but one which encourages private participants rather than telling them what to do. Such a policy conveys to them the economic incentives toward constructive behavior, and provides them with necessary financial and other facilities under appropriate conditions. It is a more subtle and in some ways more demanding policy than simply ordering that desirable things be done by issuing regulations, or by creating state enterprises to do them. But in the end, experience indicates that it ought to be the policy direction that will pay the most dividends.

Private Enterprise and the Market: Experience in Four Countries

Jerome M. Wolgin

[Analysis of experience in economic growth and other indicators of development points to four countries of three continents as having relatively successful records in 1960-80. Comparative studies indicate that their variegated private enterprises and higher degrees of market-orientation contributed to this result.]

This paper is intended to provide a retrospective view of the ways in which public policies have led to the growth of a vital private enterprise economy in less developed countries (LDCs), and how that private enterprise economy has affected the overall level of development and, in particular, the quality of life of the people of those countries. We have concentrated on examining the recent (20-year) development history of four countries--Malawi, Cameroon, Thailand and Costa Rica--which we believe are representative of the broad but limited range of countries which have dramatically improved the standard of living of their people.

We consciously decided to examine success rather than failure, in part because we felt that it was more important to learn what works than what does not, in part because we believe that there are many more roads to success than to failure and that the paths to success are more subtle, and more interesting, than the paths to failure. Nowhere has failure been more endemic than in sub-Saharan Africa, and thus the experiences of Malawi and Cameroon are particularly unusual. According to the World Bank, the median rate of growth of real per capita income among sub-Saharan African countries between 1960 and 1979 was 0.7 percent a year. The rates for Malawi and Cameroon were 2.9 and 2.5 percent respectively.

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Malawi's growth has been, perhaps, the most remarkable of all. To be small, poor, and landlocked are almost insurmountable hurdles for a new country to overcome. Worldwide, the average rate of growth for economies with this set of characteristics was .5 percent per year in 1960-79. Malawi's growth record of almost 3 percent despite these obstacles, with no natural resources besides limited areas of good agricultural land, and despite an almost total dearth of educated people at independence, is a true success story. Cameroon's record has been less spectacular, but nevertheless noteworthy. Surrounded by unsettled conditions among its neighboring countries, Cameroon remains an island of calm in a tempestuous sea; progress has been steady and peaceful.

Costa Rica's 3.4 percent per capita growth from 1960 to 1979 was average for a country of its income level. However, it is found in a peaceful democracy, proud of the fact that it has more teachers than soldiers. Costa Rica's development has produced a substantial improvement in the quality of life of its people: life expectancy has risen from 62 to 70 years; infant mortality has been reduced from 80 per 1000 population to 28; the literacy rate is 90 percent; food availability is 114 percent of average calorie requirements. Thailand's growth of per capita income has been the fastest of all--4.6 percent between 1960 and 1979. This growth has been associated with a steady reduction in poverty, improvement in an already relatively equitable distribution of income, and stability in an area of the world beset by war and insurrection.

The Process of Development

Economic growth is measured by GDP, gross domestic product, the total output of goods and services produced in the economy. Economic growth is a function of increases in the capital stock, improvements in the productivity of that capital stock (mainly the result of technological change), and increases in the efficient use of those new investments. A simple measure of the latter concept is the Incremental Capital-Output Ratio (ICOR), which measures the ratio of changes in capital to changes in output. The larger that ratio, the more new capital is necessary to generate a given increase in output; consequently a low value means greater efficiency. Table 1 presents comparative data on the rate of growth of capital stock and the ICOR. As expected, the growth success of the four countries we are studying is reflected in their ability to increase their capital stock rapidly, and the efficiency with which that capital is used.

But how were these countries able to mobilize investments and use them efficiently? Do their growth histories reveal any pattern that will enable us to develop general rules for growth and prosperity? Let us examine the macroeconomic data to see if these questions can be answered.

Table 1. The Growth of Investment and ICORs
in Selected Countries, 1960-1979

Country	Investment Growth (annual percentage change)	ICOR (changes in gross capital/change in gross output)
Malawi	9.0	3.8
Cameroon	8.6	4.4
Thailand	11.9	3.0
Costa Rica	7.6	3.9
36 Low-Income Countries	6.7	5.1
60 Middle-Income Countries (excluding major oil exporters)	6.7	4.3

Source: Calculated from IBRD, World Development Report.

Initial structure. In 1960, these countries were at radically different levels of development from each other (see Table 2). Malawi was clearly among the poorest countries in the world. Over 90 percent of its population was engaged in agriculture, domestic savings were negative, and life expectancy was a mere 37 years. Cameroon and Thailand were already in the group of countries beginning the transition to middle-income status (income-level groups defined in Table 2 footnotes). While GDP per capita was 40 percent higher in Cameroon than in Thailand, all other indicators (secondary school enrollment, life expectancy, share of labor force in agriculture) show Thailand having a much firmer basis for its subsequent growth. Costa Rica was already an upper-income country among LDCs, with almost half its labor force engaged in nonagricultural pursuits and a life expectancy close to that of the developed countries. Moreover, except for the relatively high level of social indicators in Thailand, each of these countries was below the mean level of performance (in terms of social indicators) for its income group. In 1960, there was no reason to expect that Malawi, Cameroon, Thailand, or Costa Rica would be development success stories.

Table 2. Initial Economic Structure, 1960

Category	Malawi	Mean Low Income ¹ (34 countries)	Cameroon	Thailand	Mean Middle Income ² (28 countries)	Costa Rica	Mean Upper Income ³ (32 countries)
Population (millions)	3.3	12.1	5.5	27.2	8.4	1.2	12.5
GDP/Capita (1979\$)	116	171	350	251	376	964	957
GDP (billions 1979\$)	0.38	2.06	1.93	6.83	3.17	1.16	11.96
Share of GDP in							
Public Consumption	16	11	10	10	11	10	11
Gross Investment	10	10	15	16	18	18	20
Exports	21	14	29	17	23	21	28
Gross Domestic Savings	-4	8	14	14	15	13	17
Agriculture	58	52	35	40	33	26	22
Manufacturing	6	9	8	13	13	14	18
Primary Products as % of Total Exports	98	94	96	98	94	95	84
Share of Labor in							
Agriculture	92	79	87	84	67	51	46
Industry	3	8	5	4	12	19	22
Life Expectancy	37	41	37	51	45	62	66
Secondary Enrollment	1	6	2	13	10	21	23

¹Countries with per capita incomes below \$375 in 1979.

²Countries with per capita incomes between \$375 and \$1,035 in 1979.

³Countries with per capita incomes above \$1,035 in 1979.

Structural changes. The pattern of structural changes in the economies of the four countries of our sample may be compared to the mean patterns of structural change of LDCs as a whole. The most interesting result is that the average patterns of structural change are similar to those in our four countries, even though the growth experience was different. Thus, between 1960 and 1980, the share of agriculture in GDP and of the agricultural labor force in total labor force declined for economies with both fast and slow rates of growth. Similarly, the role of international trade, the importance of the service sector, the share of GDP devoted to public consumption, and the share of manufactured products in total exports rose for our country sample (with the exception of Cameroon) and also for LDCs as a whole--low, middle and upper income, and the sizes of change in these measures were not consistently different.

These similarities are much more striking than the differences. It is only in the area of investment and savings that the performance of our sample differs markedly from the general performance of LDCs. For Thailand, Malawi, and Cameroon, the investment rate is substantially higher than average and has also increased faster than average. Only in Costa Rica, with its average growth performance, has investment behavior not been striking. Equally interesting, all of these countries except for Costa Rica have substantially increased their domestic savings rates (see Table 3).

Table 3. Saving and Investment Behavior, 1960 and 1980
(percentages of GDP)

<u>Year/ Category</u>	<u>Low-Income Countries</u>		<u>Cameroon</u>	<u>Thailand</u>	<u>Middle-- Income Countries</u>	<u>Costa Rica</u>	<u>Upper- Income Countries</u>
	<u>Malawi</u>						
<u>1960</u>							
Dom. Sav./GDP	4	8	14	14	15	13	17
For. Sav./GDP	14	4	1	2	5	5	3
Investment/ GDP	10	12	15	16	20	18	20
<u>1980</u>							
Dom. Sav./GDP	13	15	23	21	17	13	24
For. Sav./GDP	16	9	2	7	4	12	3
Investment/ GDP	29	24	25	28	21	25	27

The widely accepted idea that low-income countries cannot generate savings has not proved to be correct. Indeed, low-income and middle-income developing countries as a whole had higher average rates of savings in 1979 than did the industrial market economies. Some of this savings is generated by government other than households, but the bulk is provided by private firms from their retail earnings. High levels of profit thus generate future capital as well as providing a demand for that capital.

In Malawi, improved fiscal management moved the Government from a position of net borrower to one of net saver; high profits in the managerial sector and in the smallholder cash economy provided substantial savings, accruing both to expatriate firms and to Government parastatals. These profits were largely reinvested. In Thailand and Cameroon, the same situation existed. Fiscal probity, coupled with positive real interest rates and high levels of profit, generated savings for the managerial firms. Only in Costa Rica, where a combination of administered interest rates, budget deficits, and an overvalued currency led to capital flight, were Government policies detrimental to domestic capital formation.

In three of these four countries, one variable looms larger than in other LDCs--the ratio of "foreign savings" to GDP, which measures the degree to which external capital is being used to stimulate economic growth. In Malawi, foreign savings are 60 percent higher (as a percentage of GDP) than for low-income countries as a whole; for Thailand, twice as high as in middle-income countries; and for Costa Rica, four times as high as in upper-income countries.

There is, of course, a real chicken-egg question here--is good economic performance caused by large capital inflows, or are large capital inflows caused by good economic performance? A breakdown of these foreign flows by type shows that in Malawi, concessional assistance is predominant, while in Thailand, Cameroon, and Costa Rica concessional and nonconcessional flows are equally important. Increasing the rate of investment may depend very heavily on having access to foreign capital, either through concessional assistance or commercial borrowing and investing.

But how does a country get access to foreign capital? And how does a country increase the productivity of its investment? How do culture, politics, public policy, donor activities, and the international economy interact to affect resource mobilization and resource use? The answers are complex and elusive. Let us begin with a closer examination of the nature of the private sector.

The Private Sector--But Which Private Sector?

One of the important findings of the four country studies is the existence of an enormous range of enterprises flourishing in the devel-

oping countries, including parastatals, public finance corporations, transnational giants, family-owned firms, and "micro" firms, as well as any number of hybrid firms. A few quick examples in the area of financial intermediaries illustrate this variety:

- Development banks and finance companies, such as COFISA in Costa Rica, INDEBANK and MDC in Malawi, BCD in Cameroon, and IFCT in Thailand. These are institutions owned and operated by a mixture of international donor institutions, LDC governments and government entities, and private banks.
- Commercial banks which are either privately owned (as in Thailand and Cameroon), completely nationalized (as in Costa Rica), or owned by a combination of public entities and private firms (as in Malawi).
- Informal private credit institutions such as the *pia huey* in Thailand or the *tontines* in Cameroon.

In general, all of these types of enterprise, large and small, formal and informal, public and private, domestic and foreign, when present in the same economy provide highly differentiated goods and services to different clienteles.

With so many types of organizations, the distinction between the public and private sectors becomes very tenuous. Does the private sector include Press Holdings Ltd., the Malawi conglomerate which is owned by the Life President, Dr. Banda, in trust for the people of Malawi? Does it include IFCT in Thailand, a development bank with shareholders representing the Government of Thailand and several donor nations, as well as the World Bank and several privately owned firms? Does it include those firms partially owned and subsidized by SNI, Cameroon's National Investment Corporation? Surely excluded from the "private" sector are the nationalized banking system in Costa Rica, the Government-owned sugar factories in Thailand, and the primary school system in Cameroon.

At its simplest, the "private sector" means what it says, i.e., those firms which are privately, as opposed to publicly, owned. However, difficulties arise in the case of hybrid firms owned by both public and private interests. Does "private" mean majority ownership by private interests, controlling ownership by private interests, or complete ownership by private interests?

Another dimension along which enterprises might be classified is the degree to which they are market-oriented, that is, the degree to which making profits is essential to the success of the firm. There are privately owned enterprises such as PVOs, trade association, reli-

gious organizations, etc., that would fall into the nonmarket-oriented group, while most others would be classified as market-oriented. Most publicly owned enterprises (public schools, ministries of works, some parastatals) are not market-oriented, but others are.

A two-dimensional classification appears in Table 4 with examples found in the four country studies. Firms in the upper right-hand box of the diagram below are clearly private enterprises. Do the enterprises in this category have more in common with those in the box below them (privately owned, nonprofit-making firms) or with those in the boxes to their left (publicly owned, but profit-making enterprises)? For most purposes, and in particular in terms of efficiency of resource allocation and resource use, market-oriented firms are more alike than privately owned firms. Consequently, this study will investigate the behavior of all market-oriented firms, whether they are publicly or privately owned. These market-oriented firms make up what we will call the "private sector" in this study.

Table 4. Types of Enterprise

Market Oriented	Electric Power Commission in Malawi SODECOTON in Cameroon	Commercial Bank in Malawi IFCT in Thailand	Micro Firms Private Banks in Thailand Medium-size Enterprise in Costa Rica
	National Banks in Costa Rica State Enterprise in Thailand		Mission Schools in Malawi Chamber of Commerce in Thailand
Non-market Oriented			
	Publicly Owned	Hybrid	Privately Owned

Qualities of "Private Sector" Enterprises

It is useful to distinguish among various types of "private sector" entities. We will briefly examine three enterprise types: the proprietorial firm, the entrepreneurial firm, and the managerial firm.

1. Proprietorial firms: small owner-operated enterprises. The private sector landscape, in almost all LDCs, is dotted with proprietorial firms--peasant farms and "micro" enterprises--producing a wide variety of goods and services. From the coffee farmer in Costa Rica, to the money lender in Thailand or the tailor in Cameroon, these proprietorial firms are marked by small size, the importance of family labor, the low level of capital employed, and the limited demands made on the owners' managerial ability and technological expertise.

For the most part, proprietarial firms supply small local markets with valued goods and services; they tend to be labor intensive with low levels of labor productivity. In Nigeria, proprietarial firms may produce only 5 percent of manufacturing output, but employ 90 percent of the manufacturing labor force. More broadly, while small farms, industrial firms, or service enterprises may produce only a small share of total GNP in any LDC, they do provide a livelihood for the majority of the people.

These firms are competitive, responding to market incentives, economizing on scarce resources, and having free market entry and exit. However, it is not easy for individual firms to expand very far; when a local market expands, it is more likely that additional small firms will enter it than that firms will grow.

2. Entrepreneurial firms. The economic history of the West, particularly of Britain and the United States, is dominated by the entrepreneurial firm, the owner-operated firm rapidly expanding in response to a new technology or a new market opportunity. The Industrial Revolution is thought of in terms of pioneers such as Richard Arkwright, Eli Whitney, and James Watt. The entrepreneurial firm has thus been considered as the backbone of industrialization and modernization--the institution which converts savings into new, risky, and productive ventures--the engine of growth. However, the latecomers to the Industrial Revolution depended less on the entrepreneurial firm than on the large managerial firm (see below).

The role of the entrepreneurial firm today in the Third World depends on historical circumstances. For instance, in Malawi, there are virtually no indigenous entrepreneurial firms; in Cameroon, there are a small number; in Thailand, there are important entrepreneurial firms largely owned by the Chinese minority; in Costa Rica, indigenous entrepreneurial firms dominate the economy.

3. The managerial firm. Most modern economies are dominated by large corporate firms which separate ownership from management, and institutionalize decisionmaking. This is certainly true of most LDCs, where the managerial firms may be locally owned, owned by foreign interests, owned by a combination of foreign interests and the government, or publicly owned.

There may be little difference in behavior between the entrepreneurial and managerial firms, but the differences in organization and style imply differences in constraints. For instance, entrepreneurial skills--mobilizing outside capital, perceiving bold new opportunities, and taking daring risks--are different from managerial skills--organizing, calculating the benefits from different management choices, and managing cash balances with a sharp pencil. The critical managerial decision is expansion; the critical entrepreneurial decision is establishment. Gen-

erally, given their existing resources, managerial firms have an easier time obtaining capital than entrepreneurial firms.

Private Sector Vitality

The variety and coexistence of organizational forms. In all of these economies, from the simplest to the most complex, the variety of forms that productive units can take is remarkable. In Malawi, for example, an economy barely the size of an American city of 100,000, (e.g., Bridgeport, Connecticut), one can find smallholders, plantations, and medium-size farms; village beerbrewers and Carlsberg Brewery, Ltd.; tailors operating on a store porch; garment manufacturers with 100 employees; and the giant David Whitehead textile mill employing over 2,000 workers, jointly owned by a British transnational firm, a Malawi Government parastatal, and a large holding company owned by the president in trust for the Malawi people. Malawi parastatals take all forms, from the more typical Electric Power Commission and Blantyre Water Board, to the agricultural marketing and investment giant, ADMARC. Many large managerial firms are neither privately owned nor publicly owned but a hybrid of the two. Education is largely a province of the Government, but there are many private training schools and much training is done on the job. Credit is provided by the commercial banks (themselves owned by both public and private interests), building societies, an insurance company, small moneylenders, and the borrower's cousin. In short, wherever a supportive environment exists, some economic life form will fill it.

An enterprise will survive longer if it is adaptable to changing environmental conditions. No matter how dominant an enterprise, its survival depends on its flexibility. Like the dinosaurs, economic organizations that are highly specialized or highly rigid will die out when economic conditions change. For the economy, too, flexibility is vital. Flexibility will be more likely if the economy is complex and large. In such a case, there are many ecological niches available, and a downturn in an industry's fortunes need not have a substantial adverse effect on the rest of an economy.

1. Corollary 1: Diversification of firm and economy will enhance the prospects of survival for both.
2. Corollary 2: An economy is often healthier when the inefficient enterprises are allowed to disappear.

The success of the entire economy is not linked directly to the success of all its individual components. Inefficient firms, like Thai State Enterprises or Spearhead in Malawi, should be allowed to die when they prove to be inefficient. The resources which they waste can be more effectively used by more successful enterprises.

For an economy, diversification and flexibility are the basis for survival. Any economy that, through policy or circumstance, finds its activities concentrated in one sector can be devastated by an unfavorable change in the economic climate. Cameroon and Costa Rica, with their dependence on coffee, are in grave danger of being held completely hostage to the decline in world commodity prices.

Equally important, an economy must be able to learn from its past mistakes, to understand when a particular opportunity has been foreclosed (import substitution in Costa Rican textiles, for example), and to turn away from practices that have been shown to be ineffective. For example, while the Government of Thailand was unable to divest itself of its state enterprises, the Government avoided having them undertake new activities--a decision that many other countries failed to take. In Thailand, as a result, the state enterprise sector shrank as a percentage of the total economy. When management problems threatened the survival of Malawi's public holding companies--Press, ADMARC, and MDC--management was replaced. When several publicly owned firms in Malawi proved unprofitable, they were closed and their assets were sold.

The principle of the "Tortoise Walk". Because economic survival requires flexibility, adaptability, and diversification, prudence suggests an incrementalist approach to development--an avoidance of large-scale projects intended to make a large impact on growth. These high-risk, high-gain activities are too vulnerable to a capricious environment. Far better to take small steps, to move slowly, to avoid the pitfalls.

It should be noted, however, that incrementalism is no guarantee of success. Costa Rica is faced with bankruptcy because of a series of incremental steps that increased its dependence on the international capital market and increased its debt repayments until, with world recession and inflation, the slow build-up of debt broke the camel's back. In this case, it was the increased dependence on international borrowing in a time when credit was becoming increasingly expensive that brought Costa Rica to the brink of disaster.

Linkages among enterprises. Symbiosis is one key to economic progress. The more linkages there are among various enterprises, and the more symbiotic these linkages are, the greater the chance that growth of any one enterprise will lead to growth rather than decay of others. As an example, when Sears, Roebuck began development of its retail chains in Peru, it actively established linkages with local producers of every ilk--small and medium-size firms, micro firms, and skilled craftsmen. As Sears grew, the share of its merchandise produced locally also grew. The phenomenon is illustrated over and over again--in the sugar industry in Thailand, linking smallholders and factories; in Cameroon, with garment manufacturers processing local cloth which, in turn, is made from smallholder cotton. The links may also be between public activity in educa-

tion or infrastructure development and the ability of private firms to produce more cheaply and at lower risk.

Of course, parasitism is also possible. In Costa Rica increasingly large budget deficits led to the Government's starving the private sector of credit. In Malawi, ADMARC generated large trading margins by not passing increases in international prices on to producers, particularly in groundnuts and cotton. In East Africa, Lonrho wanted to begin the production of Chibuku beer (a local product made in the villages). After it captured the market by using penetration pricing, Lonrho ensured its market position (following a rise in prices to reflect its real costs) by sending thugs into the villages to break up the beer-making equipment of the women brewers.

Different growth stages will lead to different configurations of production organization. At the early stages of growth, when labor is plentiful and capital scarce, when markets are small and the possibilities for large-scale production are limited, the small, proprietorial firm will be ubiquitous and efficient. Where proprietorial manufacturing is limited to skilled artisan work, success is generally linked to the owner's skills, which are not easily expanded. As growth progresses, however, and new opportunities emerge, some of the more successful proprietorial firms will accumulate capital and expand production--particularly in the nonmanufacturing sectors of trade, transport, and finance. In some instances these firms become entrepreneurial, grow into new areas, diversify, and expand. Eventually some become too large to be managed as they were in the past, and they emerge as managerial firms.

Nature of economic vitality. As we have seen, an economy is a set of productive organizations. Some of these organizations are guided by market forces while others are not. Among economic organizations, there exists a variety of linkages--competitive, symbiotic, and parasitic. The soundness of the economy is linked to the soundness of its economic organizations; however, new economic enterprises are constantly being born, others are expanding, some contracting, and some failing completely.

This constant flux is regulated by the workings of the market which determine success by making profits. When profits are large, firms expand; when they are small or negative, firms contract; where there are continual losses, firms fail. Profits, in turn, are determined by the efficiency of the firm in converting inputs into outputs (use efficiency) and the value the society places on those outputs (allocative efficiency). Thus, the market is constantly weeding out the inefficient and promoting the efficient.

In general, an open and competitive market system operates to ensure economic vitality; to allocate resources efficiently; to respond to changes in tastes, new technologies, or new resource availabilities; and

to reward individual creativity. Of course, such a system does not work when firms are insulated from its pressures, or when markets are not open and competitive.

The dangers of ignoring market information. In general, market-oriented firms respond to market signals. Rising prices will lead to more production, falling prices to decreases. If those signals are distorted by government controls or other policies, the firms will be led into production of the wrong goods by the wrong methods. Thus government fixing of sugar prices in Thailand, coupled with a controlled international sugar market, has led to substantial excess capacity in the Thai sugar industry. Excess protection coupled with an over-valued exchange rate has led to the growth of inefficient import-substitution industries in Costa Rica. Taken to its extreme, a policy of ignoring market signals --for example, an exchange rate that is out of line by a factor of 10, as in Ghana, which suppressed the price of the country's main export, cocoa --can lead to unmitigated disaster and a complete breakdown of the formal market economy.

In Ghana, two economies arose: an official economy where goods and services were bought and sold at official prices, and a parallel black-market economy where goods and services were sold at a price reflecting their opportunity cost. Since the official market generally undervalued goods, a rationing process developed which led to generalized corruption, because rationed goods could be resold on the black market at enormous profits. Few economies have experienced the total breakdown that Ghana has, but even the generally market-oriented economies we have been studying here have not avoided the temptation to ignore the strictures of the marketplace and, as a consequence, have recently found themselves in great difficulty.

Recent Difficulties

The Costa Rican economy grew in an environment in which market signals and allocations were consistently ignored. Protective tariffs, low interest rates, high rates of domestic inflation, and an overvalued domestic currency all acted together to favor import-substitution over export promotion, and foreign borrowing over domestic savings. The impact of these policies had been cloaked by a coffee boom, but when commodity prices began to decline, the underlying weakness of the entire system became obvious. By the beginning of 1982, Costa Rica had an immense debt (over \$4 billion, or about \$2,000 per capita), excess installed capacity, significant capital exports, little foreign equity, and a public service that employed 20 percent of the labor force.

Thailand's recent difficulties have not been as severe as Costa Rica's, although they have necessitated a large structural adjustment program with the World Bank and an Extended Fund Facility (EFF) from the

IMF. The increase in oil prices in 1973 and the associated disturbance in the international economy presented serious problems for the Thai economy--in both its balance of payments and its rate of inflation. At this point, it appears that the Government chose to try to insulate the economy from the inflationary effects of the oil price hike, to proceed with new social projects, and to continue its import-substitution policy. Energy prices were kept far below world prices, and by 1979 energy consumption was growing twice as fast as GDP. To pay for imported oil, the Government began to run substantial deficits in its budget as well as in the balance of payments, and was forced to resort to heavy borrowing. By 1980, inflation reached 25 percent, and a system of price controls was introduced. These structural problems became obvious as a result of a downturn in export prices. In 1979, however, energy prices were allowed to rise to reflect their real cost. Structural adjustment agreements with the World Bank look toward rationalizing the price systems in agricultural, energy, and trade policy, and shifting tax policies away from favoring capital-intensive industry. With these reforms and the influx of IMF and World Bank assistance, Thailand should be able to straighten out its economic affairs.

Malawi's recent problems come not so much from distorting current prices as from misestimating future prices, particularly those of tobacco. Because of the close link between the Government and the commercial banking system, the latter was pushed into concentrating its loans in a dramatic expansion of tobacco acreage without normal collateral (because of land tenure arrangements in Malawi). When tobacco prices fell and management turned out to be ineffectual, the banks found themselves with a substantial amount of bad debt. The contraction of domestic credit, an over-ambitious development program, and a continual erosion in the terms of trade has led to two years of no growth.

Why Do Governments Intervene If Markets Work?

In the natural world, an omnipotent God created the universe in such a way that the laws of natural selection remain inviolate. When the dinosaurs fall prey to the ice age or the snail darter to the developers, God refuses to intervene. The natural law is the only standard that applies; life forms either adapt to their environment or die.

The *deus ex machina* of the economic world, the government, is not typically content to stay in heaven. It is consistently interfering with the market--fixing certain prices, distorting others, applying taxes and subsidies with equal abandon, and creating institutions that are not responsive to market forces. The result, as discussed above, is frequently chaotic. Firms that can't stand the heat are insulated from the sun, while others are allowed to grow in a hothouse, incapable of withstanding the rigors of their natural habitat. Despite all the evidence that interfering with markets can be disastrous, laissez-faire market systems are almost nonexistent.

A basic question that needs to be answered is, why does the government consistently intervene with the workings of the market? A number of possible answers suggest themselves, of which the main themes are that sometimes markets don't work; that many governments don't believe markets will work and don't give them a chance; and that governments have what they see as more important goals than economic efficiency.

Market failures. The economic literature contains a widely accepted set of instances where markets do not work so as to allocate resources efficiently. There is, for example, a spectrum of goods known as public goods, which, for a variety of reasons, are better produced by organizations (usually government) which are not profit oriented. These include, among others, defense, administration of justice, a lighthouse, public health, a portion of education, and certain types of infrastructure. The exact list of public goods may be open to debate, but not the fact that some goods cannot be provided efficiently by the market.

There are other types of market failures as well. Not all markets are free and open, and the existence of a true monopoly--a firm with substantial control over the production of a product and its substitutes--will lead to inefficiencies. Thus, monopolies are either regulated or owned and run by public authorities.

There are, in addition, external effects of production and consumption which the market cannot deal with. An example is the problem of common resources such as fisheries. Each individual fisherman has as his goal maximizing his catch given his costs. Unless they can agree on a method for maintaining the resource, decentralized decisions could lead to overfishing and decreased profits for all fishermen.

Another area where markets fail is with respect to time horizons. Few firms have the luxury to wait 80 years for a teak tree to grow. Consequently, activities with extremely long gestation periods are better undertaken by a public authority with a long time horizon.

Most important, markets do not necessarily lead to equity, however that is measured.

Markets and equity. It should not be surprising that the market system in itself is no assurance of equity. Indeed, the lesson of the market system is that the strong survive and the weak perish--which may make great sense for impersonal organizations or animal species in nature but is offensive when applied to individuals. The market rewards individuals impersonally on the basis of both the quantity and scarcity of the assets they possess, and of the efficiency with which these assets are employed. If the distribution of assets is very unequal, then the distribution of incomes will be unequal without considering individual efficiency.

In LDCs, where a large portion of the population earns its income from agriculture, the distribution of land ownership is a prime determinant of the distribution of income. Incomes will tend to be very unequal if land is primarily owned by large landholders while peasants are forced into small infertile plots and depend on wage labor, share cropping, or tenancy. This is the case in much of Latin America, parts of India, and in a few other scattered areas of the world. In each of our four countries, land is distributed reasonably equitably; peasants have access to sufficient land to maintain themselves and earn a small cash income. Consequently, rapid growth has meant an increase in the incomes of the people at the bottom.

Since skills are a scarce resource in most LDCs, they tend to be very handsomely remunerated if markets are allowed to function. Thus, in Malawi, where civil service salaries reflect opportunity costs, employees at the top of the wage scale are earning 20 times the salary of those at the bottom of the scale. (In the United States this civil service ratio is closer to four to one.) Therefore, providing access to skills by extending educational and training opportunities is not only fair, but it allows the society to expand its quantity of scarce inputs while narrowing the wage differential between skilled and unskilled workers.

Finally, a wage policy that resists increases in wages in the modern sectors above levels needed to attract workers leads to greater efficiency, equity, and savings rates. Higher wages lead to unemployment and a greater differential between urban and rural incomes. The lower market-determined wages in labor-surplus economies spread the benefits of modern sector employment more widely and keep urbanization from occurring too quickly.

For the most part, Thailand, Costa Rica, Malawi, and Cameroon demonstrate this same case forcefully. In all four countries, land is reasonably widely distributed, access to education is fair and broad, and wage rates reflect the opportunity cost of labor. Consequently, at least for the three countries for which we have data (Malawi, Thailand, and Costa Rica), income distribution is less unequal than in other countries of the same region and income level, particularly for the bottom 40 percent who get larger shares of the total.

Table 5. Percentages of National Income Obtained by The
Lowest 40 Percent of Income Receivers

Group Averages	<u>Low Income</u> 16.7%	<u>Middle Income</u> 10.1%	<u>High Income</u> 11.9%
Selected Countries	<u>Malawi</u> 21.5%	<u>Thailand</u> 17.0%	<u>Costa Rica</u> 12.0%
Regions	<u>Africa/Asia</u> 15.1%		<u>Latin America</u> 10.1%

Source: World Bank.

Politics and ideology. All four of the countries which we have examined are relatively predisposed in favor of the market system. Nonprofit-oriented enterprises are the exception rather than the rule. Governments in these countries tend to look toward market signals to allocate resources. Most prices are market-determined. This perception of the world is not typical in LDCs. For a number of reasons, many LDC governments tend to distrust decentralized market systems. This inherent distrust has become an image, a filter which distorts the perceptions of those looking through it.

Ultimately, economic objectives are not the most important considerations faced by the political leadership. For most politicians, the top item on the agenda is to stay in power. This objective is closely followed by a set of subobjectives intended to ensure the survival and vitality of the nation-state, both with respect to foreign enemies and internal political threats. For today's developing countries, national integration can be more important than maximum efficiency.

To be sure, political stability is linked in some rather complicated ways to economic progress. A failure to provide demonstrable economic progress in an era of rising expectations is destabilizing; however, so is rapid growth from which certain populations are excluded. Growth does not need to be precisely equal in distribution, but it needs to be perceived as "equitable." People need to feel that they will be able to better their lot, that the fruits of growth are not being denied them by the government. In particular, people need to perceive the possibility of progress. Exclusion of an ethnic group, a region, or a class will lead to great political tension.

Thus, governments frequently make decisions to interfere with market outcomes in order to achieve some political objective. One common example is the need to distribute economic activity more broadly geographically, counter to the normal market tendency to foster geographic concentration of investments. For example, Cameroon, Malawi, and Thailand all have policies to encourage private investment in the poorer regions of the country. In other cases, however, decisions are taken which benefit a particular powerful group rather than the nation as a whole. Since urban workers are more politically powerful than peasant farmers, LDCs frequently distort markets by subsidizing the urban proletariat with high wages, food subsidies, subsidized housing, etc., despite the negative effects of such a policy on rural incomes and on the growth of slums. Finally, politicians, like the rest of us, are strong believers in Keynes' epigram, "In the long run, we are all dead." Consequently, many decisions are taken to achieve short-run goals, even when long-run prospects are thereby threatened.

Conclusion

We do not find flawless examples of success in the four countries studied, neither do we see that they have followed the guidelines of market-oriented policy with perfect consistency. Rather, they have avoided many of the interventionist pitfalls in economic policy most of the time, and their records of economic growth and developmental progress in social areas have been rather better than those of most of their neighbors and of other countries similarly situated.

In the end, the best test of any theory of how development should take place is to see how well it works where it is followed, and compare these results with those found where it is ignored. This is a complicated endeavor, one which will continue to be pursued at various levels and over time (to take account of changing conditions). The present study leads us to conclude that the private sector of developing countries, and the value of market forces as a source of guidance to enterprises, have often been underrated and that their contributions to the vitality of the development process deserve widespread recognition.

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Promoting Rural Enterprises in Eastern Upper Volta

John Sculler

[This article describes the conditions encountered in rural Upper Volta by representatives of Partnership for Productivity, a non-profit organization based in Washington, D.C. which promotes the formation and growth of small private business enterprises in developing countries. Despite the low incomes, remote locations, and limited educational backgrounds of the people, a number of successes were achieved that raised the economic level of the region.]

From December 1977 to August 1981 Partnership for Productivity (PFP) undertook a modestly financed pilot project to promote the development of rural enterprises in the Eastern Department of Upper Volta using loan funds and technical advice. Never having worked in a setting similar to the Eastern Department of Upper Volta, PFP approached its task with an open mind. We believed we had at least as much to learn as we had to teach. Our approach was to learn by doing: we tried a lot of things and observed, analyzed and evaluated as we went along. When discussing some of the conditions we found, and especially people's attitudes, readers should keep in mind that we are forced to generalize. Not all inhabitants of the Eastern Department think alike, of course, and attitudes are constantly changing. But we were able to identify certain patterns of thought and action that were significant to our work, and those we present here.

Cultural and Environmental Factors

Working in a subsistence economy. The overriding economic and cultural factor in the Eastern Department

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is that life revolves around the agricultural season. People's primary activity is producing enough food to last from one harvest to the next. Any project that ignores this fact is overlooking an important reality. From a business point of view there is an advantage in working with people who produce their own food, as they have little need to make cash withdrawals from the business in order to feed their families. So we attempted to encourage complementary activities that would not detract from subsistence food production.

In one category of activities the emphasis was on increasing farm production. These undertakings included producing a surplus of subsistence or cash crops for sale, family livestock raising which does not demand that producers abandon their traditional agricultural activities, and the planting of tree crops.

We promoted a second group of activities to enable people to supplement their incomes during the long dry season, traditionally a time of underemployment. These activities include vegetable gardening, some commerce, artisan projects such as weaving, dyeing, carpentry, masonry and blacksmithing, animal-powered transport, and some agricultural processing such as the making of edible oil, soap and soumbals. Most of these activities come to a halt once the first rains signal the coming of the new agricultural season.

The third category consisted of activities that require some year-round attention, but where the level of activity might diminish during the rainy season due to reduced demand, allowing the owner to devote some of his time to agriculture. Businesses in this category included general stores and specialty stores (such as pharmacies), motorized transport, some artisan manufacturing, grain mills, and certain services such as bakeries and photo studios. These businesses often overlap with those in category two; they tend to be more year-round in nature when located in larger population and administrative centers. Entrepreneurs in these businesses find that their business incomes are high enough to justify their year-round attention, and consequently they often delegate agricultural responsibilities to other members of the family. These businesses tend to cater to civil servants and other salaried workers who have considerable purchasing power.

The number and value of loans granted for different purposes, average loan size, numbers of loans per client, and the loan repayment record are shown in Table 1 for the first three years of this project.

Infrastructure. The outstanding feature of the infrastructure as it relates to small enterprises is the limited number and poor condition of roads. This fact, when coupled with the great distances between most regions within the Eastern Department and their primary sources of supply, helps explain the relatively low level of entrepreneurial activity

Table 1

Loans Granted in Eastern Department,
Upper Volta Project, July 1, 1978-Sept. 1981

<u>Purpose of Loan</u>	<u>No. of Loans</u>	<u>Value: CFA Francs (U.S.\$)</u> ^{a/}	
Agriculture, Livestock	104	7,408,985	(\$ 29,636)
Agriculture, Processing	27	6,461,810	(\$ 25,847)
Artisan Crafts	86	14,318,335	(\$ 57,273)
Commerce	148	28,143,518	(\$112,574)
Transport	<u>51</u>	<u>4,855,530</u>	<u>(\$ 19,422)</u>
	416	61,188,178	(\$244,753)
Average Size of Loan:		147,087	(\$ 588)

Number of Clients Receiving Numbers of Loans:

1 Loan	236 Clients
2 Loans	56 Clients
3 Loans	16 Clients
4 Loans	<u>5 Clients</u>
	313 Clients

<u>Loan Repayment</u> ^{b/}	<u>No. of Loans</u>	<u>Value: CFA Francs (U.S.\$)</u>	
Total Loans Granted	416	61,188,178	(\$244,753)
Fully Repaid	212	40,253,388	(\$161,016)
Being Repaid on Time	151	14,375,702	(\$ 57,503)
Some Delinquency	25	2,247,048	(\$ 8,988)
Placed on "Inactive List" ^{b/}	28	4,312,040	(\$ 17,248)
Overall Delinquency Rate ^{b/}		10.7%	

^{a/} Exchange rate 250 CFA Francs = \$1.00

^{b/} As of September 30, 1981, PFP had not written off any loans, but expected to collect delinquent principal and interest in the next few years. The loans on the "inactive list" had had no repayments for 6 months. "Overall delinquency" includes these loans plus those with "some delinquency."

in the East. Major commercial centers of the region are all on the main Koupela-Kantchari road, or like Namounou are served by an all-weather secondary road. Entrepreneurs who live and work far from these centers, however, can also prosper if they possess large amounts of ingenuity and physical energy. The new road building which is now underway can only have a positive impact on the development of the small enterprise sector.

Traditional markets within the Eastern Department are widely dispersed, and most people live quite a distance from a market. Demand often exceeds the supply of goods in many of these markets, so that there are great opportunities for entrepreneurial types to profit from these local shortages. We noted that commercial enterprises in the larger market centers that offered their services on non-market days significantly increased their sales.

Mastery of the water supply is the key to agricultural production, and considerable efforts have been made in the East to construct small dams and wells for irrigated agriculture. The region is rich in low-lying areas which contain good soil and are conducive to this type of agriculture. Production can be rather easily increased by investing in water resources infrastructure, but attention must also be given to marketing the agricultural surplus which can often be a more intractable problem.

The network of schools and medical units in the Eastern Department is minimal, which limits the progress of small enterprises. Were there a greater degree of literacy and numeracy and a higher standard of health, people would be able to develop more sophisticated business skills and less time would be lost to illness. Illnesses restrict the progress of struggling new enterprises, and a major medical emergency can result in the rapid decapitalization of a fragile business.

Impact of traditional culture on business behavior. Except in the departmental headquarters of Fada N'Gourma, which is beginning to acquire some urban characteristics, the entire population of the Eastern Department lives in villages or in small administrative centers where traditional ways of thinking and acting still predominate. We found that traditional culture had both positive and negative influences on business behavior.

The positive aspect was the traditional concept of honor and pride in meeting financial obligations. We found an overwhelming propensity on the part of villagers to make their loan repayments on time, even when their enterprises were not working as well as they had hoped, and often when they had to make personal sacrifices to produce the money. Their more urbanized counterparts were generally not as consistently conscientious in honoring debts.

Tradition's negative influence is that it discourages what we would call analytical thought in making business decisions. We found many clients relying on traditional fortunetellers for advice before making decisions that affected their enterprises. Others were afraid of succeeding in too big a way so as not to attract inordinate attention from their neighbors, which could easily build into jealousy. For people coming from this sort of intellectual background, it is difficult to accept that poor business management is the cause of business failure.

People tend not to view an enterprise as being separate from the rest of their lives; it is only part of a greater whole. Accordingly, assets can be moved freely from one activity to another. There is almost a reluctance to have any one part of a person's economic life become too large: diversification into many smaller activities is seen as a guarantee against future economic uncertainty. Expending a great deal of time and effort in building an enterprise to a size where it will produce an important income is often viewed as unwise.

This concept when combined with the general lack of appreciation for business management represents a great hindrance to enterprise development. To be sure, there is a traditional concept of management in the organization of productive work. But the need to calculate, and to acquire the habit of writing things down, requires skills and discipline not found in traditional culture. The need to plan, analyze and reflect also requires a mental break with tradition. It is not surprising, therefore, that entrepreneurs with some schooling tend to acquire modern management skills more quickly than those who have had no training in the modern sector.

Traditional forms of credit have existed in the Eastern Department for some time, and the concept of paying interest for the use of someone else's money is well understood. However, most traditional credit was for consumption--borrowing for weddings and funerals, buying food during times of scarcity, or coping with family emergencies. When PFP arrived in the Eastern Department there was little borrowing for investment outside of one government loan program.

Despite a general reluctance to go into debt, we noted that people with entrepreneurial ideas were willing to come to us and accept the risks inherent in borrowing someone else's money to launch projects they thought would be profitable. Over the first three years of the project there were increasing numbers of potential borrowers presenting themselves for loans, who were encouraged by some of the successes of the early borrowers. Another factor which has made investment loans more popular is the establishment of two local banks in Fada N'Gourma which attract customers in large numbers although their lending criteria are stricter than ours. The rate of interest does not seem to be a factor that people take into account when applying for a loan.

Salaried civil servants are definitely not reluctant to go into debt. Their salaries are acceptable to the banks as collateral, and they have a longer history of modern sector borrowing than do villagers. We observed, however, that salaried workers often have difficulty in putting their borrowed funds to productive use, and we have been obliged to reduce the number and amount of loans to these individuals.

There is a great propensity on the part of entrepreneurs once started in a business to reinvest profits rather than consume them. However, profits are not always reinvested in the activities that produced them, but are placed in other areas that will increase the overall wealth of the individual and will serve to guard against future emergencies and old age, and which will provide an inheritance for the next generation. Among more traditional people these investments most often include cattle and grain speculation. People who live in the modern sector often tend to invest in real estate and construction.

Project Objectives and Defining Success

Our task as the project got underway was to devise a methodology for the promotion of rural enterprises in the Eastern Department that would have a beneficial effect on both the entrepreneurs assisted and the economy of the region. But as time went on we began to perceive that many of the activities we assisted did not result in the creation of viable, durable enterprises, even though we were having a favorable impact on individuals who came into contact with us.

By the end of the three and a half years of the project we had come to see an objective in helping people of the region to achieve a greater measure of their human potential through the pursuit of small-scale economic activities. The main goal remained the creation of enterprises: we recognized, however, that clients might not immediately reach this goal, but that working with them was still justified. The success of their and our efforts could be discerned on three levels: client satisfaction, community satisfaction, and fulfilling PFP requirements.

Client satisfaction encompasses many things--most obviously an increase in personal wealth or the creation of a successful business. It can also include indirect results like having had the opportunity to acquire material things as a result of having gone into business, even when the business does not succeed in the long run--an experience from which the client might learn and try again. Less tangible benefits are as important to many clients; attempting something new, even when it does not work out as expected, can be a very significant experience. We have had clients who failed, economically speaking, in their initial effort only to succeed in subsequent projects because they had been able to diagnose what went wrong and correct their early mistakes. We

have even had clients being satisfied with having been refused a loan, either because they had discovered through our selection process that they had the means to carry out their project without our financial assistance, or because they discovered that their proposal was simply not economically feasible.

Community satisfaction can occur on several levels. It is most frequently seen as the introduction of more goods and services into the community, or a reduction in prices of consumer goods after the implantation of successful businesses. One of our selection criteria has been that an approved project could not benefit the borrower at the expense of the community, but rather had to add something to the community. We have also noticed that the existence of our loan fund is seen by some as a local resource of benefit to the community, and satisfaction is evident when that resource is used correctly--when borrowers do beneficial things for their community and pay their loans back on time. There have been instances where clients have assisted us in recovering loan repayments from recalcitrant borrowers because they perceived that a local resource was being abused.

A third measure of success is whether the client manages to accomplish what we in PFP expect of him. We expect, first of all, that the loan be used for the purpose it was granted, and second that the loan be repaid on time. We are flexible in approving modifications of loan purpose and in renegotiating contracts to meet changing economic circumstances; but we insist that the client come to us with his problems before any changes are made.

Having outlined these indicators of success, we are forced to admit that we have not found a satisfactory way to measure the degree of success that each of our clients attains, particularly the intangibles. But we know we are succeeding: we see it in the increased economic activity in the region, we see clients developing personally every day, we hear clients and members of the community tell us that things are working and getting better. We are also receiving ever-increasing numbers of sensible loan proposals, which indicates an increased awareness and acceptance of our presence as a community resource.

Participating in rather than instigating development. Having observed over time the actual tasks we perform in promoting small enterprises, we see ourselves mostly as a catalyst in the process and not the prime mover. We require that clients approach us with proposals for projects, instead of soliciting business ourselves. This gives them the opportunity to show motivation and initiative, and to do things they know and that interest them. We have discovered that there is a great reservoir of knowledge of how to undertake productive activities among the rural population, as well as a desire to attempt different things. What often causes this knowledge and these ideas to stagnate is lack of

encouragement. Our primary job, then, is to listen and make suggestions about these ideas. We are mainly interested to know if clients have thought the idea through and have considered all the important factors.

Many of the ideas are not thoroughly thought out, so we spend a good deal of time during the initial contact period discussing organization. Once we are sure that the client is sufficiently organized we determine what the project's capital needs are, and furnish up to eighty percent of those needs in the form of a loan. Over the life of the project we may grant additional loans and contribute management advice in appropriate doses. But throughout it is the client who is the prime mover. If the project succeeds, it is generally on the force of his effort.

A step-by-step approach. The principle of assisting clients to gradually develop their enterprises is based on a recognition that people master new techniques in incremental stages. It is also a recognition of the fact that, since most of our clients have not had a lot of experience in managing large sums of money, it is better not to risk a great financial loss at the beginning of a project because of inexperience in management. But it is in the interest of all clients to gradually develop the scope and complexity of their activities. This is because the initial level of most of the enterprises that we assist is very elementary, and so it would be relatively easy for other unskilled people to enter the same field of activity and drive the competition out of business.

When we receive a proposal for an ambitious project we are often forced to scale it down because of the client's previous inexperience and lack of personal investment capital. For example, a general store with a working capital of one million francs (about four thousand dollars) might be an economically viable proposal, but at the same time be totally inappropriate if the client has had little experience in commerce and only has fifty thousand francs to invest. In this case, we would keep the million franc store as a goal and propose a series of steps to the client for attaining it. We might suggest that he first engage in a less permanent form of commerce, such as peddling among different markets, in order to show us that he knows how to buy and sell and to build up his own working capital. From that point he might move to a small general store when he felt he had enough capital to construct a modest building, and if he was sure that the market was good enough. From this permanent base he could begin reinvesting profits in merchandise that other traders were not providing in sufficient quantity in order to give his store its identity, and by so doing gradually advance towards his goal of a million francs.

Not all clients follow this progression. There are many who reach their maximum level, which is often very modest, after one or two loans

and who find it difficult to develop further. But we have assisted others who have made very encouraging progress in incrementally mastering more complex levels of business management and who have created some very solid enterprises. We believe that this approach has enabled us to minimize losses, both to our credit fund and to the personal assets of our clients.

Individual and group enterprises. It is our perception that people in the Eastern Department tend to work best as individuals. As mentioned above, there is a cultural trait which leads to a mistrust of others, especially where money matters are concerned, and a spirit of jealousy that outsiders might learn the secret of one's success and therefore pose a threat to one's economic wellbeing. For people who think in this way, and there are many, it is probably counterproductive to support group enterprises as an immediate goal; they can be very productive within their traditional individualistic framework.

There are other people in the region, however, who see that there might be economic advantages in cooperating with others in order to further the interests of the group as a whole. The key here is that this perception must come from the people themselves, that they perceive it is in their interest to form a group. Without this, the group has very little chance of succeeding.

We have seen that it is possible to create a group by first working with individuals. This happened most vividly where a series of loans to guinea fowl producers resulted in the formation of marketing groups, when the producers saw that they could save on transport costs to Niamey by selling their eggs together. We have also observed that groups can take various forms, for example the family. Since there is generally more trust among family members than among other individuals, we have made an effort to promote family enterprises.

Appropriate management. At the beginning we took a fairly orthodox approach to management, attempting to teach things like elementary bookkeeping, inventory control and how to fill out monthly profit and loss statements. Some clients proved able to learn these techniques, but we discovered that almost none used the information they so painstakingly recorded to analyze what was happening in their businesses.

This phenomenon, combined with the fact that most of our clients were illiterate, prompted us to take a second look at the enterprises we were assisting to try to discover what the owners really had to know about what they were doing in order to succeed. Once we had identified these basic areas of management, we believed we could come up with appropriate techniques to teach them to our clients.

We were able to condense management into two basic themes that the majority of our clients need to be aware of. The first concerns having

a general plan of what one wants to do. This should include a good idea of what the activity will cost and an estimate of the benefits it will produce.

The second area involves the enterprise's working capital. The owner must know what his working capital needs are, and should have a system that will enable him to gauge what he has at any given moment.

Our first series of encounters with clients during the period preceding the granting of the loan provides us with an opportunity to begin helping them develop a sense of organization regarding their proposed projects. The clients receive a series of tasks to perform, first to show us that they are really interested in the project, and second to begin preparing the organization of the enterprise. These tasks include things like preparing a budget, doing a simple market survey, finding a source of supply, looking into the question of transport, or perhaps developing further some technical skill. The tasks are then evaluated for quality to give us some idea of the prospective client's business competence. They also provide him with a better idea of what he may be getting himself into before any money has been invested.

A second technique for teaching clients to take an analytical look at business performance is the filling out of periodic balance sheets that measure the level of working capital. Even when clients are illiterate and unable to compose the balance sheet, the exercise is still valuable, because it gives them the experience of stepping back and taking an overall look at what they have. We have found that illiterate entrepreneurs are able to get a "feel" for what they own by being conscious of the amounts they spend on new orders and the amount of merchandise and materials they have in stock. For example, in an evaluation of village stores that we did in the Diapaga region, we found one illiterate owner who was able to state within one thousand francs the total worth of his store as we had measured it on paper at 556,000 francs.

These balance sheets, aside from helping the clients, also give us an idea of the progress they are making, and give us an indication of when and where there may be problems. In this respect they serve as a good diagnostic tool.

Another useful technique we discovered was to use successful clients as a management resource for others who are about to start a business or who have encountered problems they are unable to solve. We have found that clients are often the best communicators when it comes to their peers, and that their involvement with the day-to-day minutiae of business operations gives them a grasp of details that we in PFP often lack.

We have also observed that clients have a way of devising their own methods to find out what they want to know about their businesses. A

butcher who wanted to separate his working capital from his profits simply used two different pockets to divide his daily receipts. An illiterate carpenter keeps track of customers' orders for doors and windows by taking the measurements with bits of string that he then "files" in the ceiling of his workshop in the order they are to be produced. And there is a miller who keeps track of the number of clients he receives in a day by tossing pebbles into an old coffee can.

We conclude that there is no one approach to management for all clients, nor is there a management "package" that we can distribute to everyone. Many clients need no help at all, apart from the discussions preceding the granting of their loans. Others, despite our efforts, can never master the necessary techniques to run a successful enterprise. In the large, we have concentrated our attention on those clients who need and remain open to our advice, and believe this to be the most efficient utilization of our time.

[Extracted from "Rural Enterprise Development Project, Final Report," March 1982. A Report to Partnership for Productivity International, Washington, D.C.]

The Sine Saloum Rural Health Project Revisited

Abby Bloom

[A project to extend health services to a low-income rural area in Senegal was found to be on the verge of failure in 1980, but had become highly successful and economically viable by 1983. Among the reasons for change was the policy of charging for medicines and other services enough money to cover costs of their delivery.]

Can primary health care programs succeed in the harsh geographic and economic environment of the Sahelian countries? Can they be sustained by the low-income populations they serve? Once a primary health care program has proven unviable, can it be salvaged? How can critical program evaluations serve as blueprints for future success? The primary health care program in Sine Saloum, Senegal, offers valuable insights into these fundamental issues.

In 1980, a team from the U.S. Agency for International Development (AID), which had supported the project for three years, evaluated the rural health program in Sine Saloum, Senegal. The findings, described below, were quite negative. However, the reaction of both the Senegalese and Americans to the evaluation was significant. Instead of attempting to dilute the evaluation's trenchant criticisms and recommendations, they accepted the evaluation results and moved swiftly to adopt recommendations for improvement. The result has been a genuine turnaround in a project that had been headed for certain failure. This paper analyzes the changes that had occurred three years after the initial evaluation, and discusses characteristics of the program.

The Setting

The Sine Saloum region covers an area of 24,000 square kilometers (12 percent of the land mass of Senegal), and

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comprises approximately 20 percent--1,200,000--of the country's six million population. Sine Saloum consists of six departments: Gossas, Nioro du Rip, Foundiougne, Kaolack, Fatick and Kaffrine, in the heart of Senegal's "peanut basin." Peanuts account for much of the country's export earnings and Sine Saloum alone supplies almost two-thirds of these exports. The region is a magnet for male migrant agricultural labor. Demand for labor is seasonal, and it peaks between May and October, the rainy season, when agricultural activity is most intense.

Life expectancy in Senegal, 44 years on average, is short; the crude birth rate, 48/1000, and the infant mortality rate, 118/1000, are high. Illness in Senegal is highly seasonal and rises dramatically in July and August, just after the rainy season has begun and environmental conditions are most conducive for the transmission of malaria and enteric and diarrheal diseases. Malaria is the most common serious illness among adults. Diarrhea, measles, malaria and tetanus are the leading causes of death; among children, diarrhea and respiratory diseases is the most frequent causes of death. Although malaria is present throughout the year, it peaks during the prime agricultural months when labor requirements are greatest. The overall nutrition status of Senegalese mothers and children is poor; a substantial proportion of children aged 1-6 receive less than 75 percent of their daily caloric requirements.

Early Project History

The Sine Saloum Rural Health Project, as designed in 1977, was to provide primary health services to approximately 380,000 people in five departments of Sine Saloum. The original program's aim was to create a network of *self-supporting* rural "health huts"--i.e., village based health facilities. Active participation of villagers was sought for constructing the huts, encouraging use of the new services, and for payment of salary to part-time village health workers (a health assistant, trained midwife, and sanitarian) and payment for drugs received. The huts would provide the basic, primary health care services that would address the major causes of poor health in the region and become part of a comprehensive primary health care system. Cases requiring greater medical knowledge or skill could be referred to "health posts" at the next higher level of the hierarchy.

The 1980 Impact Evaluation

An AID-supported evaluation of the Sine Saloum Health Project in April, 1980 identified some significant achievements, but it also found "...a project with serious problems and in danger of collapse."

By 1980, more than 400 villages in Sine Saloum had constructed health huts. Villagers had organized health committees, had helped construct or renovate health huts, and had selected candidates for training as *secouristes* (paramedical village health workers), *matrones* (trained midwives) and

hygienistes (village sanitarians). The Ministry of Health had developed materials for training these workers, and had trained and deployed hundreds of workers to village health huts or to "health posts." Record-keeping and drug procurement systems were implemented, and an initial and replacement drug stock had been provided. The Ministry of Health had instituted a schedule of fees for hut visits and drugs. Community motivation activities were initiated, and health information was provided in a weekly radio program. Health post staff provided through the project were (at least theoretically) supervising health workers at the huts, and regional and departmental staff from higher levels were in turn supervising the post staff. Nevertheless there were weaknesses which the evaluators deemed so critical as to jeopardize the viability of the entire system.

1) The health huts were not financially viable. A simple financial check of a sample of health huts showed that they were not taking in enough money to cover the replacement of medicines and other operating costs. When reported receipts were compared with reported expenditures, virtually every health hut showed a significant shortfall. Moreover, the villages did not have on hand as much cash as their books stated. There were various possible explanations, but the inescapable conclusion was that the huts were steadily losing money and, at the existing rate of decapitalization, huts that had not already closed would soon have to cease operating.

2) Supervision and support for village health workers were inadequate. Supervisory visits were infrequent, and this lack of supervision was considered the most important weakness in the overall program.

3) Ability to replenish medicine supplies in the health huts was questionable. Although it was too early for firm conclusions, the evaluation team doubted that the supply system had the capacity to meet the huts' needs for drugs.

4) Many health huts were located in such close proximity to one another, or to health posts where medicines were distributed free of charge, that competition was causing many to close.

5) Attrition among health workers was high: there was an annual turnover rate of more than one-third in one region.

6) Charges for visits and medicines and payments to village health workers varied from site to site, and were determined without regard to the long-term financial viability of the huts. Village health workers were receiving the lion's share of hut revenues.

Consequences of the 1980 evaluation: redesign of the Sine Saloum program. Critical evaluation reports like this one are often suppressed. Criticisms of host country efforts can be seen as embarrassing for the host

country, and consequently often are viewed as potential causes of strain between donor and host country. Moreover, donor country officials usually try to avoid implicit, and certainly direct, criticisms of their own actions.

But the 1980 Sine-Saloum evaluation had far-reaching effects. Rather than ignoring its conclusions and recommendations, the AID mission in Senegal and the Government of Senegal immediately undertook a series of additional reviews and rapidly instituted corrective measures. Among the steps taken were a review of the project by Senegal's National Assembly, and the appointment of new project staff--including project managers from both countries. The project was then redesigned to incorporate the evaluation's recommendations. Of special interest here is that the system of fees and charges for village health services and payment of village health workers was reviewed, and was modified to increase the likelihood that the program would become financially viable.

Sine Saloum Revisited

In 1982 a proposal to AID by the Government of Senegal for a second phase of the Sine Saloum program provided an opportunity for AID to review what, if anything, had changed as a result of the 1980 evaluation and subsequent redesign.

Since 1980, evidence had accumulated on the poor performance of primary health care programs around the world, and particularly in sub-Saharan Africa. The result has been increasing skepticism in AID and other donor organizations about the prospects for success of such programs. The problems that seem to plague most programs--poor management, weak supervision and logistics, systematic underfunding of the health sector in general, and inability to sustain the recurrent costs of primary health care in particular--were writ large in Sine Saloum. Compared to more favorable settings in which PHC programs have fared poorly, Senegal with its severe foreign exchange problems, budget deficits, staggering national debt, and relative dearth of natural resources, appeared an unlikely prospect for a viable PHC program. Moreover, the prevailing wisdom is that once a PHC program has raised the expectations of its potential beneficiaries but then failed to satisfy them, it is virtually impossible to resuscitate the faltering program.

Yet the inescapable conclusion of a review of the Sine Saloum project is that Senegal has succeeded in developing a prototype for a viable village PHC program. By 1983 primary health care services had become self-supporting in more than 370 villages in 4 departments of Sine Saloum.

Financing PHC in Sine Saloum

Today villages in Sine Saloum are covering 100 percent of the direct costs of primary health care services at the community level: villagers are paying for medicines, compensating the community health workers, and

maintaining the village health huts. Financial viability has not come easily. Still unresolved is the issue of who should pay for the necessary central functions of the PHC program such as training, supervision, and logistics. Yet the degree of cost coverage by consumers in Sine Saloum is rarely achieved in any PHC program, let alone in a sub-Saharan country.

Various factors underlay the bleak financial prognosis for the health huts in 1980. One problem was competition from other Ministry of Health facilities, particularly from nearby health posts that provided free medicine and treatment. Even as the Ministry of Health was attempting to levy charges for medicines prescribed by village health workers at the health huts, it continued to pursue a national policy of providing health services free of charge at the next higher level of the health system. So it was not surprising that villagers often preferred to walk to the nearest health post for free care, rather than pay for services in the local village. The result was that groups who were better off--those who lived in the larger towns or settlements where posts, dispensaries, centers and hospitals are located--got free care, while rural villagers on the socioeconomic periphery were obliged to pay for their health care. This two-tiered system of health care was clearly inequitable, and it was fiscally unsound.

The Ministry of Health subsequently instituted a uniform policy requiring user fees at all levels of the system. This was a politically charged decision that currently faces many health ministries, but which they have tended to avoid making. The Government of Senegal took a courageous step when it abandoned a system that had led many people to believe that free government health care was their right. The new policy of user payments was introduced with a carefully orchestrated campaign emphasizing community control of health care through community payment for medicines and for the services of village health workers.

After the 1980 evaluation, the practice of charging an identical fixed fee for each consultation which did not cover costs was abandoned. It had been replaced by a system based on the real costs of medications. Charges for medicines are based on the actual costs of drugs. All payments for drugs and fees for services are deposited in the village health committee treasury, rather than going directly to the health workers as before. Recent analyses and site visits attest to the fact that users are regularly paying fees for medicines received. Village health worker logs show that fees are collected from clients at most visits, and that they are collecting the correct fees.

The money collected at the health hut (or by the trained village midwife for deliveries) is turned over to the treasurer of the village health committee. The treasurer is usually one of the elders in the community. Guidelines on the management of health hut funds state that the money should be deposited in a bank account, but this is not realistic in rural Senegal, and village committees generally keep the cash within the village. While villagers were generally poor, they have in practice paid for ser-

VICES they value; only the fee charged by the trained midwife for deliveries appeared occasionally to exceed the ability of clients to pay. If a woman cannot pay the entire amount soon after a delivery, she may make informal arrangements to pay the midwife small amounts over time.

User fees, largely fees for medicines, are not the only form of community financing in the Sine Saloum program. Other contributions towards the cost of village health services include cash or labor-time contributions to build and maintain the health huts. Villagers' contributions for the construction, maintenance and improvement of health huts seem to be reliable, and the huts are well maintained in all communities where health workers are functioning. Health huts are constructed of local materials; modest furnishings may be supplied by the community or by the Communauté Rurale.

Local funds also provide for payment of the village health workers--the VHW (paramedic), the trained midwife, and the sanitarian if one is assigned to the village. Remuneration of village health workers has taken a variety of forms, and the experience here is less satisfactory than with payment for medicines. Visits to a number of health huts and interviews with PHC personnel reveal some variation in the patterns of remuneration from village to village. This might reflect either the differing values that villagers place on health workers' services, or the disparities in resources available in different villages. Some workers believe they are not receiving adequate payment.

Usually each household is asked for a contribution toward the workers' salaries. A survey conducted in 1982 found that most VHWs (90 percent) received some form of cash compensation, usually an annual payment, and they sometimes also received payment in kind--usually volunteer labor in the VHW's fields. In addition to cash payment, midwives may receive the customary lamb's haunch for performing a delivery.

In addition, a national law requires that all villagers pay a head tax to the Communauté Rurale, the local government administrative unit that includes a series of villages (corresponding closely to the area covered by a health post). In recent years Rural Councils in Sine Saloum have allocated between 12 and 15 percent of their budgets to finance health services in their communities. Some of this money might be made available in the future to cover the costs of supervision of health huts by health post personnel; this policy is being discussed with the Government of Senegal.

Community Participation in the Sine Saloum Health Program: Village Management and Control

Community management of PHC services has become one of the most successful features of this program, and distinguishes this primary health care program from other PHC programs.

A directive issued by the Senegalese Ministry of Public Health in 1980 recognized community participation and financing as the means for the attainment of the long-term objective of widespread health improvements. The community health committee would be the principal organ of support for the PHC program; villagers would be expected to pay for PHC services, and all responsibility for the collection and management of funds (including restocking of medicines) would be the responsibility of the local health committees. The committee is responsible for constructing a health hut and for local program management. Its financial tasks include maintaining a ledger in which all payments and expenditures are recorded; establishing and publicizing prices for health services, deliveries, and medicines; and determining how village-level workers will be paid. The Ministry's directive also urged formation of a youth committee and an assembly, and these groups exist in most communities.

What form has community participation taken in actual practice? In 1980, community participation in PHC in Sine Saloum was limited; the village health committees, despite sincere efforts, were unable to keep the huts functioning. All this has changed dramatically in a little over two years.

During the two years between the redesign of the program and 1983, all members of the village health committees in health-hut villages had received training in health-hut operation. Three-quarters or more of the committees were reported as meeting once a month or more; an even higher proportion of committees reportedly met regularly with village-level health personnel. However, some recent research seems to indicate that the committees may not be meeting as frequently. Virtually all committees were said to include members from other villages close to those in which health huts are located. Nearly all committee members stated that the village owns the health hut and is responsible for its maintenance, for payment of the village health workers, and for replenishing drugs. This represented a marked increase in familiarity with and acceptance of local responsibility for health services compared with the feeble understanding of community participation found previously.

At least one important change in health committee representation was made during the past year. It had been observed that although women are in principle the primary clients of any PHC program (seeking services for themselves and their children), representation of women in village health committees was limited. To give women a greater voice in the program, the project director, a Senegalese midwife/health administrator, initiated women's committees in health hut villages. This development is intended to create parallel men's and women's community organizations, a form that would be consistent with traditional village organization in Sine Saloum.

Analysis of the villagers' actual financial and in-kind contributions to health huts and the salaries of male VHWs showed that men contribute more than women, and hut villages more than peripheral villages;

this pattern corresponded to the actual utilization of PHC services in the health huts. It is not surprising that peripheral villages, often three to five kilometers from the hut village, should display lower utilization and participation. Still unanswered is the question of why women understand the program less, contribute less, and utilize it less, despite the organization of mothers' committees to accommodate their interests. Two anthropologists who studied the program suggested that women may continue to rely on traditional health practitioners, possibly because they are more attuned to women's special health care needs and their traditional concepts of disease causes and therapy.

Supervision and higher level support for village health workers. How to pay for the continuing costs of supervision and support of village health workers is a major problem facing many second generation primary health care programs. The costs of supervision include some portion of the salaries of the supervisory personnel and the costs of their transportation (vehicles, fuel, and expenses) for visits to outlying villages. While the government has until now assumed responsibility for supervisors' salaries, coverage of the cost of transportation is still unresolved. One of the first changes in supervision in the Sine Saloum program after the evaluation was to abandon the supervisors' horses and buggies in favor of motorscooters (mobylettes). While the recurring costs of the motorscooters may be higher, at least they were congruent with the supervisors' upward mobility aspirations, and they do use them much more.

A second measure was an experiment designed to test the improvement from more frequent supervisory visits to villages. All supervisors were instructed to visit VHWs once a month, but supervisors of a selected sample of 60 health hut villages were told to visit twice a month. However, there appeared to have been no noticeable superiority in VHW performance, record-keeping, or any other indicators among those villages that received more intensive supervision. The effects of greater supervision frequency should be studied more systematically to determine whether it is desirable.

Health hut medicine supply. The 1980 evaluation expressed doubts about the capacity of the program to meet the huts' drug requirements. One of the significant changes in the program has been the assignment to villagers themselves of responsibility for resupplying the health huts with drugs. As a result, by 1983 most villages were self-reliant in maintaining an adequate drug supply. Supplies are replenished with funds collected for drugs by the village health workers. The village places its order through the regional government pharmacy, and arranges for transportation of the drugs from the health post to the village. The cost of transporting the drugs is built into the price charged for them at the village health huts.

Unresolved Issues, New Problems

The achievements of the Sine Saloum program must be weighed against several issues and problems that are beginning to emerge as it develops.

User financing: meeting demand but also meeting need? The viability of the Sine Saloum PHC program is now firmly established. User fees are the backbone of the system. But the effects of the reliance on user fees on the quality and type of health care that are delivered need to be considered.

One result has been little demand for preventive health services. The mix of services originally offered at the village health huts in Sine Saloum was calculated by the Ministry of Health to address pressing health problems. Over time certain services have "caught on", while for others there has been relatively little effective demand--not because the health problems do not exist, but because the prospective clients do not wish to pay for these services. Examples of services for which there is a need but little demand include family planning, post-partum care, and child nutrition surveillance and improvement.

In Sine Saloum, providing mainly those services that clients demand and are willing to pay for appears to have led to a near exclusive emphasis on curative services. Apart from the prophylactic administration of chloroquine, preventive activity is almost non-existent. Also lacking are the kinds of activities--education, outreach, surveillance--necessary to effect the behavioral changes which in turn lead to long-term improvements in health status. Preventive health activities are usually considered an essential part of primary health care and they require devotion of considerable time by VHWs to yield results; but they do not yield any immediate financial remuneration for the health worker or income for the village health hut treasury. Thus, one of the challenges in the second phase of the project will be to find a way to obtain user-financed preventive health measures and services.

A drug-driven system? User fees in the Sine Saloum program are in fact fees for medicines. A review of the records of several health huts revealed that everyone who is seen at a health hut received not only a diagnosis, but a drug of some kind. Is everyone who sees a village health worker actually sick? And does every person in fact require medicine? Are the diagnoses accurate? Are drugs misprescribed? Are fees for medicine an effective means of financing this system precisely because demand for drugs is unhealthily strong? What pressure does a village health worker feel in prescribing drugs? In short, to what extent does the fact that the Sine Saloum program is drug-driven have deleterious consequences for its clients? For health workers? Most of these questions cannot be answered at this time, but their implications deserve further study.

Care when care is needed most? Illness and malnutrition peak during the rainy season in Sine Saloum. Yet a quick review of utilization records indicates that there is no concomitant increase in the use of

health care services during the rainy season. Why are people not receiving more services when they need it most? They may feel they must stay at work in the crucial harvest period; or they may be short of cash just before the produce sales after harvest. The causes for these utilization patterns should be determined and, if possible, measures taken to ensure that people can receive care when it is most needed.

Male or female health workers? Male village health workers are trained to give much more comprehensive care than the female health workers. With few exceptions, female health workers are trained as midwives, although most of them have also received training in providing many of the basic primary health care services. Yet preliminary field visits and a review of records indicate that male health workers may be unavailable during a critical period of the year in the rainy season, and that during this time the burden of health care may fall on the midwives. Moreover, there appears to be some reluctance on the part of women to seek care from male health workers. However, many of the preventive functions that will be introduced during the next phase of the program are, in essence, maternal and child health care services, and these may be more appropriately and effectively delivered by female health workers when they are appropriately trained.

Community participation: involvement or acquiescence? Designing PHC programs to include active community involvement has proven an elusive goal in many settings. A recent review of the Sine Saloum project by an interdisciplinary team of economists and other social scientists has raised a question of just how involved communities really are in the program. Their somewhat pessimistic assessment, based on a review of supervisory reports and interviews in two exemplary villages, is certainly not conclusive. Yet their findings tend to raise questions about client satisfaction with and support for the PHC program that did not arise in the several surveys conducted in the project area. That is, the more encouraging survey results may not have detected a mismatch between the program's content and the perceived needs and preferences of prospective clients. Further investigation into the level and correlates of client satisfaction and participation would be extremely useful in improving utilization and support of the Sine Saloum program in future years.

Conclusion:

What has caused the Sine Saloum project to turn from financial decline to viability, and thereby provide a basis for the continuation and expansion of much needed medical services? Clearly much thought and effort was devoted to restructuring the program to avoid problems encountered in the first phase. Government of Senegal commit-

ment and political backing were crucial. Fundamental to the program's improved prospect for success, however, is the fact that villagers showed themselves ready and willing, despite their low incomes, to pay for services they valued when they are priced competitively; and they also proved ready to assist with community activities which correspond with their felt needs.

The competition of free services first had to be eliminated. But the national government also had to agree to permit village health committees to keep all its income, and to manage its own affairs with relatively little outside control other than standards for charges and keeping financial records, reinforced by periodic supervisory visits.

The major problems that had been impeding financial viability of the Sine Saloum Rural Health Program, such as underestimation of charges required to replenish drug supplies, have been mitigated, and the program has a new life. Authorities who were previously unaware of the level of demand for health services discovered that demand is strong enough to sustain a system that at least covers the cost of drugs and village health worker salaries. However, daunting problems remain: can supervision costs also be financed? Can the system provide preventive as well as curative health measures? Can the system be redesigned to ensure that care is available and accessible during peak disease months? And, finally, can the PHC program be better molded to engender stronger community involvement and utilization? All of these issues remain to be addressed in a second phase of the program beginning in 1984.

[Adapted from "Prospects for Primary Health Care in Africa: Another Look at the Sine Saloum Rural Health Project in Senegal." An internal document of the U.S. Agency for International Development, August 1983.]

EDUCATIONAL PROSPECTS



Some Basic Trends That Are Shaping Education's Future

Philip H. Coombs

[Writing in 1981, the author foresees increasingly expensive and bureaucratized educational systems confronted by an explosive expansion of learning needs in an environment of slower economic growth, persistent educational inequities, and diminishing international cooperation.]

One needs no crystal ball to read the future. One only needs to examine recent trends and future projections of them to get a reasonably clear idea of some of the critical issues that will besiege education in various parts of the world during the coming decade. Though the future is clouded with many uncertainties and unpredictable developments, it is still possible to approach it with our eyes open and our minds informed by past experience. Thus it will be useful to examine briefly a few of these basic trends that are already shaping education's future.

The Rapid Growth of Human Learning Needs

The most primordial fact pertinent to education in the present era is the explosive growth of human learning needs throughout the world. This results in part from the extraordinary increase in the number of people in the world. But it is due even more to the vastly accelerated pace of economic, social, technological, political and other types of change going on throughout the world. These various changes generate many kinds of new learning needs that, in one way or another, touch the lives of entire populations in both rich and poor nations.

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The growth in the number of potential learners in the world in the second half of the 20th Century is truly mind-boggling. It took from 2 to 5 million years after the first appearance of humanlike creatures on this planet for mankind's population to reach the one billion mark (around 1800 A.D.). The second billion was added in 130 years (by 1930), and the third billion in only 30 years (by 1960). The total is now expected to top 6 billion by the end of this century.

Table 1: The Expanding World Population: 1950-2000
(millions)

	1950		1975		2000	
	No.	%	No.	%	No.	%
World Total	2,513	100	4,033	100	6,199	100
More Developed Regions	832	33.1	1,093	27.1	1,272	20.5
Less Developed Regions	1,681	66.9	2,940	72.9	4,927	79.5
Africa	219	8.7	406	10.1	828	13.4
East Asia	673	26.8	1,063	26.3	1,406	22.7
South Asia	706	28.1	1,255	31.1	2,206	35.5
Latin America	164	6.5	323	8.0	608	9.8
Oceania	13	.5	22	.5	30	.5
Europe & USSR	572	22.8	728	18.1	832	13.4
North America	166	6.6	236	5.9	289	4.7

Source: UN 1978 Assessment.

The great bulk of this rapid growth is taking place in the less developed regions of the world. Their combined share of the total world population rose from 67% in 1950 to 73% in 1975 and will reach about 80% by 2000 (Table 1). But because their populations are younger than in the developed regions, their share of the world's total school age population is even larger (Table 2). This means, of course, that the huge educational burdens resulting from this demographic growth are falling largely on the countries least able to bear them.

The more developed nations, by contrast, are moving rapidly toward population stabilization by the end of the century. But these nations, despite their low population growth, will also experience sizeable increases in learning needs, especially on the part of their older youths and adults, because of steady changes in living and working conditions. The infusion of new technologies, the changing character of jobs and job qualifications, increasing geographic and employment mobility, increased employment of women and improvements in their status, changing life-

styles both at home and outside, the shortening work week allowing more leisure time, all these will generate vast new learning needs affecting the entire population.

Table 2: Trends in School Age Populations
1960-2000 (millions)

	<u>1960</u>	<u>1980</u>	<u>2000</u>
<u>More Developed Regions</u>			
Age 6-11	107.8	104.8	109.4
12-17	91.1	110.3	108.9
18-23	<u>87.6</u>	<u>115.6</u>	<u>103.6</u>
Total.....	286.5	331.2	321.9
<u>Less Developed Regions</u>			
Age 6-11	316.6	495.0	664.4
12-17	249.2	445.3	615.5
18-23	<u>217.2</u>	<u>388.9</u>	<u>550.4</u>
Total.....	783.0	1,329.2	1,830.3

Source: UNESCO, based on UN 1978 Assessment.

Most developing nations will continue to be besieged by powerful demographic pressures to further expand enrolments. Simply to maintain the enrolment ratio existing in 1975 for 6 to 11 year olds, Africa will have to increase enrolments by 107% by 2000, Latin America by 75%, and Asia by 63%. (The same figure for the more developed world is only 9%.) To go beyond this and keep up the enrolment growth rates at each educational level that prevailed prior to 1975, Africa would have to expand enrolments (for all levels combined) by 111 million from 1975 to 2000, compared to 44 million actually added between 1950 and 1975. Latin America would have to increase total enrolments by 94 million, and the required addition for Asia would be 212 million.

The implications of these enrolment figures for teacher and classroom requirements and for education budgets are staggering. But even if these enormous enrolment increases were achieved, no developing region would yet have reached universal primary education by 2000; and the absolute number of out-of-school children and youths, as well as the number of adult illiterates, would exceed 1975 levels.

The Tightening Economic Squeeze on Education

To cope with the enormous growth of learning needs will obviously require large increases in educational resources and a more efficient

use of them. But here lies the blistering rub. Educational systems almost everywhere found themselves caught in the 1970s in a tightening financial squeeze between stiffening budget ceilings and rising costs. The problem was exacerbated by the worldwide recession and inflation of the '70s, but it had been in the making well before the recession struck.

One side of the squeeze ties back to the preferential treatment enjoyed by education during the exuberant 1950s and 1960s, when education's share of total public expenditures and the Gross National Product climbed steadily in almost all countries (Table 3). This trend was very helpful to educational expansion at the time, but it obviously could not continue indefinitely without crippling all other important public services. The day of reckoning arrived for many countries during the 1970s, when education's percentage share flattened out and in some cases declined. In countries where this has not yet happened, it is very likely to in the 1980s. In short, the halcyon days of generous and relatively easily obtained annual increments to education budgets are over. Henceforth the annual "battle of the budget" will be much rougher, with stiffening competition from other sectors (not least of all, in many countries, the military).

Table 3: Public Expenditures on Education
as a % of GNP

1960-1977

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1977</u>
Developed Countries	4.0	5.1	5.6	6.0	6.0
Developing Countries	2.3	3.0	3.3	4.1	4.3

Source: UNESCO Yearbooks, 1980 and earlier.

What happens to education budget increments in various countries in the 1980s will depend heavily on two things: how their economic growth rate behaves, and what priority is given to education by the general public and political leaders. On both scores the outlook is not particularly bright in the majority of countries, both rich and poor. Economists are divided on causes of the slowdown in economic growth rates during the 1970s, but few of them are forecasting any dramatic increases over the growth rates of the 1950s and 1960s. The World Bank felt compelled last year to revise downward its previous "high" and "low" projections of per capita GNP growth rates in the 1980s (Table 4).

With respect to priorities, the earlier public and government enthusiasm for education has evidently been diminishing in many countries in

recent years. The voices of public criticism and disenchantment and of disgruntled taxpayers have grown louder. Financial authorities, hemmed in by increasing demands from other sectors, have taken to ruthlessly pruning education budget requests. These adverse trends are unlikely to be reversed in the 1980s.

Table 4: Growth of GNP per capita, 1960-90
(average annual percentage growth)

	1960/70	1970/80	Low Case		High Case	
			1980/85	1985/90	1980/85	1985/90
<u>Developing Countries</u>						
Low Income	1.7	1.7	1.2	1.8	2.1	2.5
Middle Income	3.4	3.1	2.1	2.4	2.7	3.4
<u>Industrialized Countries</u>	3.9	2.4	2.5	2.5	2.8	3.5
<u>Centrally Planned Economies</u>	n.a.	3.8	3.3	3.3	3.3	3.3

Source: World Bank's World Development Report, 1980.

The other side of the financial squeeze comes from the cost side--from the inherent tendency of educational expenditures per student to rise progressively (quite apart from inflation) because of the labor-intensive character of education and the lack of productivity-increasing innovations. It is noteworthy that few of the record-breaking number of educational "innovations" reported in the 1970s seemed aimed at improving efficiency and reducing unit costs; most in fact were loaded in just the opposite direction.

This upward pressure on costs will very likely intensify during the 1980s whenever the growth of enrolments slows down and powerful built-in cost escalators come into play--particularly those tied to teacher salary structures that provide for automatic increases based on years of service, and for large grade increases for higher teacher qualifications. As fewer young recruits are hired at the bottom and the existing teacher staff ages, instructional costs per student will move upward. The whole process will be further accelerated in the many countries where the bargaining power of teacher unions has become strong. All these cost-increasing tendencies were sharply in evidence in developed countries during the 1970s. It does not require a contraction of enrolments to set them loose; all it takes is a marked slowdown in the rate of expansion. Nothing short of radical educational surgery can stop these inexorable cost increases, whether in developed or developing countries.

The Deteriorating Employment Market

The late 1960s and early 1970s witnessed a wrenching transition in most economies throughout the world from an era of ubiquitous shortages of educated manpower to a new era of growing surpluses. Jobs that had earlier gone begging for qualified candidates were now largely filled, and the economy was not creating new ones fast enough to match the greatly increased output of secondary and higher education. Sooner than most educators and manpower forecasters had expected, the rapidly increasing output of secondary school and university graduates had caught up with the accumulated backlog of manpower deficits and begun to exceed the effective demand of the employment market. More and more graduates had difficulty finding the kinds of jobs they had set their hearts on and that their freshly minted diplomas would virtually have guaranteed only a few years earlier.

The resulting youth unemployment problem was also exacerbated by the stagflation conditions of the '70s. It was bound to develop eventually, when the rapidly upward trending curve of educational output crossed the flatter curve of new job openings. This problem was further exacerbated (a point often ignored) by the enlarged youth cohorts coming onto the labor market in the '70s and, in many developed countries especially, by the increasing proportion of women seeking employment.

It would be wishful thinking, in either developing or developed countries, to expect the boom employment conditions for young school and college graduates in the 1950s and 1960s to return in the foreseeable future. Selective manpower shortages will continue to appear, but there has been a fundamental realignment of the demand-supply relationship between educational output and employment markets.

Changing Educational Structures and Persistent Inequalities

The rapid expansion of educational systems since 1950, shown by the figures in Table 5, has wrought major changes in their structures. In the developed countries, which already had universal primary schooling, the main effect of the expansion was to widen the educational "pyramid" at the secondary and especially the post-secondary levels. In the wake of World War II most European countries undertook to transform their narrow "elitist" systems into "mass" systems by multiplying their size. The United States and Canada and certain other developed countries that emerged from the war with semi-mass systems of secondary and higher education--much more diversified and flexible than the European systems--set about expanding them still further, and broadening their access to adults as well as to youths.

The post-war evolution of the educational structures in most developing countries, contrary to initially expressed intentions, took

a remarkably different path than that followed historically by today's developed countries. The latter countries built their educational pyramids from the bottom up. By the late 19th and early 20th Century most of them had virtually established universal primary schooling but still had extremely small secondary and higher educational participation. These levels were gradually enlarged over the next half century and, after the war, much more rapidly. The 20-year expansion targets adopted by the ministers of education of Asia, Africa and Latin America at UNESCO's landmark regional conferences in the early 1960s envisaged a similar strategy of building from the bottom up. The goal was to complete universal primary education (UPE) within 20 years, meanwhile building a modest core of secondary and higher education that could be fleshed out later.

Table 5: Growth of Enrolments by Levels, 1950-1975

Region	Year	Number Enrolled (millions)		
		1st Level	2nd Level	3rd Level
Europe & USSR	1950	74.6	15.6	2.53
	1975	84.9	45.4	12.41
Growth		14%	191%	391%
North America	1950	23.8	6.9	2.4
	1975	29.3	23.1	12.0
Growth		23%	235%	400%
Africa	1950	8.5	0.75	0.07
	1975	44.8	8.50	0.88
Growth		427%	1033%	1157%
Asia	1950	53.3	12.7	1.0
	1975	159.6	61.6	8.5
Growth		199%	385%	750%
Latin America	1950	15.4	1.7	0.28
	1975	56.9	12.4	3.61
Growth		269%	629%	1189%

Source: UNESCO Yearbooks.

In fact, however, they expanded enrolments at a much faster rate at the top and middle levels than at the base of the system, almost without exception (see Table 5). As a result, by the end of the 1970s the majority of them were not yet within striking distance of UPE, and at the present rate many will not make it by the end of the century. But they have already substantially overshot their secondary and especially their tertiary level expansion targets.

Today's educational structures in most developing countries, in addition to being top-heavy, are also very lop-sided geographically. In effect, they have two educational systems: an urban system that is already close to universal primary schooling in many instances (except for slum children) and has impressively high secondary and post-secondary enrolment ratios compared to 15 years ago; and a rural system typically composed of thinly spread (often incomplete) primary schools, with few if any secondary schools and no higher education whatever above them. The practical effect of this dual system is that rural children, who often comprise 70 to 90 percent of all the nation's children, have a drastically smaller chance than their urban counterparts of entering and completing primary school, much less going on to secondary school or the university. Surprisingly, these urban/rural inequalities are even greater in a number of Latin American countries, despite their higher per capita incomes and comparatively smaller rural populations, than in many poorer countries of Asia and Africa.

These huge urban/rural educational disparities are part of a much broader imbalance between urban and rural economic and social development, which underlies the heavy concentration of extreme poverty in the rural areas of most developing countries. Helping to rectify these gross urban/rural inequalities and meeting the basic needs of the poverty-stricken rural majority is clearly the central challenge to educational policy in the 1980s in many developing countries.

Educational Planning, Bureaucracy and Politics

The rapid expansion of national education systems after 1950 created a compelling need for comprehensive and integrated educational planning, designed to keep these systems internally balanced and harmonized with expanding and changing educational needs and demands, with manpower requirements of the economy, and with available economic resources. The planning concepts and quantitative methodologies that evolved in the 1960s and 1970s and that are now in widespread use have been helpful in some of these respects. But they are largely geared to an educational strategy of linear expansion, and to aggregate national planning from the top down. Hence they are manifestly inadequate for achieving three presently urgent purposes: (a) guiding and implementing needed fundamental changes and innovations in inherited educational systems; (b) decentralizing the planning and management of these systems so as to adapt them to local conditions and to promote greater local involvement and support; and (c) creating and enlarging a wide diversity of nonformal education activities, many of which should be integral elements of various kinds of development programs stretching from agriculture to family planning. One of the urgent tasks for the 1980s, therefore, is to develop fresh approaches to educational planning that can serve these essential needs more effectively.

The great expansion of educational systems also inevitably increased their bureaucratization. This in turn led frequently to extreme centralization of decision-making and regulation, to rigidities, delays and inefficiencies in execution, and to stifling new ideas and initiatives at lower echelons and in individual schools and classrooms. One of the imperative requirements in the 1980s, therefore, is to remedy these bureaucratic excesses that are choking the whole system and failing to bring out the best in its participants.

Finally, the great expansion of education also brought it increasingly and inevitably into the center of political life and controversy, contrary to the old credo that "education should be above politics". But with education having become the largest industry in most countries and the largest single user of public funds, it cannot escape from increasing political scrutiny, debate and intrusion. And with the whole issue of social inequalities, including educational inequalities, having now moved to the forefront of the political agenda throughout the world, and with students and teachers almost invariably turning up in the vanguard of major political protests and movements in more and more countries, it is evident that education and politics will become increasingly frequent bedfellows--even if uncomfortable ones--in the future. It is also predictable that the best laid plans of educational authorities and planners will often be derailed by unpredictable political and cultural collisions within nations.

The Changing Environment of International Cooperation

The post-war and post-independence years witnessed a proliferation of international educational cooperation beyond anything even dreamed of before. Dozens and dozens of new governmental, intergovernmental and nongovernmental organizations sprang up and became involved in exchanges of students and scholars among countries of all sorts. They are providing technical and material assistance to help emergent nations build their own educational capacity. Underlying all this is the endeavor to create greater mutual understanding among all nations in a shrinking and increasingly interdependent world, filled with great promise on the one hand and incredible dangers on the other. Most who were involved in these new activities in those earlier times, on either end of the dialogue, look back on it now as perhaps the most exciting and rewarding period of their whole career. Though "foreign aid", as it was called, was popularly perceived as a "one-way" flow of help from "donors" in the North to "recipients" in the South, most educators who got caught up in the process quickly became convinced that it was a mutually beneficial exchange.

This remarkable upsurge, and the broader movement of which it was part, reached its high water mark around the mid-1960s. It has since been steadily ebbing, for a variety of familiar reasons. During the

'70s, for example, the overall amount of "official development assistance"--measured in constant dollars--largely stagnated, and the relatively small share of it going to education tended to decline. A sizeable volume of cooperative educational activities has continued, but much of it in the now well-worn grooves that were freshly cut a decade or more ago. To be sure, some new trails have been blazed, and new participants have joined the process charged with fresh enthusiasm. But overall, the captivating aura of enthusiasm, adventure, discovery and spontaneous friendship that permeated the earlier "movement" seems to have waned. This is much less true of voluntary agencies, many of which shifted their emphasis in the 1970s from short term "relief" efforts to more enduring "development" efforts. But many official bilateral and multilateral development agencies have grown increasingly routinized and bureaucratized and in some cases increasingly politicized, to the detriment of their basic mission. To many of their staff members, originally fired with idealism, it has ceased to be a "movement" and become just another job, albeit an unusually interesting and often challenging one. The point should not be exaggerated, however, for these organizations are still doing very useful work; the question is rather how they can renew themselves and increase their effectiveness in the 1980s.

Along with numerous conflicts and upsetting changes in the world environment that have soured the atmosphere for cooperation, there have also been encouraging signs of progress. One of the most heartening of these is that many developing countries, as they have matured, have become increasingly self-reliant and more insistent on making their own development plans and decisions and on being less dependent on outsiders. This is, of course, a symptom of success in the initial foreign aid endeavors. Their officials are often heard to say in private these days, "Do not misunderstand; we still need help, but not the kind we have been getting." What they mean in part is that the quality of experts being sent to their countries now is not on the average as high as it once was, and in some cases below the calibre of their own people who are supposed to serve as "counterparts". But they also mean that the old notion of "foreign aid"--the one-way flow of help from North to South--has become increasingly obsolete and unacceptable. What is desired now is a new spirit of dignified negotiation between autonomous and mutually respected partners, based on the concept of a reciprocal flow of benefits. This point of view is also widely shared today--if not always practiced as yet--by external assistance agencies. Everyone, on both ends, is learning new styles of cooperation and this will take time.

There is also a growing appreciation of the potentialities of horizontal development cooperation among developing countries. Their accumulated development experience now often makes it possible for them to learn many useful lessons from one another that are more relevant

to their needs and circumstances than the lessons available in industrialized countries.

There can be little doubt that the needs and opportunities for fruitful international educational cooperation in the 1980s will be greater than ever. But in view of the many economic and political changes that have occurred on the world scene and the new crop of common critical issues now facing education around the world, these future needs and opportunities for cooperation will be quite different than earlier. This points up the urgent need to develop a fresh international consensus on some fresh priorities and approaches to educational cooperation for the 1980s. It also cautions against following a "business-as-usual" approach, or an excessively political one that could destroy the spirit and effectiveness of the whole enterprise.

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The booklet from which this article was taken was a preliminary review of the conclusions to be elaborated in a new book, The World Education Crisis Revisited, Oxford University Press, forthcoming in 1984.

Education As An Investment

George Psacharopoulos

[Recent economic analysis has shown that investment in education, particularly at the primary level, has had an unusually high social rate of return in developing countries.]

Human capital is created and the quality of human input in production is significantly improved by spending on education. This is why countries, particularly those with low per capita incomes, invest such a large proportion of their budgets on education--and why, when the state does not, individuals do. It is highly rewarding, both to society and to the individual. It is difficult to measure all these rewards; many, such as the benefits to society of a better electorate or a more informed consumer body, are quantitatively elusive. But the measurable evidence is sufficient to demonstrate sizable financial rates of return to investing in education.

The methodology used for evaluating education projects is a much debated issue. For many years, the World Bank has been using the "manpower requirements" approach, which identifies the number of skilled people a country needs to reach sectoral growth targets. Because manpower requirements are based on sectoral needs for qualified people, this approach often tends to lead to investments in higher education and technical curricula to meet needs of the modern economic sectors. However, the Bank is increasingly using information on the costs and benefits of different levels of education as a basis for decisions to invest. Typically this approach favors the lower levels of education, and the more general curricula, because of their low costs.

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Deriving costs is a relatively straightforward matter; arriving at private and social rates of return, however, and particularly the latter, seems to pose more problems, both empirically and theoretically. This article will discuss the calculation of rates of return, and will summarize the results of using them to quantify the profitability of different levels of education in a broad sample of developing countries.

The findings have important policy implications. They show, first, that using this methodology, returns on investments in all levels of education in the countries reviewed are well above the 10 percent normally used as a criterion for considering an investment project. Second, returns are highest for investments in primary schools. Third, surprisingly, returns on education in general arts subjects are often higher than those for technical training, mainly because of the high cost of the latter.

Profitability of Investment

The rate of return to investment in education can be estimated in the same way as returns to any other economic activity. Costs are incurred for a given number of years in the form of teachers' salaries, in the cost of using buildings and facilities, equipment, and materials, and in the students' failure to produce while in school. Benefits come in the form of increased production over the lifetime of a person who has more education and broader skills.

Because of the difficulties involved in directly measuring the marginal product of labor with different levels of education, or the opportunity cost of someone who is staying in school rather than working, earnings are used as a proxy for productivity. Two types of profitability measures are usually estimated, private and social. The private rate serves to explain and predict the private demand for places in certain types of schools. Social rates of return are used as guides for allocating public investments in education.

The private rate of return estimates the gains made by the educated individual; benefits are represented by the extra value education gives in the form of his or her lifetime earnings, after tax, and costs by the out-of-pocket expenses--tuition, fees, and other incidental expenses strictly related to the extra education received. A fellowship would enter as an offset to costs in calculating the private rate of return to a college degree. The direct private cost of primary education in a fully subsidized state school would be virtually nil in most countries. By contrast, a calculation of the social rate of return includes the full costs of education, regardless of whether schools charge fees or not. The benefits (i.e., earnings) are calculated before taxes, since taxes represent a transfer from the point of view of society.

Estimating Rates of Return

Estimates of the rate of return to a given level of education are calculated by comparing the discounted benefits over the lifetime of an educational investment "project" to the costs of such project. Thus, for the calculation of the private rate of return to four years of university education, benefits are estimated by taking the difference between existing statistics on the mean post-tax earnings of university graduates by age and those of a sample group of secondary school graduates. The earnings of the latter also represent the opportunity cost of staying in school. Direct costs are obtained from statistics on a student's out-of-pocket expenditures that are strictly due to the costs of college attendance. Given these data, the rate of return to investment in a college degree compared with a secondary school qualification is the rate of interest that reduces to zero the net present value of the discounted difference between the costs and benefits. A simple equation for the private rate of return is

$$\text{Private rate of return} = \frac{\text{Mean annual post-tax earnings of university graduates} - \text{Mean annual post-tax earnings of secondary school graduates}}{\text{Four years study} \times \left(\text{Mean annual post-tax earnings of secondary school graduates} + \text{Mean annual private direct cost of study} \right)}$$

A social rate of return to college education could be calculated in the same way, except that earnings should be pretax (as taxes are a transfer from the point of view of society at large), and the direct cost should include the full amount of resources committed by both government and students for higher education, rather than the smaller part of expenditure borne by the student.

Some Empirical Evidence

Several estimates have been made over the last 20 years of educational costs and benefits, and, of course, the resulting rate of return. A recent World Bank survey of 44 countries at different stages of economic development gave the social rates of return appearing in Table 1. (The private rates of return are several percentage points higher than the corresponding social rates, as will be discussed later.)

Some salient features emerge from the table. First, the rate of return to investment at any level of education in developing countries is generally above the common 10 percent normally required by the Bank

Table 1
Social returns to education by level and
country type
(In per cent)

Country type	Educational level		
	Primary	Secondary	Higher
Developing ¹	27	16	13
Intermediate ²	16	14	10
Advanced ³	— ⁴	10	9

Source: Based on George Psacharopoulos, "Returns to Education: An Updated International Comparison," *Comparative Education* (October 1981).

¹Developing countries include Brazil, Chile, Colombia, Ethiopia, Ghana, India, Indonesia, Kenya, Malawi, Malaysia, Mexico, Morocco, Nigeria, the Philippines, Rhodesia, Sierra Leone, Singapore, South Korea, Taiwan, Thailand, Uganda, and Venezuela.

²Intermediate countries are Cyprus, Greece, Israel, Iran, Puerto Rico, Spain, Turkey, and Yugoslavia.

³Advanced countries are Australia, Belgium, Canada, Denmark, France, Germany, Italy, Japan, Netherlands, New Zealand, Norway, Sweden, the United Kingdom, and the United States.

⁴Not computable due to lack of "control" group of unschooled.

to justify investment in other economic enterprises. The benefits accrue both to the individual, who is being educated and earns wages in accordance with his or her level of education, and to society, to the extent that the individual's contribution to national income is more than the public resources committed to his or her schooling.

Second, the returns to investment in schooling decline as the educational level increases. This pattern suggests that top priority should be given to investing in primary schools. It is also in accordance with the fundamental economic proposition of diminishing returns to investments at the margin.

Third, the same declining pattern is observed across countries at different stages of development: the absolute returns to investment in schools being highest at all levels in poorer countries. This empirical finding has important implications for lending for education projects. It is the poorest countries that need most help in financing their educational systems, because money spent in this way exhibits the highest economic payoff.

The averages in the table cover considerable variations between and even within individual countries. Thus an early World Bank study has shown that the social returns to education in Kenya were 22 percent for primary and 19 percent for secondary. A later study in the same country showed that private returns for the same levels were of the order of 28 and 33 percent. A study on Malaysia showed private returns to higher education (35 percent) that were even higher than the returns to secondary education (33 percent)--a deviation from the observed world pattern of declining profitability by level of education. Although social returns to primary education of the order of 82 percent (Venezuela), 66 percent (Uganda), and 51 percent (Morocco) are not uncommon, the social returns to higher education in some countries are rather modest--thus, the Philippines has returns of only 9 percent, Israel 7 percent, Japan 6 percent, Greece 5 percent, and South Korea 5 percent. It should be noted, however, that these relatively low returns are observed in countries with more or less highly developed systems of university education. Although one should not jump too easily from association to causation, it is tempting to attribute the high rates of economic growth observed in some of the countries listed above to previous investment in higher education.

The high social rates of return on education are echoed by the private rates. In fact these are higher, because the private rate balances the benefits of after-tax earnings against the cost of schooling to the individual, which tends to be below the full cost to the public sector in most countries because of public subsidization of education.

The individual typically pays an opportunity cost for getting educated instead of working, although it varies with the level of education invested in, as well as the country's level of economic development. For example, the opportunity cost of someone studying for a doctorate in an advanced country is enormous because the individual forgoes what he or she could earn with a master's or bachelor's degree. On the other hand, there is virtually no opportunity cost associated with primary schools in advanced countries, because there are limited employment opportunities for children. However, the opportunity cost of primary education in poor countries is important because the productive contribution of children to the economy is both legal and substantial, particularly in activities such as agricultural production.

Benefits to Society

At one time it was thought that the most important kind of education to promote economic development should be of the technical-vocational type. However, recent evidence on the returns to this type of education has cast serious doubts on its value. More often than not,

the rate of return to a general curriculum is higher than the return to a technical-vocational curriculum at the same level of education (see Table 2). The reason is that although engineers and technicians earn more, on average, than economics or humanities graduates, the cost of technical education is very much higher than the cost of general education--a fact that depresses the social returns to investment in technical education. Of course, this finding does not imply that engineering education should be curtailed, but it gives a signal that additional investment should go to arts subjects.

This finding also has other implications. The humanities and liberal arts have high female enrollments and are a socially profitable investment for two reasons: (1) the contribution these enrollments make to increasing female participation in the labor force, and (2) the well-documented link between the education of women and social welfare factors such as better nutrition and lower fertility. Actually, the higher the level of educational attainment, the greater the participation of women in the labor force. Hence, more education, of any type, enhances the chance that it will be productively used in the market place. For example, in the Sudan the probability that a female will participate in the labor market increases from 8 to 38 percent if she has completed secondary education. Similarly, in Singapore the chance of a woman participating in the labor force is 21 percent if she has no schooling, 29 percent if she has primary schooling, 68 percent if she has secondary education, and 76 percent if she has attended university.

Table 2
Social returns to university education
by discipline in selected countries

Country	Discipline	Rate of return (In per cent)
Philippines	Agriculture	3.0
	Engineering	10.3
	Economics	10.5
	Law	15.0
Brazil	Agriculture	5.2
	Economics	16.1
India	Engineering	16.6
	Humanities	12.7
Iran	Agriculture	13.8
	Humanities	15.3
	Economics	18.5

Source: Based on George Psacharopoulos, "The Economics of Higher Education in Developing Countries," *Comparative Education Review* (June 1982).

But even if educated women never participate in the organized sector of the market (which is the most common case in developing countries), they certainly are economically engaged in agriculture and so-called "household production." What this means is that more educated

women produce more and better quality goods and services for the consumption of the members of their household. Such "goods" might take the form of more nutritious meals and a balanced diet, better sanitation conditions, and use of contraceptives. The link between education and lower fertility has been well documented in the literature of such issues; other things being equal, more educated women desire and eventually have fewer children.

Investment in education, especially at the lower level, also has tangible effects on equity and the alleviation of poverty. In practically every country, labor earnings increase with educational attainment (see Table 3). The provision of universal primary education, apart from being highly profitable, has important egalitarian effects; it pushes people from the illiterate, low-income class into a higher income class. In the same way, higher education increases the supply of graduates, which tends to reduce the existing large income difference between university graduates and other types of labor by increasing the earnings of the latter. This proposition is based on the evidence of what has actually happened in advanced countries following a recent immense expansion in education: compare the index values in the two columns of Table 3.

Educationn. level	Country type	
	Advanced ¹	Developing ²
Primary (index base)	100	100
Secondary	140	239
Higher	219	639

Source: Based on George Psacharopoulos, *Earnings and Education in OECD Countries* (Paris, Organization of Economic Cooperation and Development, 1975).
¹Advanced countries include Canada, France, Greece, Italy, Japan, Netherlands, Norway, the United Kingdom, and the United States.
²Developing countries include Ghana, India, Kenya, Malaysia, Nigeria, the Philippines, South Korea, and Uganda.

The summary picture given in this table masks considerable variation in the structure of earnings between individual countries. Thus, in Ghana, the ratio of university to primary school graduate earnings is 9.1 to 1 and in Malaysia 7.7 to 1. However, in a country like the Philippines with a fairly well developed system of higher education, the corresponding ratio is 2.2 to 1.

Conclusions

The global proposition that spending on education is an investment with a high social rate of return is well supported by the accumulated evidence over the last decade. It can also be confidently concluded that education, especially at the lower level, contributes to the alleviation of poverty, a more equal distribution of income, and an improved social environment.

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Improving the Quality of Education

Stephen P. Heyneman

[In developing countries attention is slowly shifting from providing places for primary education to improving the quality of learning through better books and other classroom tools.]

Universal primary school enrollment has now been achieved in 35 of the richer developing countries. In the 36 poorest countries (whose per capita gross national product (GNP) was US\$265 a year or less in 1975) average enrollment in all levels of primary education increased from 48 percent of the school-age population in 1960 to 70 percent in 1977. By the end of this century, every child will probably be able to start school.

Perhaps the most serious oversight of educational planners during the great expansion of the 1960s was to bypass the issue of how well schools were teaching skills. In spite of the significant advances made in providing places in primary schools, these schools in the developing world generally have poor resources and pass on less effectively than they could the increasingly complex skills required of school leavers today. The education of teachers and the availability of furniture, equipment, and materials are normally well below the standards considered minimal for schools in industrial societies.

In 1977, for instance, there were ten pupils for each available primary school textbook in the Philippines. In Bolivia, in 1978, the monetary value invested annually in furniture and materials in the average fourth-grade classroom was approximately 80 U.S. cents a pupil,

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one sixtieth of the investment for each pupil in Maryland (U.S.A.) during the same year. In a survey conducted in Malawi in 1979, 1 pupil in 8 was found to have a chair, and only 1 in 88 a desk. Primary schools were without safety standards. Walls frequently collapsed after a rain; roofs had large holes; wind and storms disrupted classroom activity as a matter of course. The normal classroom was dark and stuffy; students sat on the ground, balancing an exercise book or slate on their knees to write. Teachers had no offices, chairs no backs, and stools half a seat.

Such inadequate teaching environments are partly a result of the fact that the lion's share of the funds available for education--on average 95 percent of the money set aside for primary schools--has to go toward teachers' salaries. But paying a teacher to copy from a worn-out textbook onto a blackboard and to supervise its memorization by 50 students is an ineffective utilization of expensive talent. The question is what level of classroom resources teachers should have available to justify their salary. In industrial countries today, 14 percent of recurrent costs of primary schools are allocated to classroom resources--books, maps, visual aids, furniture, and the like--and 86 percent is spent on salaries. The average in Asia is 9 percent and 91 percent for salaries; and in Africa 4 percent with 96 percent for salaries.

The large difference in educational quality between low- and high-income countries is also widening. As more and more pupils enter school there is less available to teach them with. In 1960, the average Organization for Economic Cooperation and Development (OECD) country invested 14 times more for each elementary school pupil than did any of the 36 countries with per capita incomes below \$265 per year. But by 1977 the difference had grown to 50:1.

Although conclusive evidence is scarce, it is clear that the poor quality and limited educational materials available in developing countries adversely affect the level of cognitive skills a student can acquire at school. Recent studies show the average student from a developing country scoring at a level that falls in the bottom 5 to 10 percent of students from a high-income country, and the poorer the country in economic terms, the fewer cognitive skills are acquired by the end of the primary school cycle. Though any comparison--whether between pupils or schools or districts or counties--should be approached cautiously, there is general agreement that achievement is lower in schools in poor countries.

Textbooks Crucial

Since the 1960s, social scientists have been trying to isolate the characteristics most closely associated with achievement in basic cognitive skills. The approach is relatively recent and imperfect; but, though technical caveats abound, it has come to one important conclusion:

in wealthy countries much of the learning in school is accounted for by factors not connected with the school environment, implying that additional physical facilities, teaching equipment, and textbooks only help the acquisition of new knowledge a little. But the quality of the physical and particularly the classroom tools in low-income countries is shown to explain three and even four times the amount in achievement that it can in high-income countries. In fact, the poorer the country in economic terms, the larger the impact on achievement that school quality seems to have.

The evidence is scarce on which aspects of the educational environment can be expected to have the most impact on student achievement in the developing world. But one conclusion is consistent: higher achievement is associated with the availability of textbooks and other printed materials. Of the 20 assessments that have been made of the relationship between the availability of printed material and student achievement scores, 17 have reported positive effects.

Providing books where there is nothing to read in the schools sounds like a simple undertaking but may entail substantial logistical challenges--the books have to be acquired or produced, stored, distributed, and so on. But there have been successes in the efforts made to improve this aspect of schooling. The World Bank's Third Education Project in the Philippines assisted the Government to design new, high-quality textbooks in mathematics, science, and Pilipino. Approximately 97 million of them were distributed sufficiently widely to alter the average ratio of pupils to books from 10:1 before the loan to 2:1 afterward. Average student scores were raised significantly; in fact, the achievement gains in the Philippines were approximately twice the magnitude to be expected in North America if class size were to be reduced from 40 to 10. Moreover, the gains from the project were frequently the greatest where they were least expected--among students whose family background and school location have been associated with severe poverty and who came to the school with low levels of knowledge.

Where there are enough textbooks, and the school system has met certain standards of efficiency and good management--as in Algeria, Greece, Ireland, or Korea--the Bank tends to lend for science laboratory equipment, supplementary readers, library facilities, electronic media, or specialized teaching facilities. These too can be expected to increase achievement by significant amounts. Thus, the demand for educational investment is slowly experiencing a shift in emphasis away from providing places for universal primary education and toward improving the quality of the learning.

Future Policy Developments

Two results seem to be emerging in the wake of the demonstrated importance of the quality of educational materials. First, developing

countries want to design, manufacture, and distribute their own educational materials, including textbooks. The World Bank has, where it is economic to do so, made loans for printing presses, storage and distribution systems, paper mills, and the training of editors, designers, and production experts. This is the case in both Indonesia and the Philippines.

But this strategy needs to be analyzed carefully. In some cases, the cost of producing books locally from scratch may be prohibitive, and the technical experience, equipment, and raw materials (particularly paper) may be imported more cheaply from Western Europe or North America. The publication process demands substantial experience in editing and production, in printing, testing, and marketing. Six to ten years is normally required to develop a new generation of textbooks for primary school grades one through six. Given the availability of the necessary skills, this may be economic for books on local history, civics and literature; but it may be cheaper to adapt already published materials in mathematics and the sciences. However, it is often more economic for countries to publish their own textbooks than to print them. Printing in large quantities requires specialized machinery and a constant supply of raw materials and maintenance skills; publishing requires editorial and design skills but not necessarily the local hardware for manufacture.

A second effect of the interest in the quality of education is the increased awareness of the need for equality of educational opportunity within and between populations. For the first time in history it will soon be possible for every individual at a given age to have an opportunity to begin schooling. But this is not a sign that equality of opportunity has been reached among nations. Substantial new resources would have to be made available to pupils in developing countries if they are to have anything approaching equality of opportunity with pupils in the developed world.

The major industrial countries invest 50 times more per pupil to meet similar curriculum objectives than do certain developing countries. This disparity leaves developing countries with an unenviable choice: establish a ceiling on enrollments; or increase expenditures on education to provide the quality of resources needed if their curricula are to be efficient. But if the latter option is chosen, some consensus must be reached on the level of inputs required for all pupils, and where resources can be found to obtain them. These will be the central issues in most developing countries in the years to come.

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Distance Teaching: An Alternative Method Of Education

Hilary Perraton

[Teaching by correspondence or radio--and usually both--can support or supplement formal school systems, often in a cost-effective manner, when students are adequately motivated, the project is efficiently organized, and some element of face-to-face contact is included.]

The demand for school places is beginning to outstrip the capacity of many economies to supply them. At the same time technical changes in medicine, in agriculture, and in engineering mean that new ways of living are open to many adults--but may be open only if they have received some relevant education. This double demand, for schools and for adult education, puts a strain on educational systems that few can bear. The scale of the demand has led to a search for alternative methods of education that can reach more people, or reach different people, or do so more cheaply. Distance teaching offers some of these possibilities.

The variety of jobs attempted through distance teaching makes a neat definition difficult, but for present purposes it can be taken to mean an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learner. In practice, distance teaching usually involves a combination of media. The more effective programs seem to benefit from linking broadcasts and print with some kind of face-to-face study. As a result, it is difficult to draw sharp distinctions between traditional education and distance teaching. At one extreme, a distance-teaching program using radio and correspondence lessons may teach students who never meet a teacher and

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have little or no contact with the regular educational system. At the other, distance-teaching methods are used to support schools and to supplement the ordinary work of classroom teachers. Indeed, it is often valuable to distinguish between the in-school and out-of-school use of distance teaching--that is, between its use to support teaching where students come together at least several times a week, and its use to provide teaching for students who meet only once a week or even less often. But, despite the blurring of the distinction, a concentration on the use of centrally prepared materials does mark distance teaching off from orthodox education.

Distance teaching attracts the economist because it uses mass-production methods which change the structure of educational costs. With traditional classroom methods, the costs of education rise in proportion to the number of children being educated. When every thirty or forty children need a teacher and a classroom, salaries and buildings swallow up most of an educational budget. Few economies are possible unless the quality of education is sacrificed. With print and broadcasts, however, the marginal cost of each additional student is very small. Indeed, if radios are widely distributed, it costs no more to broadcast to a million students within reach of a transmitter than to a hundred. In theory, then, distance teaching can bring economies of scale to education.

The Essence of Distance Teaching

In a sense, the development of the printed book allowed student and teacher to be separated. Indeed, the use of textbooks by children in a classroom implies that they are learning from a distant textbook writer rather than from the classroom teacher who is with them. It is legitimate to ask whether there is anything more to distance teaching than the provision of textbooks, whether it can do more than would be achieved by the universal establishment of public libraries.

In practice, distance teaching differs from simply publishing and distributing books in three ways: in its use of a variety of different media, in its structure, and in its system for feedback.

Where possible, distance-teaching projects have used more than one medium in an attempt to balance the advantages and drawbacks of each and to provide reinforcement. Studying by correspondence alone, for example, is almost a byword for boredom. Radio programs to support correspondence lessons offer a stimulus and a sense of personal concern to the isolated student. At the same time, the content of the radio program can reinforce the content of the print, and it may be possible to use each medium to present that part of the content for which it is most appropriate. Poetry, or mathematics for that matter, can be explained better if the text can be heard as well as seen. Radio conveys

conviction or excitement more easily than print, although the permanence of print is essential if one wants to be able to refer back to what has been said. And, if we can use some sort of face-to-face study along with print or broadcasts, then we can aim for the best of both worlds--the economies of mass production together with the humanity and individualism of personal contact.

The need to use a number of different media has led in turn to a concern with structure in distance teaching. In writing a book, an author can dodge questions of structure or can select the structure that he finds intellectually most rewarding. If, on the other hand, the objective is to produce a package of materials that will teach effectively, then we are forced into thinking about the structure of the content and the structure of the media--the way in which the different media will relate to each other. The criterion then becomes educational effectiveness: the best course is the one that teaches most effectively. Experience suggests that the most appropriate structure for distance teaching differs greatly from that of an orthodox book. Whereas the function of most books is to present the author's view, the function of distance-teaching materials is to stimulate the student to activity that will enable him to learn. The particular structure adopted will probably vary from subject to subject and from course to course. But a common feature of many distance-teaching programs is that the information presented to students is closely bound up with directions to them on activities they should undertake. Material offered to a student in the absence of a teacher needs to be structured in such a way that it encourages the student into learning activities that go beyond passively reading or listening or watching. The development of an appropriate structure makes effective distance teaching possible; it also sharpens the distinction between it and the regular production of books or broadcast programs.

Good distance teaching also depends on a system of feedback. No matter how carefully educational materials are prepared, they will not meet the needs or answer the problems of all the students for whom they are intended. A system of feedback enables students who have problems with the prepared material to receive some help; it also enables the producers of distance-teaching materials to assess how far they have been successful in what they were trying to achieve. Feedback is necessary for learners who cannot otherwise overcome their learning difficulties, and also for teachers who cannot otherwise see how effective their teaching has been. Beyond that, feedback is important because, unless it is built in, the hidden curriculum of a distance-teaching system is that the educator already possesses all the knowledge relevant to the student, and the latter's knowledge and understanding are of no importance to the educator. Feedback, though hard to organize, is the way of building dialogue between student and teacher into a distance-teaching system.

If distance teaching is well structured, using a variety of media and providing for feedback, then it offers a method of education different from that of an orthodox school and different, too, from the simple distribution of educational materials. Potentially, it allows education to be extended to people who cannot get to school for one reason or another. Distance teaching has also been used to support the orthodox educational system--directly, by providing courses for use in school; and indirectly, by enabling the in-service training of teachers.

Distance Teaching in the Third World

In the 1960s, many countries of the Third World were beginning to look for unorthodox solutions to the educational problems they had inherited. In many African countries, for example, it was clear that the expansion of schools, within the limits imposed by finance and by the supply of teachers, could not meet the demand for education even within a generation or more. Distance teaching was seen as a resource that should be used on a large scale because of the economies it seemed to offer in terms of teachers and money. As a result, attempts have been made in the Third World to use distance teaching for all levels of education, from supporting literacy teaching to offering university degree courses.

The biggest weakness is, perhaps, in the most important area of all: there has been little success in using distance teaching to offer primary education. It seems fairly clear that young children need some type of formal institution like a school if they are to learn an orthodox basic curriculum effectively. Although a few attempts have been made to support primary school teachers in the classroom, the help that distance teaching can offer to the most basic education does not lie in creating an alternative to the regular primary school. Rather, it can help by providing a basic education to adults out of school and by offering in-service education to primary school teachers. The numbers of children seeking to enter primary school are dwarfed by the numbers of adults who never went to school, or who did not complete their school course. And nowhere in the world would it be realistic to contemplate sending all undereducated adults back to school. The costs of taking people out of work, let alone the direct costs of the education program, would make this impossible.

Adult education. Attempts have been made to use distance teaching to provide education for adults on a part-time basis, whether they are literate or not. Such attempts have usually involved group study. If a group of adults has one literate member who can be supplied with teaching material to read and stimulated by a radio broadcast, then he can lead a discussion in which literates and nonliterates can both participate. Adult learning groups have been set up in at least three different ways. First, radio forums go back to the farm forum movement of

Canada, which adopted the motto "Listen, Discuss, Act." They have, for the most part, been concerned with agricultural education, using a weekly radio program designed to stimulate group action toward better agriculture. In West Africa, in particular, government-backed farm forum organizations have been set up to provide information and support to forums, and to plan new programs in the light of feedback. In Senegal, the use of feedback has been taken one stage further. Here radio clubs have been deliberately used as a channel for peasant farmers to make their views known to the central government. For the most part, however, forums have dealt with basic agricultural education and have not extended their interest more broadly to education for adults.

A quite different approach to group learning has been attempted with radio learning campaigns in Tanzania. Whereas radio forums are social organizations that remain in existence for many months or for years at a time, the radio campaigns are short and occasional. In each campaign, the largest possible audience has been enrolled in study groups. The whole apparatus of the adult education movement and the political party organization has been used in Tanzania to set up groups, train group leaders, and deal with feedback from them. The subject matter of campaigns has varied from political education to basic health, but their consistent aim has been to use distance-teaching networks for basic education aimed at a large proportion of the adult population.

In Latin America, a third approach to group study has been tried through the radiophonic schools, set up first in Colombia in 1947 and later copied widely in Central and South America. Acción Cultural Popular (ACPO) of Colombia saw radio as the one way of reaching an audience of peasants. With strong backing from the Roman Catholic church, ACPO developed a system of producing books and broadcasts in basic education and supported that central activity by deploying a field staff to encourage the formation of radio schools, or learning groups. The groups are most often members of a single family, and courses may be followed by adults and children together. The curriculum of many radiophonic schools attempts to be both formal and nonformal--to reconcile the curriculum of the formal educational system with the day-to-day interests of the students, usually peasants and their families, often dependent on subsistence agriculture.

All these methods demonstrate that distance teaching can do something to provide basic education for adults. But, despite their successes, the various projects do not amount to a regular system of education for adults analogous to the formal system of education; they do, however, point the way toward future basic educational programs. Although evidence about their effects and about their costs is scarce, it is sufficiently encouraging to say that under certain circumstances distance teaching is an appropriate tool for basic education for adults.

Teacher training. Distance teaching can help indirectly with the primary education of children through their teachers. As C. E. Beeby suggested in his classic analysis *The Quality of Education in Developing Countries*, the educational background of primary school teachers is the major constraint on the quality of education they can offer. In many countries of the Third World the demand for primary education has outstripped the supply of trained primary school teachers. Untrained or undertrained and uneducated teachers have been pressed into service. Their own lack of education holds back the quality of what they do in the classroom. As Beeby says:

"The teacher in a village school who has himself struggled only to a doubtful Grade VI or Grade VII level is always teaching to the limits of his knowledge. He clings desperately to the official syllabus, and the tighter it is the safer he feels. Beyond the pasteboard covers of the one official textbook lies the dark void where unknown questions lurk. The teacher is afraid of any other questions in the classroom but those he himself asks, for they are the only ones to which he can be sure of knowing the answers." (op. cit. p. 5.)

And yet, even hesitant, undereducated teachers are doing an indispensable job; without them schools would close down, or would make do with teachers even less educated. While the proportion of untrained teachers in an educational system should decline as more trained teachers graduate from colleges of education, the process is slow. Many educational systems will employ untrained teachers for generations to come. At the same time, the content of education will continue to change, rapidly and inexorably. To improve the schools, in-service teacher training is vital.

Distance teaching has been seen as a way of providing in-service education to primary school teachers on a large scale. Its attraction is that the teachers are not taken away from the classroom while they study. If vacation courses are linked with correspondence lessons, radio broadcasts, and some supervised classroom practice, then it is possible to make qualitative improvements in the work of primary school teachers. Indeed, there may be advantages in using in-service training rather than pre-service training, as H. W. R. Hawes of the London Institute of Education has suggested:

"First of all, the conventional idea of a course in a teacher-training college followed by teaching practice or short spells in one or two schools, is no longer the only practical way of organizing teacher training. Teachers are now being trained in sandwich courses where the student teachers teach full-time for one school year and follow courses in education at a training college at other times, mainly during the vacations. There is a growing number of projects for in-service training of unqualified teachers where correspondence courses are combined with

residential courses... I am coming to believe that a curriculum reform project run in harness with an in-service program would have considerable advantages."

An in-service course of this kind requires two different jobs to be done. The longer, more difficult job is to provide a complete training for teachers, not only raising their own academic subject knowledge but also attempting to improve their classroom teaching. This has been the aim of teacher-upgrading projects in, for example, the Middle East refugee camps, Swaziland, and Sri Lanka.

A second, more modest aim is to provide a general education to teachers, making up for some of the schooling they lack. This is a simpler job because it does not involve the severe problems of teaching, at a distance, about classroom teaching. And, if the basic education of teachers is so weak that it reduces their effectiveness and imaginativeness in the classroom, then to improve that education is clearly important. This has been the rationale for the use of correspondence and radio at the University of Nairobi, Kenya.

Secondary education. In terms of numbers, the pressures on secondary education in many developing countries are less than those on primary schools. But pressures there are. As primary schools expand, the demand from students and their parents for more secondary school places increases. At the same time, as economies develop, the demand from employers and from tertiary education for greater numbers of well-qualified graduates from secondary school increases. The two sets of demands can conflict with each other: children struggling to get into secondary school are primarily interested in the number of school places, while employers and colleges or universities are at least as concerned with the quality of education provided in secondary school. There is, at least potentially, a conflict between the demand for quantity and the demand for quality.

The principal ways ministries of education have reacted to the pressures on them are the regular expansion of secondary schools and the gradual process of raising the caliber of secondary school teachers. But distance teaching has been used to help meet the demand for good secondary education in three ways. The way with the longest history is to provide courses equivalent to the regular secondary courses for children or adults outside secondary school. The second way is to go one step further and use distance-teaching methods for students outside school but to offer them a different kind of education, with a different curriculum related to their particular interests and needs. The third is to use distance teaching to raise the quality of existing secondary schools.

Correspondence courses for secondary-level examinations have been the mainstay of correspondence education since it began. They have pro-

vided a small element of flexibility in education, offering a chance of getting qualifications to people who did not have the time to study at school, or lived in a place with no school. This kind of education has been offered by commercial correspondence colleges, by universities, and by government agencies. And, as with the Soviet Union in the 1930s, a number of countries are using distance teaching not for a handful of exceptional students who cannot get into school, but as a regular ancillary to the school system on a large scale. The Air Correspondence High School in South Korea, the Minerva radio project in Brazil, the Malawi Correspondence College, and the Mauritius College of the Air are examples.

University education. The unsatisfied demand for education at the primary and secondary levels has led most Third World countries to concentrate their energies, and their use of distance teaching, at those levels. In Israel, by contrast, the government is already moving toward universal education up to the age of sixteen. There distance teaching is being pressed into service to expand tertiary education, through the establishment of Everyman University as a complement to the range of well-established Israeli universities. Correspondence lessons prepared by the university are the most important teaching method; they are supported by newly written textbooks and by radio programs. Study centers are also available, although not every center can provide tutorial help for every course. Students are not obliged to attend study centers and can, if they wish, work entirely by using the correspondence and broadcast lessons.

In general, the university's early results suggest that distance-teaching methods can be successfully used at the level of higher education where there is an appropriate technical and educational infrastructure. At this level, too, the regular costs of education are so much higher than they are in primary or secondary schools that it is possible to produce cost savings results with much lower enrollments.

The Costs

Distance teaching is not necessarily a cheap way of solving educational problems. In some cases, there is no alternative: distance-teaching methods may, for example, be the only means of providing in-service training to teachers who cannot be taken out of the schools. In other cases distance-teaching methods can be cheaper than their orthodox alternatives; this has been shown by studies in which direct comparisons could be made. In the Middle East refugee camps, for example, it was possible to compare directly the cost of producing a trained teacher through pre-service, residential courses and through in-service, distance-teaching courses. The cost of the latter was half that of the former. In both Korea and Israel, distance-teaching systems appear to offer considerable savings over alternative methods of extending education to adults outside school or university. In Mauritius, the use of distance teaching to improve secondary schools is probably cheaper than alternative ways of making such improvements. But in Kenya, the number of students using the

Correspondence Unit is too small for it to show the economies of scale that had been hoped for. The early evidence from Brazil suggests that where there is a fairly cheap alternative to out-of-school education using orthodox methods, it may be difficult to attract the number of students that will make distance teaching attractive.

Two general conclusions can be drawn. The first concerns the level of education. Usually, the more advanced an educational course, the more the teachers working on it are paid. And, as staff salaries are such a large item in most educational budgets, the total cost of more advanced courses tends to reflect the higher salaries. (In the case of universities, the expensive equipment and facilities required by the university teachers ensure that their total budget is also high.) In distance teaching, many of the costs are the same regardless of the level at which courses are offered. The cost of broadcasting lessons or of setting up a print shop does not depend upon the level at which the courses are pitched. It is thus much easier for distance-teaching costs to look favorable when compared with the costs of higher education than when compared with secondary or, even more, primary education costs. At the lower levels, larger numbers of students are needed to make the costs of production and equipment look reasonable.

The second point is related. The structure of costs of distance education differs from the structure of costs of ordinary education in schools or colleges. Whereas staff costs generally dominate educational budgets, costs for the production of materials, and for specialized plant and equipment, form a much larger proportion of the costs of a distance-teaching project. If, therefore, the costs of distance teaching are to compare favorably with the costs of ordinary face-to-face education, then the staff costs for the face-to-face elements in a distance-teaching alternative must be kept down by employing teachers or tutors for a smaller number of contact hours, or by employing less-qualified teachers who will work at a lower rate of pay.

Measuring the Effects

Measuring the effects of education is more difficult than measuring the costs. At least with the formal courses it is possible to fall back on examination results, and the evidence here is quite consistent. Those who keep working to the end of a distance-teaching course have high chances of passing the examination, sometimes higher than if they studied in a more conventional way. The results are naturally affected by motivation. Most students in teacher in-service courses keep working because promotion and increased pay depend on sticking the course out to the end, and they tend to pass their examinations. The evidence from the Korean experience shows that, even without this direct incentive, distance teaching is an effective way of preparing for examinations. This confirms results from other countries. In Australia, for example, pass rates in tertiary education are better for students in distance teaching

than for those in part-time study and nearly as good as for full-time students. In Britain, the National Extension College has achieved better results in English, using a multimedia course, than the average for all schools. In Germany and Sweden, students in secondary equivalency courses can do better than comparable students following traditional methods.

But many students do not complete their courses, and so never take the examinations for which they were aiming. Motivation differs from person to person, and from society to society. The pressures that lead relatively high numbers of Korean students to complete their courses are quite different from those in many other societies that have adopted distance teaching. Again, it is important to find an appropriate point of comparison for students in distance-teaching projects. Often such students begin at an educational disadvantage as compared with full-time students; typically, they come from financially poorer homes, and often have performed less well at earlier levels of education. This presents a major problem for the researcher. In order to assess the efficiency of distance teaching, we ought to compare its results with an alternative method of education used for the same purpose and with similar students. But it has seldom been done that way.

In practice, students of similar social and educational background are rarely offered a choice of working at a distance or through the regular educational system. Far more often, distance teaching has been used as a second-best route for students who have been eliminated, by poverty or examination, from the regular face-to-face system. Given these disadvantages, and comparing their performance with that of other part-time students, it is not surprising that, even in Sweden and the USSR where distance teaching is well developed, dropout rates of about 50 percent appear to be normal. Experience thus suggests that distance teaching can be reasonably successful in overcoming educational disadvantage, but that courses leading to formal examinations seldom retain more than one-half or three-quarters of those who start them.

The Conditions for Success

Some conclusions can be drawn about the conditions that need to be met if a distance-teaching project is to be successful. The first is about motivation. If you are following a distance-teaching course that has no teacher with a custodial role, you can choose to drop out at any time. Unless there is a very efficient and sophisticated counseling service, no one may notice, let alone encourage you to go on. For distance teaching to be effective, in the sense of retaining its students to the end of their course, they need to be highly motivated and to see the relevance of their studies to their own life and their own prospects.

Second, the project must support the student with an appropriate and efficient organization. The scale of the organization has an important

bearing on its efficiency, as measured by the cost per student. The variety of specialized jobs within a distance-teaching institution creates pressure to employ a range of staff with different skills. As a result, it is difficult to imagine a distance-teaching equivalent to the one-teacher school. Similarly, any distance-teaching institution needs access to a minimum of equipment for producing and distributing teaching materials and keeping records of its students. Thus there is a minimum size below which it would be difficult to operate a distance-teaching institution. That minimum size demands a minimum number of students if costs are not to be out of proportion.

Third, both practice and theory confirm that there are benefits for good teaching, and for keeping up student motivation, in using a variety of media, although we are still a long way from having a prescriptive formula for the right mix of media. What is already clear is that problems of integrating the media are among the most serious to be overcome if a distance teaching program is to work well. Difficulties arise here because distance-teaching institutions seldom control all their own activities. Broadcasts usually depend, for their timing if not their content, upon national broadcasting organizations rather than educators. Tutors, who run study centers, or study group leaders often are not staff members of the distance-teaching institution with which they are working. These are almost necessary difficulties: if distance-teaching institutions are to achieve economies by making greater use of teachers or buildings within an existing educational system, then they are forced into sometimes uneasy alliances with other educational bodies. Although the result is administratively uncomfortable, it makes for a more efficient use of national educational resources as a whole.

Fourth, the organization of face-to-face study may be the most crucial activity. It is certainly the activity in which economic and educational pressures are likely to be opposed. The educator, concerned to humanize a system of education that depends on mass production, usually wants to increase the face-to-face element in the system. He will be especially determined to do this if he wants to ensure that centrally produced materials will be clearly relevant to the local needs and interests of his students. But part of the economic strength of distance teaching is that it can save on the cost of teachers: there is an economic case for minimizing face-to-face contact, or at least for minimizing its costs.

The Future

Finally, there are two unresolved questions: about the role of distance teaching in open learning, and about its future more broadly. Distance teaching is not necessarily open, in the sense that courses are open to all comers; professional programs of continuing education may be limited to accredited members of a particular profession. But where

courses are open, and are designed as an alternative route to qualifications, the question arises about the extent to which they should resemble regular school programs. Should they aim for equivalency programs, or should they insist that their students take exactly the same examinations as those in the regular system? Are students better off with a course designed specifically for their interests--which may be regarded by employers or other educators as second best--or with a course less obviously suitable for adults, but leading to identical qualifications? Questions of status as well as of education are involved.

The second question is broader. Distance teaching has been used to solve educational problems of both quantity and quality, and is seen as a valuable tool in an educational crisis. It has been used to extend education beyond the limits of the school and college system, and to improve the weakest bits of that system. But does it have a permanent part to play, and a part to play in close relation to the regular system? In considering what that part might be--if it exists--it is worth noting the essential nature of distance teaching, where this includes a substantial element of face-to-face learning and a feedback system. In such distance teaching, the subject matter content can be recorded on print or on tape, thus liberating the teacher from much of his traditional role of conveying information and enhancing his role of helping learning. Distance teaching, then, can help toward the Copernican revolution in education for which many have been asking--the concentration on learning rather than teaching. (It will not always do it: correspondence courses can all too easily lend themselves to rote learning, and it would be ridiculous to pretend that distance teaching is a synonym for pedagogic excellence and enlightenment.) But when distance teaching is reflecting the better, rather than the worse, aspects of the regular educational system, its particular qualities suggest that it might have a continuing role to play, not merely in providing an alternative or second-best system of education for hard-pressed countries and sorely tried educators, but in providing a better educational system for all.

[Adapted from Alternative Routes to Formal Education, Hilary Perraton, editor, pp. 3-27. Published by the Johns Hopkins University Press, Baltimore, MD, U.S.A., Copyright© 1982 by the International Bank for Reconstruction and Development, Washington, D.C., U.S.A.]

Innovative Approaches to Universal Schooling

Haile Yesus Abeje

[Low-cost learning methods, responsive to the practical needs of learners and their communities, can supplement the formal educational system.]

It is disturbing that, as we approach the twenty-first century, more children than ever in developing countries are without any educational opportunities, to say nothing of their illiterate parents. After years of well-intentioned debate and discussion, the problem of providing all children with minimum educational opportunities still evades solution. The shortcomings of the traditional educational system contribute to the problem. Formal education is frequently expensive and elitist, denying educational opportunities to the majority of school-age children. The content of formal education is mostly academic and irrelevant, resulting in 'educated' unemployment. It neglects the education of parents, and is often inaccessible to girls. Under these conditions the chances are that most children who are now disadvantaged will not have minimum learning opportunities in the near future.

However, the following stories of Farida, Muktar, and Hosnara relate how new avenues of learning are being explored in a developing country like Bangladesh. These stories of two children and a mother illustrate the dramatic changes taking place in educational systems in many developing countries to accommodate the unique educational needs of children and mothers who work. The exploration of bold, new and unorthodox approaches is necessary if millions of children and mothers like Farida, Muktar and Hosnara are to have minimum learning opportunities.

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Farida Attends School Two Hours Daily

Eleven-year-old Farida is the third child in a family of eight children. Her father is a rickshaw driver, working in Dhaka, where Farida's family lives. The family's income is meager, and Farida, being one of the older children, is required to work in various ways to contribute to her family's welfare. Besides caring for her brothers and sisters while her mother works in the mornings, Farida cares for a number of other children in the neighborhood. Although she receives relatively little money for her work, it is, none the less, an important economic contribution to her family.

In spite of her responsibilities at home, Farida finds time to attend the local community school for two hours a day, from 2 to 4 p.m., after 'normal' school hours--a time that does not interfere with her work.

Since starting school, Farida has learned to read and write and to add and subtract. She now enjoys reading simple stories to her younger brothers and sisters and can help her family keep records at home.

Farida's teacher is a young girl from the community who has completed high school and has taken a keen interest in community service. Although the financial rewards from the community school are in no way commensurate with the young teacher's services, the community support and recognition, combined with her own motivation, provide the impetus for her to help children like Farida to have basic learning opportunities.

Farida and her family have aspirations for her to continue to learn, and the two-hour school meets her needs by providing her with useful knowledge and equipping her with the basic skills for further learning, as well as enabling her and her family to be more self-reliant.

Muktar Goes to School Every Other Day

In Ahladipur, a village about eighty miles from the urban area in which Farida lives, 13-year-old Muktar also works to help his family. Looking after the cows and goats, gathering firewood and helping in the paddy fields are some of Muktar's duties.

Muktar must walk three miles to the village school, often in inclement weather. He crosses two rivers, which are often flooded during the rainy season. Because of his responsibilities at home and the local environmental conditions, he attends school every other day.

On the days on which Muktar is not in school, he has 'homework' to do. In his home and community, he is able to try some of the new things he is learning in school. He has planted a vegetable garden, experimenting with some new vegetables that have been introduced at school because they are rich in food value.

Recently Muktar has been able to acquire a few chickens, which now provide eggs to supplement his family's diet. Soon he will get some fish to raise in the pond. The inclusion of such vegetables, eggs and fish in the diet of Muktar's family improves both the quality and quantity of their food intake.

What Muktar is learning improves his own family's life; in addition, his neighbors have begun to take notice of what is taking place in Muktar's home and are interested in learning more about these changes. The three-day school offers Muktar practical knowledge and useful skills while enhancing his contribution to the welfare of his family and his community.

Shamin's Mother Learns at the Community Center After Work

Shamin's mother, Hosnara, lives in Patwakhali village. After she has completed her daily household chores--marketing, preparing meals for the family and helping in the field--she attends classes for mother from 4 to 6 p.m. at the village community center.

As a child, Hosnara was not allowed to attend school, for this privilege was reserved mainly for the boys in her family. There wasn't enough money to send all the children in her family to school and since she was a girl she had to stay home and help her mother.

Hosnara's classes have opened a new and exciting world for her. Not only does this educational opportunity provide Hosnara with marketable skills, such as jute-craft, but it offers an opportunity for functional literacy, as well as knowledge in areas such as family planning, child care, nutrition and sanitation, which contribute to the general well-being of her family.

The opportunity Hosnara has for learning and the subsequent acquisition of practical skills and useful knowledge not only improve her status in the family and community, but also enable her better to help her children as they grow and learn. She realizes the positive difference her own educational experience has made in her interaction with her schoolgoing children, which contrasts with that of her friend, Begum, who is illiterate and is unable to respond appropriately to her schoolgoing children.

Hosnara has taken it upon herself to explain to Begum how important it is for her also to participate in community education. Begum

is motivated by the fact that her educational experiences will also counteract the alienation that often develops between illiterate mothers and their schoolgoing children.

Hosnara encourages Begum and others like her to join the community learning center classes. Hosnara's schooling, although late in coming, has not only contributed to her own personal fulfilment, but has also helped her to improve the quality of life in her home and community.

Alternative Approaches

These stories illustrate three practical measures that can widen access to learning in developing countries. Such measures are determined by two factors: the demand for education, which may greatly outweigh the supply; and the resource limitations on money, personnel and materials.

A two-hour school day. As the story of Farida shows, Farida and many children like her have a meaningful learning experience by attending school two hours a day. Using this approach, a school serves three or four groups of children on any one day. The same facilities, materials and personnel can be used to educate twice, three times or even four times the number of students educated before. A two-hour school day accommodates those children who must work a part of the day to contribute to the income of poorer families, and also facilitates the linking of education with the real world of life and work.

School every other day. For children who must walk long distances to school, as in a rural area, and/or who must work part-time, school every other day offers the possibility of meeting their educational needs. With this approach, one group of children attends school on Monday, Wednesday and Friday, while another group comes on Tuesday, Thursday and Saturday. If such a scheme is implemented, the Bangladesh school system, which currently serves 7 million children, can double the present enrolment, raising it to 14 million, using only the facilities and resources already available.

Accent on parent education. For education to be a constructive force in the community, parents, especially mothers, must also be included in the educational process. The role of the mother in the healthy growth and development of the child is critical. It is a known fact that the mother is the best teacher. There is also evidence, as the story of Begum indicates, that children in developing countries who attend school while their parents are left illiterate tend to be unable to relate their newly acquired knowledge to the needs of their home and community.

Thus, to avoid alienation and to lay a proper base for children to grow and learn, parents must have opportunities for their own education.

It therefore becomes imperative that universal basic education should have the dual objective of parent/child education.

Relating Learning Content To Survival Issues

These approaches emphasize that the content of learning must be characterized by selectivity and flexibility and must respond to the environmental and socio-economic needs of the learner.

There are two essential features of the learning content. First, there is the acquisition and mastery of learning skills, reading and computation, which enable the pupil to continue to learn. Secondly, the content of learning is related to survival issues, such as increased food production, family planning, health, sanitation and nutrition education. This process enables the learner to become self-reliant, giving him or her a more fulfilling life. In such life-oriented practical education, for example, children and their parents learn vegetable growing, which improves the quality and augments the quantity of the family food intake.

Another example is the planting of trees as a community learning project; as a result of this, mothers and girls have readily available wood for their cooking, and are thus spared the drudgery of spending hours collecting firewood every day. In such situations, learning becomes a tool for solving vital family and community needs.

Paraprofessional Teachers

These alternative approaches, which aim at the universalization of educational opportunities, also require innovative methods for teacher education and recruitment. The traditional long period of academic training required for teachers, besides being expensive, is impracticable for meeting the immediate demand for a large corps of teachers to man the expanding educational enterprise. Therefore, in such a scheme, teachers who have not spent much time in academic training, along with members of the community endowed with professional and vocational skills, are employed at a modest salary. Since the major expense of most educational programs is the remuneration of teachers (in many cases as much as 90 percent), this innovation represents a viable economic option, without which the provision of universal learning opportunities is hardly possible.

Teachers such as these can operate at the grass-roots level of development, where knowledge and resources are scarce but where the need is the greatest. There must be provision for continuing in-service education, whereby teachers can sharpen their skills, widen their knowledge, and increase their awareness, so that they can deal adequately with the inter-related grass-roots development issues in the various communities of which they are a part.

An Array of Learning Experiences

For universal learning opportunities to become a reality, there must also be a vision of what can be accomplished beyond the confines of a classroom and the limitations of a school. This vision takes on form when readily available institutions, such as mosques, madrassas, churches and other community structures, which have traditionally served as learning centers, are used in the education process.

The interaction of the formal structure with the non-formal, the flexible approaches, and the relevant learning opportunities, provided at appropriate time intervals in and out of school, supply an array of meaningful learning experiences which can help in the universalization of mass education.

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DEVELOPMENT-SUPPORT COMMUNICATION



DEVELOPMENT-SUPPORT COMMUNICATION

Over the last 15 years, development agencies have become increasingly aware of the importance of effectively transmitting facts, ideas and values to people in developing countries so as to better enable them to take part in and enjoy the benefits of the development process. Development requires changes in knowledge and attitudes--and supported by these, changes in behavior too. But until the mid-1960s the question of how best to communicate the information needed to bring about such changes was rarely addressed by development planners and practitioners.

Evidence gradually accumulated that one reason for development projects failing to achieve their goals was inadequate understanding between the policy-makers or administrators of projects and their intended beneficiaries. Not only were communication requirements treated as minor elements in development plans, but even when their importance was recognized they were badly handled. It took some time to realize that, to be effective, a communication must not only be sent but must be sent in such a way that it is understood. Slowly it became clear that cultural factors are usually of primary importance in determining what messages get through and what media are most effective.

The articles in this section of the Development Digest deal largely with novel or unusual ways to prepare and transmit communications which will successfully reach the audiences to which they are directed. New approaches are constantly being tested, and the case histories below present some of the lessons learned in recent years which illuminate the theory and practice of development-support communication.

Andrew E. Rice
Associate Editor
Development Digest

Social Communication: A Potent Force for Change

Salim Lone

[More than a medium, more than a message, communication is the total process whereby people understand each other, and each other's environment and aspirations. Placing real communication at the center of development programs can help overcome the obstacles that stand in the way of social change.]

In discussing ways to improve his country's economic performance, Mozambique's Minister of Information was recently quoted in a *New York Times* article as saying that what was needed was a return to the methods the ruling Frelimo party used during the liberation struggle against the Portuguese. "Then the people in the liberated areas would debate and find solutions to their problems," said the Minister, Luis Cobaco. "Now there is a tendency to call in the engineer to solve the problem, without discussing it with the people who are experiencing the difficulty."

The Minister's words reflected the growing realization in the international community that a major shortcoming of many development efforts of the past two decades has been the absence of close communication between all those--planners, professionals and the population--involved in development programs. Communication was conceived as a static, one-way flow of information from the professionals to the masses which fitted the "patterns of domination of less privileged majorities by elites," in the words of communications specialist Juan E. Bordenave.

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It is from the development arena that some of the strongest challenges to established communication structures are emerging. One element of the challenge comes from those struggling to place communication between deprived communities and those providing them expertise at the center of development planning. Communications specialists contend that human communication is the pivot on which balances the success or failure not only of individual programs but of the whole process of development.

In fact, however, the vast majority of development programs are conceived and executed without a serious communication component. One recent illustration is a scheme to provide much needed iodinated salt to a region in Pakistan suffering from an extremely high incidence of goiter which floundered badly because the entire promotional campaign was devised without even a rudimentary understanding of the people's sensitivities. In a deeply conservative, Muslim population, the salt was promoted with photographs of a smiling, unveiled young woman, to which the bulk of the population reacted with hostility. It was only after the unsold salt packets began piling up on store shelves that UNICEF's communications staff in Islamabad were asked to come in and do some quick remedial work.

Communications personnel are rankled by this "plan first, communicate only after initial failure" syndrome. But as more and more of those after-the-fact appeals are heard, it is becoming clearer to planners that communication is not merely another hardware component consisting of posters, radio messages, and so on, but a central and decisive factor of any program. Whether it is an effort to reduce the death rate from water-borne diseases in West Africa or an attempt to increase the rice yield in Asia, the communication of the ideas involved does not take place automatically. On the contrary, not only is their value far from self-evident to program recipients, but their displacement of an existing set of strongly held ideas is a complex undertaking.

The effort to raise communications to a more appropriate place in the development context has been enormously helped by recent evidence about its impact. We have seen, for example, the massive shift away from breastfeeding in just one generation. The aggressive use of marketing techniques and the mass media to convince mothers of the merits of formula feeds has contributed to the breastfeeding decline. On the other hand, in a Latin America study we have seen how two groups of children from identical, impoverished social classes show markedly different nutritional status, thanks in the main to the ownership of radios by the healthier families. We are now realizing that when we talk of communications in the context of social and behavioral change, we need to consider not only the "medium" and the "message" but also all those ideas, habits and aspirations acquired through social contact and interaction.

The Commercial Communicators

Among those who must be classified as "successful" in fully investigating their target group and understanding how to communicate with them are the commercial manufacturers. Their advertising campaigns have revolutionized consumption habits and lifestyles across the world. They have saturated the media with advertising carefully researched to gauge the concerns of their audience, and have succeeded far better in changing behavior than have consciously designed development programs. In most third world countries, companies marketing agricultural products have reached remote farming communities with weed killers, fertilizer and insecticides. But try asking the same villagers if they know what is the best remedy for diarrhoea. And in many poor urban areas people will pay hard-earned cash for snacks and junk food, persuaded by commercial advertising that they are somehow "better" than vegetables from the back yard.

A growing number of voices, recognizing the impact of commercial advertising, are therefore advocating that their techniques be adopted in the promotion of social development. They argue that not to do so is to abdicate the print and air waves to those whose primary aim is to sell their particular products and whose objectives may be in conflict with the development propagandists. Richard Manoff is an experienced advertising man who has used his commercial skills to promote developmental messages in the Third World. "Against the enormous power of the mass media to fashion food habits via advertising, the nutrition educator confined to traditional channels doesn't stand a chance," he asserts.

Manoff begins with a religious conviction that there is no idea that cannot be promoted as are commercial products. The way to get your message across, he says, is to create one which is short and confined to a single idea. "If you look through history, you will find that the great messages have been simple and short. Moses only had 10 commandments and they hardly add up to 60 words, and the 17 Rock Edicts of Ashoka (the Indian Emperor who was converted to Buddhism in 260 B.C.) are equally brief and to the point.

"Since we are not trying to make the rural mother a nutritionist or a doctor, I don't see why so many of you are writing books or pamphlets which few people except your colleagues are going to read," he says. "The development worker's approach is often too serious and academic, and therefore less impactful. For example, when I was helping promote oral rehydration therapy in Nicaragua, we tried to make the message simple and catchy. We just said: 'Make super *lemonada* at home --it will fight diarrhoea.' The lemonade concept was one most mothers related to immediately, and that is basically what antidehydration is: lemon, salt and sugar. And we didn't give it any formal name such as ORS, either. The reach of the message was enormous."

A More Wholesome Message

For decades now, the mass media and others have promoted development as a process of "modernity", with advanced technology providing the answers to human deprivations. Tractors will replace ox ploughs, earth homes will give way to structures of stone and steel, with refrigerators and cookers inside, and milk will be available in cartons. So people started insisting on having the latest, most modern, most technologically "superior" products: injections from the doctor, instead of a tonic, for example; formula feeds instead of breastmilk; a car instead of an ox-cart; a video receiver instead of a school textbook.

Today, it is not uncommon for communications practitioners to preach more modest, more wholesome and more attainable goals. The emphasis is on social cohesion, the strength and wholeness of all cultures, the use of appropriate technology, and raising living standards not through material acquisition but through improved nutrition, health, and other essentials.

Changes in communication strategies will not by themselves eliminate the most fundamental problem facing humanity, which is the eradication of poverty, but they can contribute to that goal. A comprehensive communication strategy can help awaken the people to unchain their energies in the service of development. This dynamism is difficult to trigger because in every social system, regardless of its insufficiencies, routine and tradition provide deep security. A culture is a collective identity, and cultural change, even when it is generated by the people themselves, can be disorienting and fearsome.

The last frontier in development is also the largest. Knowledge is a language with an infinite vocabulary. It is also the only resource in the world which actually grows with use and which cannot be depleted. To communicate effectively what we know will be, for all of us, to learn that much more.

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How the Message Does Not Get Through

Andrea Okwesa

[Communication should be an integral part of every development program, but merely providing information is not enough. If messages are not appropriate to the audience, they may be counter-productive.]

A report to the Third Asian and Pacific Population Conference of the United Nations Fund for Population Activities (UNFPA) relates how bamboo poles were used in demonstrating to men in a remote Asian community how to wear condoms. Months later, when the trainers returned to the village, they were confronted by groups of angry pregnant women: where had the men been keeping their condoms? On bamboo poles.

The incident graphically illustrates what can happen when communication messages fail to be appropriate, and do not provide the listeners with enough information to reason their way to sensible conclusions. It points to the critical need to know one's audience intimately, particularly the degree of the community's experience in dealing with new ideas, and their receptiveness to change.

Jamaica's experience has shown how lack of such understanding can result in grievous misinterpretation of the message. In conjunction with Catholic Relief Services, the Ministry of Health initiated a program aimed at reducing the prevalence of childhood malnutrition. A history of little or no success in combating this problem by conventional methods led fieldworkers to look for new communications techniques. One part of the program was a scheme for changing attitudes and

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practices related to breastfeeding and infant feeding. Materials and media to be used were slides, booklets, a flannel board and cutouts, and practical demonstrations given by community health workers. The target group was low-income mothers attending ante-natal and child welfare clinics in two parishes of the island.

The first problem to surface concerned the scripts. They had been written to be read, rather than spoken. When they were read aloud to some groups, certain words were not heard correctly. A word like "rarely," for instance, sounded like "really." Imagine the impact of a statement like: "A breast-fed baby really (rarely) gets diarrhoea."

Other words, although properly pronounced, were unintelligible to the audience because the script had been prepared without an understanding of local idiom. In Jamaican colloquial speech, "food" refers to ground provisions, i.e., starchy roots, tubers and fruits, such as yam, breadfruit, and potato. This restricted meaning of the word made its use puzzling and sometimes actually evoked laughter. Mothers were asked: "What are two foods that could be used together to make a good meal for baby?" Their answers were "yam and potato" or other combinations of starchy roots common in their diets. When asked to give examples of three or four foods to make multimixes, their answers reflected their own local grasp of the meanings, negating the objective of the fieldworkers' carefully planned lessons.

The same situation arose over the word "feed," which to the average Jamaican means canned baby formula or "baby feeding," so that mothers were bewildered by the use of the word as a verb instead of a noun as in a question like: "What should a mother feed her one-year-old baby?" and were unable to give the desired response.

When confronted with development jargon like the word "steps," the situation was even more complicated, such as in: "What are some of the steps that a mother should take to make sure that her baby keeps healthy?" The learners, accustomed only to the meaning of the word in their experience, could make no sense of the question and a room of blank faces stared back at the researcher.

Writers of development materials often advocate "personalizing" texts using "you" or "we," so that learners will identify more closely with the message and relate it to their own situations. This suggestion was made in a recent pre-test of some CFNI materials on anaemia, aimed at an audience with a low level of literacy. But mothers could not appreciate the sense of the word "you" as an impersonal pronoun representing an average person, the sort of person the speaker was addressing. Each mother in the group took the "you" quite literally to mean herself, so when asked a question like "What fruits do you give for baby?", each one described exactly what she did, e.g., "I give

orange juice" or "He won't drink juice" or "I don't give him any." Mothers may have known what fruits one ought to juice, but were not able to answer the question.

Knowing the Audience

A thorough background knowledge of the audience being addressed is essential. Only then will the communicator be able to respond to the specific behavioral needs of the audience, and formulate the most appropriate strategies and approaches for delivering messages. This information needs to be collected early in the program planning process, as was done in a baseline survey undertaken before Jamaica's Nutrition Education Program in 1977. This helped not only in the selection of themes, but also in the exact content and wording of the messages and in the choice of media. Messages went beyond recognizing and stating the problems to acknowledging existing behavioral constraints. An example of this is one of the 45-second spots aired between regular program on the country's two radio stations:

Music...

Soft knock on door.

Voice: (gentle) Come in. Oh is you,
Gran'ma...come in nuh...

Gran'ma: (interrupts) no rush, chile.
But tell me something...Is how much
longer yu going breastfeed the baby.
Yuh tink say this big three-month ole
pickney can live on breastmilk alone?

Voice: (patiently) Gran'ma...some-
times yu stubborn you know...don't
a tell yu a'ready that the nurse at the
health center say that I don't have to
give the baby anyting but breastmilk
til him is four months old. And look
how him look nice and healthy..."

The spot ends with the announcer's voice acclaiming the superiority of breastmilk and reinforcing the message conveyed in the dialogue. The message was both appropriate and relevant in the Jamaican context. The use of "gran'ma" in the extended family system was intended to strike an answering chord in the majority of listeners. The expression of a common belief--that babies do need "something other than breastmilk"--highlighted the problem: many mothers in the survey had reported that they gave their babies supplements before four months. Then an alternative action was proposed, reinforced by a shrewd psychological appeal--"an look how him look nice and healthy"--to motivate the listener to adopt the other, more desirable behavior.

Health and nutrition programs will clearly continue to fail unless communication is made an integral part of the process of change. Successful communication will help ease the transition between old and new ideas by motivating people to accept change, and then giving them the tools and skills to deal with new practices. A search for the most powerful and effective vehicles for communicating messages must exploit all available social and cultural forms.

But it must always be remembered that the mere provision of information is not in itself able to effect behavior change. The best way to find out if people will respond to messages and media at the behavioral level is to listen to them. This is "participatory communication"--directly involving the audience with any changes which may affect their lives, and letting them express their views.

Too many programs are handicapped by materials which the people do not understand because they have not been given the opportunity to react to their content, style and format. Pre-testing of all communication messages, materials and media is crucial. Comprehension, attitudes and other perceptions among the audience should be assessed at an early stage of production. The effectiveness of a particular item in changing behavior will not necessarily be guaranteed, but some of the dangers of misunderstanding and misinterpretation will be reduced.

As long as communication is given a low priority and communication elements are tacked onto a program or project budget as an afterthought --if included at all--the gap between development programs and people will never be bridged.

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Print Materials for Nonreaders: Experiences in Family Planning

Margot L. Zimmerman and Gordon W. Perkin, M.D.

[A methodology for preparing nonverbal instructional print materials, based on working with and learning from the intended audience, has demonstrated that nonliterate people can learn effectively and economically through the print medium in conjunction with personalized oral instruction.]

Thirty percent of the world's people cannot read or write. This proportion is even higher in many parts of developing countries--over 80% in some areas. Yet it is often precisely these nonliterate people who are most in need of information on health care, agriculture, sanitation, water management, nutrition, and other aspects of development. The means must be found to communicate this information to those who cannot read words on a page. This paper describes the development of printed materials that have been used successfully to inform nonliterate people about family planning--a critically important health service.

Traditionally, the print materials used to convey "how to" information for development activities in agriculture, nutrition and health have virtually all been dependent upon the written word to convey their message. Thus, comprehension of the material is based on the ability to read. But in the last five years, PIACT (Program for the Introduction and Adaptation of Contraceptive Technology) has demonstrated that it is possible to prepare print materials for illiterate and/or semi-

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literate persons (hereafter called "nonliterates") who want to know about various family planning methods that are practical, feasible, and effective.

Background

In the 1960s and early 1970s, almost all efforts to communicate family planning messages to nonliterates were through direct interpersonal communication (face-to-face discussions), motivational/informational films, and/or radio. Face-to-face communication can be a very effective communication tool, but it is completely dependent on the knowledge, attitudes, personality, and time constraints of the person providing the information. In many programs, outreach workers and motivators are often limited in number, overworked, and either unwilling or unable to spend enough time with each client to ensure that their verbal messages are properly understood. Follow-up visits are usually planned, but too often forgotten. While films and radio programs or spot announcements can be good motivational and information tools, they are not normally used to discuss in detail anything as "sensitive" as how to make sure an IUD is in place or how to insert a vaginal foaming tablet. Also, these "mass" media are not suitable for client follow-up or for answering questions of individual contraceptive users.

A review of the extensive research on how visual perception varies from culture to culture--how pictures and drawings are interpreted, the meaning of conventional signs and symbols, the meaning of color--indicates that it is probably not possible to communicate new ideas and information to nonliterates by using only pictures. In the absence of any verbal message, many nonliterates can recognize the objects shown in pictures, but the ideas or concepts behind the pictures will almost never be conveyed. Simply preparing pictorial booklets to hand out to nonreaders with the expectation that they can look at the pictures and follow the ideas and instructions would be a waste of time, energy, and money.

However, pictures can be a reminder; they can be used to reinforce instructional messages conveyed to nonliterate family planning clients and potential clients. Pictorial handouts can reach many people in many areas simultaneously, while a development worker or health professional can only work with one group at a time. Consequently, PIACT's instructional materials program began as a way to reinforce--or support--the verbal messages of family planning workers. From this comes the phrase "support materials."

There are several advantages of using printed material to improve the information and education component of family planning programs. Printed materials come in many forms--pamphlets, package inserts, posters, flip charts, and so on. They are easy to store and can be used

without any special equipment. Printed materials are an excellent reinforcement tool because they can be used over and over again, and are independent of any institutional or programmatic time schedule. They also provide a means for transmitting uniform technical information throughout a designated audience.

Messages, Symbols, Graphics

Preparing informational materials for people who cannot read means communicating without words--without words but still in print. Without words, a person can communicate with gestures, facial expressions, suggestive sounds, or by pointing to something that has meaning--a symbol. People from different cultures view symbols differently, or visualize the same symbol differently, and thus the representation of that symbol must be appropriate and comprehensible. These are the challenges in communicating in print without words.

Finding the right picture is usually harder and more complicated than picking the right word, especially for an audience whose perceptions are largely unknown. As an example, how do you take the message of menstruation and symbolize it in print to a nonliterate woman? What graphics do you use to represent that symbol? In Mexico, Bangladesh, and the Philippines, PIACT struggled with these questions. In Mexico it was found that women associated a roll of cotton with menstruation; a Kotex (brand of sanitary napkins) box was originally tested, but it proved to be a satisfactory symbol only among urban women. In Bangladesh, the most widely recognized symbol for menstruation was a red spot at the back of a woman's sari. In the Philippines, a red dot on the front of a woman's dress was tested as the symbol for menstruation, along with a calendar showing a date encircled. An alternate symbol was to show a woman wearing a dress but covered in an "aura" of red, instead of the dot. Although the red dot on the dress was deemed distasteful and offensive by the family planning program managers, it was the symbol clearly understood and preferred by rural semiliterate women, the intended audience.

Methodology for Materials Development

Determining the message: Project staff start with a health service or product--in PIACT's case, contraceptive products--that needs to be explained. The first step in the development of support materials is a series of group discussions with all groups involved: the intended audience of the pamphlets--past, present and potential contraceptive users (literate and nonliterate), health providers of all levels, and fieldworkers if the family planning program is not clinically based. The object of these discussions is to learn as much as possible about how the health product is perceived by each group, its acceptability, advantages and disadvantages, side effects, rumors or misunderstandings about the product, and so on.

Concurrent with these discussions, project staff also review the available literature on the product, particularly that which refers to its actual use in the field, in order to fully understand the product's mechanism, effectiveness, possible complications, and the experiences of other projects in promoting the product's use or informing potential clients.

From these two simultaneous actions, project staff will find out what the audiences want to know, and what they need to know. From this information, the list of messages for possible inclusion in the support materials is compiled.

Visualizing the message: Armed with the list of messages, the next step is to find the symbols for portraying each message. The potential users of the printed material are the source of the symbols as well as the messages, and the results of the prior group discussions should be examined carefully for clues to appropriate visualization. Project staff will work closely with an artist at this stage, who should prepare at least one drawing to illustrate each message. Sometimes more than one drawing is prepared and subsequently field-tested to find out which is better comprehended by the users. The symbols are grouped in some sequence to form a continuity of messages. This sequence is also tested for comprehensibility and completeness to ensure that all the necessary information is covered.

Once messages are selected and a series of visuals prepared, extensive individual interviews are conducted among people representative of the intended audience in order to pretest the chosen messages and pictures. The materials will be changed as a result of this feedback, and in fact the materials are continuously tested and re-tested in the field, with on-site revisions being made as needed, until a satisfactory level of message comprehension is attained. In the process, some messages may be revised, while others may be discarded or completely changed. Or the sequence may be changed. A new version of the pictorial messages is then prepared and field-tested again. Some messages may require several revisions before their meaning is clear; others may be understood almost immediately.

Training the providers and evaluating the results: Once the materials are developed, tested, and printed for distribution, it is important to train the health professionals who will be using them how best to work with this new information tool. This training need not involve an elaborate or lengthy process, but people at all programmatic levels need an explanation as to why and how the materials have been prepared and why using them will make their job easier, more efficient, more pleasant, and more effective. As with almost anything new, unless the health providers understand the advantages, the materials will not be used properly, or perhaps not even distributed in the first place.

A Project Example

PIACT's first project to develop an informational pamphlet for non-literates began in Mexico in 1977. The Mexican affiliate of PIACT had found that nonliterate Mexicans who had decided to use contraceptives were poorly informed about the birth control method they had selected. No materials existed to help them understand how contraceptives worked and how to use them. From twelve clinics of Mexico's social security program, 276 women of reproductive age were surveyed--90% of whom were nonliterate. The project staff found the level of contraceptive knowledge virtually nonexistent, and what information the women did have was mostly erroneous. This fact was apparently contributing to the high discontinuation rate among acceptors of oral contraceptives, especially those in rural areas.

Using the methodology described above, PIACT decided to develop a pamphlet that nonliterate clients could "read." The pamphlet would be used to accompany verbal instructions from the nurse or midwife, and then given to the woman to take home and refer to whenever she had a doubt or concern.

A. Leonard, writing about the development of this first pamphlet in a Ford Foundation publication *Sin Palabras*, described the process of choosing and changing symbols and graphics:

"The first page [of the pamphlet] attempted to explain when to begin taking the pill. The concepts presented were *menstruation* (the pill should be taken beginning the fifth day of the menstrual cycle) and *night* (the pill should be taken at night). For the message *day to begin*, the illustration in Figure 1 was used. The women, quite logically, perceived the drops of blood as shades of fingernail polish.

"The illustration of *night* (Figure 2) ...represented the woman as a young girl [indicated by her] mode of dress and braids. She was also perceived as being particularly unattractive and therefore not someone the women would want to identify with. Since they thought the figure was a young girl, the 'readers' assumed that the open window in the illustration was a blackboard in a schoolroom, that the moon was a drawing on the blackboard, and that the girl was not taking the pill but eating candy.

"The messages of the final page attempted to explain that the pill is good for most women (Figure 3), and that if you don't take the pill regularly, you can easily get pregnant (Figure 4). What the women 'read' into the illustrations was: 3) a group of girls, and 4) unfortunately one of the girls got pregnant--which seemed ridiculous to them because they perceived her as being so young."



Figure 1



Figure 2

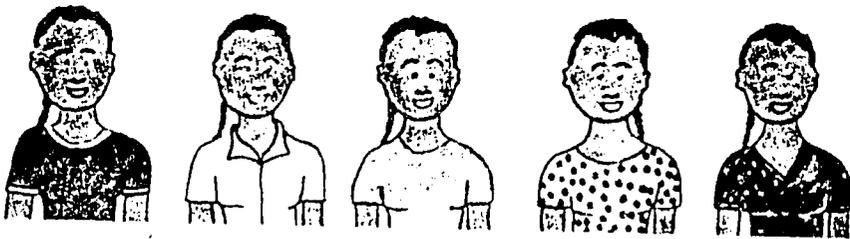


Figure 3

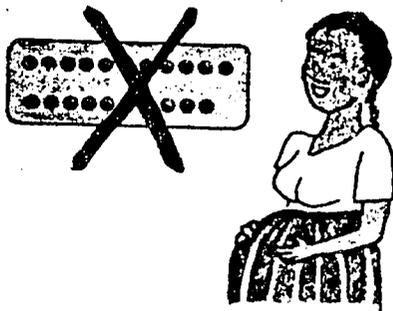


Figure 4

Tables 1 and 2 show how comprehension of the symbols improved as the graphics improved in the three stages of the pamphlet's development. Project staff learned the appropriate representations of the necessary symbols only through extensive interviews with the women and continual re-testing of the improved graphics. An illustration from the final pamphlet is shown in Figure 5.

Table 1
Example of Refinements of Symbols
PIACT de Mexico

Message	Symbol
Proper pill-taking	
Version #1 Comprehension 62%	A couple next to a lit candle. They think about the pills. She takes one, and draws an "X" through the date on a calendar.
Version #2 Comprehension 68%	A package of pills next to a lit candle. The woman takes a pill.
Version #3 Comprehension 97%	The woman is doing normal <i>evening</i> housework. Then, in night dress and next to a lit candle, she takes a pill, <i>leaving</i> two pills still in the package.

Table 2
Three Changes in Symbols Used and Percentage
of Comprehension Among Test Group,
Oral Contraceptive Pamphlet, PIACT de Mexico

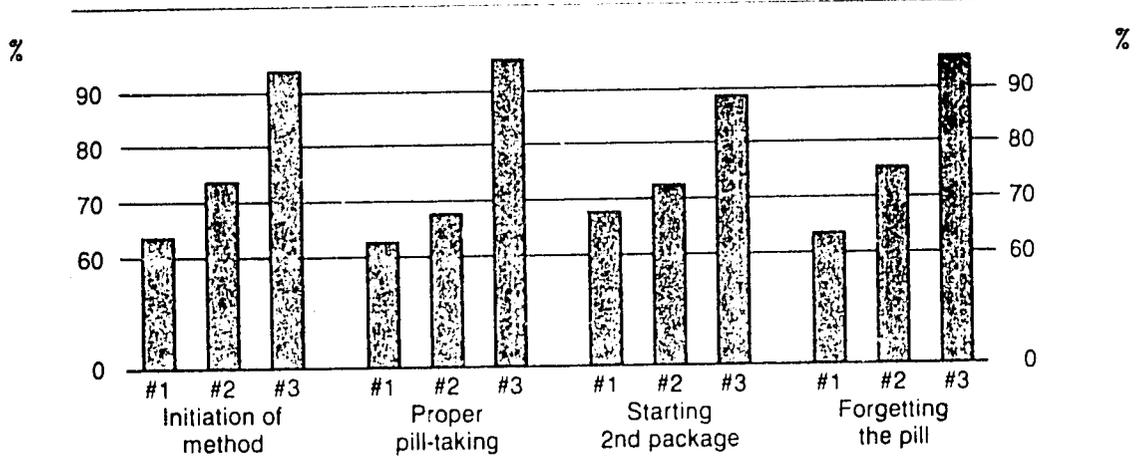




Figure 5

The first experience made clear how far off the initial assumptions of even sophisticated and sensitive project staff can be, and how long the process of developing appropriate materials can take. Virgen Granados, the Mexican social worker who most contributed to the success of the first pamphlet, summed up the human understanding necessary in this work:

"You must never assume that because people cannot read that they aren't intelligent." ...The interviewer must be someone who knows and is comfortable with the target audience and who is perceived that way by the people. It is also important to realize that the process is going to take time...A lot of time must be taken developing a rapport with the woman... Too often interviewers know in advance what response they want and then proceed to elicit that response from the subject. "You must be willing to learn from your audience and you must be able to accept criticism."

In order to test whether this new information resource would really improve the knowledge of nonliterate oral contraceptive users, 240 women in the states of Durango, Nuevo Leon and Chiapas were enlisted in the evaluation. An equal number of women used and did not use the pamphlet.

The women were interviewed twice at a three-month interval, and the results were clear: the number of correct responses about contraceptive methods and their side effects were always higher for those women who had received the pamphlet than for those who had not. It was also found that when fieldworkers and others having direct contact with oral contraceptive acceptors and potential acceptors used these materials, it helped them provide accurate and uniform information to all their clients.

Guidelines

Some guidelines for developing instructional material for nonliterate can be drawn from the lessons PIACT has learned:

1. Keep pictures as simple as possible. It is better to show a family planning clinic set against a plain background than against a city street. A crowded street will only detract from the message being conveyed.
2. Though excessive, unnecessary detail interferes with understanding the message, the comprehension may also be reduced if there is too little detail.
3. Content must be limited to the most important messages. Only 8-12 major points can be effectively covered in a single pamphlet.
4. Each picture and each page should have a single, sharp meaning. Putting multiple messages on one page will be confusing.
5. A single page of a booklet should not include too many objects, nor should it attempt to portray more than a single step in a process.
6. For maximum comprehension, pictorial symbols should be as realistic as possible.
7. Pictures are more likely to be successful if such things as facial features, clothing and buildings are based on what is familiar in that society.
8. Use only familiar objects and symbols to portray a message. For example, many different kinds of light sources could be used to signify nighttime (a light bulb, a kerosene lamp, a candle, a tin lamp), and one must test the symbol chosen with the intended audience to ensure it is appropriate.

9. Material produced for national distribution may not be equally appropriate for all regions of the country.
10. The ideal pamphlet length is usually 16 pages. This corresponds to the ideal number of messages and the attention span of most readers. It is also usually the most economical format for high-speed presses.
11. Initial runs should be small, even if the cost per copy is higher, so that changes can be made before mass distribution.
12. Comprehension of the picture is higher when a person's whole body, rather than just some part of it, is portrayed.
13. If the material being prepared will use more than one color ink, or will have simple words included, these choices should be pretested in the same way the illustrations are tested. Keep in mind that certain colors have different meanings in different societies. Using color will also add to the production cost.
14. People who have not learned to read or write do not necessarily look at pictures in the order intended. It often proves helpful, as messages are being tested, to ask several groups of people to arrange the individual messages into a sequence that seems most logical to them.
15. The design and testing of nonverbal materials are more complicated, and require much more time, than the development of comparable verbal materials. Simple does not mean easy.
16. Once a team has acquired experience in developing instructional materials for nonliterate, the production process can be accelerated considerably. Several pamphlets, in different stages, can be under development at the same time.
17. The intended audiences should have the final say about the content, illustrations and sequences that are used. Administrators and others indirectly connected with the project usually will have an abundance of suggestions for revision, or state that they do not understand the message. But, the materials were not designed for this group!

18. Not all kinds of technical information can be transferred primarily through illustrations. Pictures can probably be used to teach someone how to change a tractor tire, but it is doubtful they can be used to teach a person to drive that tractor.

[Extracted from Print Materials for Nonreaders: Experience in Family Planning and Health, PIACT Paper Eight, 1982, Copyright© Program for the Introduction and Adaptation of Contraceptive Technology, 130 Nickerson St., Seattle, Washington 98109, U.S.A.]

Using Folk Entertainments To Promote National Development

H. K. Ranganath

[The traditional performing arts offer many advantages in spreading development messages to villagers and slum dwellers not reached by the mass media.]

The business of art lies just in this--to make that understood and felt which, in the form of an argument, might be incomprehensible and inaccessible.

Leo Tolstoy, What Is Art?

As luck or destiny would have it, the poorest of the world's poor are likely to be found living just out of range of most national development efforts. The villages or city slums they inhabit, moreover, lie just a little beyond the effective reach of the urban-controlled mass media, making it difficult, if not impossible, for development planners and communication specialists alike to involve them in the dialogue and processes necessary for the promotion of desirable social and economic changes. Yet in many countries of the Third World, the village and the crowded urban slum must be seen as prime targets for development efforts. Governments with conscience recognize the obligation to bring these communities into the forefront of the struggle for social and economic betterment. If this battle is not joined, the entire development enterprise may simply collapse in failure under the intolerable weight imposed by growing problems of inadequate food production and distribution, rapidly increasing population, and needs for housing, health care and employment opportunities.

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All too often governments tend to concentrate efforts on urban-directed programs that almost automatically and exclusively call for the supportive use of the mass media--radio, television, film, mobile power units, video equipment and slide-and-tape presentations. This approach is the most sophisticated and expensive of all possible means of reaching the poorest segments of rural societies in order to change attitudes and behavior and to promote the overall national development effort.

The mass-media approach, while important where it may do the job, tends to leave vital elements out entirely--the local color, the regional dialect, the traditional dress and costume, and the familiar local musical rhythms. Often, too, ongoing development programs designed at national level may not take into account the prevailing local conditions in the villages and in the slums of cities. The poor are seldom consulted for their own views about development. This may lead to suspicion and resentment on their part, which can work against the best aims of the best programs.

There is a growing feeling among development experts and communication strategists that the existing media channels of the very people they are trying to reach should not be overlooked. These channels are found in the rural entertainments of itinerant troubadours and song-and-dance troupes in most developing countries. The rural poor have their own unique media of communication; one has only to drop cultural biases to discover them.

If used sensitively with regard for cultural and religious values, and if the local artists could be won over to the side of the development strategists, folk entertainments could become a vital force for change in the villages. Traditional entertainment forms have often served in the past as vehicles for the propagation of religious values and political causes. Claims for "purity" in the folk arts--the art-for-art's sake argument--have little basis in fact, especially where the forms themselves are not tampered with.

What are folk entertainments? While it is difficult to define a class of artistic activity found in widely differing cultures around the world, we can say that folk entertainments cover the spectrum of the traditional performing arts, among which are drama, puppetry, mime, dance, song, story-telling, joke-telling. One of the main characteristics of folk entertainments is that they are first and foremost entertainments. The authors are usually, though not always, anonymous. The manner of presentation is familiar and the form is traditional. It has a place in culture and history, and is a source of cultural pride.

Why Use Folk Entertainments in Development Communication?

There are many reasons why folk entertainments have attracted the attention of development communicators. The following are some of the most frequently cited.

Historically, folk entertainments, while undoubtedly serving to preserve tradition and teach established values, have often played a role in the communication and promotion of new ideas and the adjustment to a new or evolving social or political situation. For example, when the mass media have been controlled by an alien power, as in unpopular colonial regimes or in a wartime occupation, folk entertainments have sometimes been the only public forums for ridicule of the oppressor and presentation of strategies for resistance. We tend to think that a stress on development is something characteristic of the last two or three decades, but development, if interpreted broadly as an adaptation to the realities and possibilities of one's time, is a continuing process. Traditional entertainments have often been instrumental in encouraging and guiding this adaptation.

Folk entertainments are familiar to audiences, who are disposed to attend performances and to have positive feelings about what they see and hear. When a new fact or idea is presented, audiences can evaluate it face to face, without the added perceptual problem of having to adjust to a new medium, such as cinema or television, or the limitations of radio.

Folk entertainments, since their forms are flexible, can give local relevance to communications that would otherwise seem distant by adapting the communication to local situations, by using dialects or special vocabulary that make the audience feel both accepted and at home, and by incorporating specific localized references to custom, climate, etc., that help fit the communication into a familiar context.

These traditional entertainments can often reach where mass media cannot--to areas that have no electricity, where equipment cannot be inexpensively brought or cannot be used, where most of the population is illiterate, and where the local language is not spoken by enough people to warrant production of mass-media materials in that language.

For the most part, folk entertainments are inexpensive to mount and, being flexible, are easily moved from site to site.

The audience for folk entertainments provides instant feedback to the performer or performers and to the communicator if he is present. Folk entertainments are sensitive, and can be adapted very quickly according to this feedback. Further, traditional performers are usually skilled in improvisation and in adjusting to the tastes and moods of audiences.

Folk performers are often well known and well liked by audiences, as well as respected for their talents and skills. If they are willing to cooperate, they might also serve as excellent discussion leaders and agents promoting change, notably before or after performances as well as on other occasions.

Finally, while folk entertainments have traditionally played an important role in many cultures, some are dying out for lack of support, because of the onslaught of the mass media, or as a result of urbanization and disruptions in the society. Infusing them with new themes, new purposes, and financial and other support can go a long way towards preserving valid art forms that are a source of pride to people, especially the rural poor, who may not be entirely at home in a world of mass media. At the same time, folk entertainments can provide fresh and interesting program material for the mass media, making them more acceptable to both rural and urban audiences.

[Extracted from Using Folk Entertainments to Promote National Development, a pamphlet, 1980, Copyright© UNESCO, Paris.]

Comic Books Carry Health Messages to Rural Children in Honduras

Oscar Viganó

[An informal medium used in schools has supported the objectives of a rural water and sanitation project.]

Innovation is using something old in a different way.

Dewey

A new project in rural western Honduras is using children as message-carriers to teach villagers important health lessons about clean water and sanitation. Working with a specially created comic book, the children learn the health concepts in school and then share them with their families. This Honduran Water and Sanitation Project represents a cooperative effort on the part of two institutions which usually work independently: the Water and Sanitation Department of the Ministry of Health, and the National Autonomous Water and Sewer System. The Project is the first in Honduras to have a specific health education component written into the project design from the beginning.

Organizationally, the Ministry of Education is directly responsible for the health education component, and for the construction of wells, latrines, and windmill systems, while the National Autonomous Water and Sewer System is responsible for the construction of aqueducts and sewer systems. The Project will benefit 100,000 people living in small rural communities of up to 50 families each. Most of the communities in the Project area have nearby schools and health units where children can easily be reached.

Oscar Viganó, the teaching module's designer and the comic book's artist, is the Field Project Director of the Joint Ministry of Health and SANAA Water and Sanitation Project, Tegucigalpa, Honduras.

The objective of the health education component of the Project is to change attitudes and behavior of community members with regard to water consumption and use, and maintenance of latrines, wells, and aqueducts. Investigators found, during the survey conducted to help design the Health Education Implementation Plan, that in Honduras, as in most rural areas, children play an important role in providing and handling drinking water, as well as in caring for younger members of the family. The children are, in turn, most affected by health problems related to water and sanitation.

When Project designers considered how best to reach the children with the health education messages in coordination with Project activities and objectives, rural primary schools surfaced as one of the most important channels of communication. However, to tap the children's potential, it was necessary to design a system simple enough to be used in the schools without much training, economical to produce, effective and attractive to children, and above all, in line with the Project's philosophy that dialogue and participation are an essential part of health education. Any materials used should contain basic information about the subject, ideas and exercises to conduct in a classroom situation, and information for children designed to encourage classroom participation.

Analyzing the different possible combinations of materials, the team came up with the idea of using a teaching module consisting of a class manual for the teacher with information about the learning objectives, water-related health problems, industrial and in-home techniques to purify drinking water, exercises for each particular class, evaluation, suggestions, and an accompanying comic book for each child.

Comic books were selected because their format has many advantages. Comic books are obviously entertaining, are fairly easy to produce, can relay information visually and step-by-step, combining action and a written technical vocabulary, and can be consulted again and again. In addition, children can take comic books home and pass them on to members of their family or to other children, multiplying the educational message.

The main concern in developing the comic book centered on the style of illustration to be used. The designers chose a humorous style, something children relate to very well. Suggestions for characters were narrowed down to two children, a girl and a boy who would discuss health and sanitation matters. Then the problem became how these children knew or learned about the subject, and which one would be the expert. Finally an "expert" was born; nobody knows more about water than water itself, therefore a talking Drop of Water became the second character, and the comic books were called "*Juanita y la Gotita*" (Little Jane and the Drop of Water).



In this sequence, greatly reduced here, the Water Drop is explaining to Juanita that, before he is boiled, he can make people sick when they drink him. But if she will boil him for 15 minutes. The comic books have an average of 8 pages, and contain a glossary to define new words and a questionnaire for the children to complete.

Content Description

The subjects of the comic books follow the Project objectives and are related to health education in water and sanitation. Each comic book contains single-concept messages; such topics, for example, as one cause of water contamination, or one way to purify water. Special care was taken to ensure that the illustrated sequences were not confusing and would be easily understood by children.

In the scripts the story develops sequentially, the events follow one another in the present time, without showing past or future actions. The script writers drew technical information for the different subjects from books and validated the data through area experts working with the Project or the Ministry of Health.

In order to correct any content or language errors, once technical changes are made, a rough copy is illustrated, photocopied, and distributed among area experts and personnel familiar with the subject and with rural audiences. It should be noted that the comic book has been designed for the formal schools, so although very simplified, the language used does not contain any slang.

The first comic book (see illustration) dramatized the causes of water contamination and how to decontaminate water by boiling it. Learning objectives were: 1) identify in writing one cause of water contamin-

ation, 2) identify in writing one way to decontaminate drinking water within the reach of the rural family, 3) describe in writing what bacteria is and describe its effect on drinking water, and 4) describe in writing the dangers of drinking contaminated water.

Pretest Results

Once the design of the first module was completed, drafts of the teaching guide and photocopies of the comic book were pretested in three rural schools with three teachers and 54 third to sixth grade children. During the pretest of the comic book, each child was given a questionnaire with five questions related to the content of the health education class to be answered before they saw the comic book. Afterwards, children took the comic book home to read; the following day the teacher conducted a health education class using the teaching guide content and asking questions related to the comic book story, expanding each answer with information taken from the guide. Once the class was over, questionnaires with eleven questions (five from the earlier questionnaire, plus six about comic book content) were given to the children.

Correct answers for the first five questions went up from 59 percent to 80 percent. During the test, the correct answers about boiling water to purify it rose as much as 90 percent. Ninety-five percent of the children indicated that they liked the characters, and teachers expressed their satisfaction with the materials and welcomed the opportunity to use them.

Production plans include 12 modules containing educational materials about such topics as the prevention of water-related sickness and personal hygiene. Five thousand copies of the first comic book have been printed, and the Project expects to reach 100 rural community schools, distributing an average of 40 copies per school. To date, 1,200 copies have been distributed among school children in 30 rural schools, and teachers are sending back information which will be used in the design of future modules.

The relatively low production cost, US \$0.30 per copy, the comic books' acceptance by teachers and school children, their potential for carrying sequential visual and written communication, and their effectiveness in relaying the educational message all make the comic book a perfect medium to introduce health education in the rural schools.

(For further information, contact Oscar Viganó, Field Director, AED/PRASAR, A.P. 140, Tegucigalpa, D.C., Honduras.)

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Teaching Environmental Lessons in Kenya Through a Children's Magazine

Judy Brace

[A contest organized by a young peoples' newspaper involves school children in two-way communication on development and environment issues.]

Believing that a two-way exchange of information is the essence of communication, an innovative research institute in Nairobi has set out to celebrate the annual World Environment Day--and to discover what children know about their environment---in a unique way. Using the vehicle of *Rainbow*, an existing English-language weekly newspaper for children, the Mazingira Institute has, for the past four years, collaborated with the editor on the design, content, and production of one issue annually devoted to a single topic of development and environmental concern. In the past these special topics have been water, trees for food, and renewable energy. The 1982 topic, developed from the feedback received from the issue on trees for food, was generation and nursery development of tree seeds.

Rainbow, the only publication for children in Kenya, has a regular circulation of some 17,000 per week (25 percent Nairobi, 75 percent smaller towns plus some rural areas, estimated total readership 150,000) and sells for the equivalent of US 10¢. The press-run of the special environmental issue is increased to provide three to five free copies mailed to each of 10,000 primary schools in the country, with an accompanying letter of explanation to each headmaster. (English is the language of instruction in the schools.)

Judy Brace is the Director of the Clearinghouse on Development Communication, Academy for Educational Development, Washington, D.C.

Learning from a Contest

The topical content of each issue is explored through a variety of features: an editorial, a theme article, a comic strip, letters, and a contest which is the highlight of each issue. The contest centers around a series of approximately 12 carefully structured questions, the answers to which not only determine the winners, but provide valuable information about children's perceptions and understanding of the theme. Responses are tabulated and published in a form accessible to curriculum designers, development and environment researchers, and others with an interest in such matters.

The 1981 contest generated approximately 2,500 responses, almost all of which came from rural school children who are those most intimately acquainted with their natural and resource environment. Contest winners (there are some 10 different prizes) and their headmasters are brought to Nairobi for an awards ceremony. Headmasters meet at this time with Institute staff to provide further feedback on the use they make of the newspaper as a teaching tool. Many rural schools typically lack up-to-date, relevant materials.

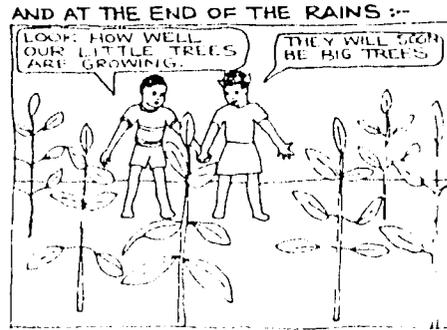
A very special feature of each issue is a two-page comic strip story that features Mingu and Sweetie, a boy and girl whose interaction is free from adult influence. The episodes subtly modify male-female roles, and result in a solution to an environmental problem that the children have perceived. A panel of technical experts advises on the validity of innovations devised by the children, such as an improved three-stone cookstove to increase the energy efficiency of fuelwood. Elsewhere in the issue more detailed instructions for building such a stove are provided.

The entire development cycle of each issue of *Rainbow* is about 13 months, from conception to publication in May, contest deadline in September, winners selected and announced in the November issue of *Rainbow*, to the final tabulation and publication of the data received.

The first two years' issues were funded by local business or industry, while the third and this year's issues have been sponsored by the Canadian High Commissioner. Budget for the entire project is under US \$30,000 (approximately US \$3.00 per school), and includes staff costs, the printing and mailing of two issues (the environmental feature issue and the issue announcing contest winners), travel costs for winners and headmasters, and collection and printing of data from the questionnaire.

In the belief that this idea has applicability in any country, the Mazingira Institute in 1981 proposed an enlarged project, to include eight English-speaking countries in Eastern and Southern Africa, for

S O G Z I T O M M S



By Diana Lee Smith

funding by several international agencies, both as a way to gather local information from the countries' children and to share with them information on the environment.

(For further information about this project, contact Davinder Lamba, Executive Officer, Mazingira Institute, P.O. Box 14550, Nairobi, Kenya.)

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