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THE IMPACT OF HIV/AIDS ON EDUCATION
a review of literature and experience

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Table of Contents

I	Introduction 1	
	A.	AIDS and Social-Economic Development1
	B.	The Differential Impact of HIV5
	C.	The role of education8
II	Impact on the Effectiveness of Education10	
	A.	A more open system10
	B.	A more integrated message in a more flexible system
III	Impact of HIV/AIDS on Demand, Supply, and Process13	
	A.	Demand13
	B.	The Supply of Education20
	C.	The Process of Education22
	D.	The quality and quantity of education23
IV	Impact on the Education System: How It Responds to HIV/AIDS ..25	
	A.	The clients and roles of the system25
	B.	Operations of the system28
	C.	Content and methods of education 29
	D.	Planning and Management of the System30
V	Implications of the Impact of HIV/AIDS for Training, Research, and Donor Programming38	
	A.	Training38
	B.	Research39
	C.	Programming of donors39
	References41

I

Introduction

« . . . the AIDS pandemic confronts us with a full range of development issues . . . issues of poverty, entitlement and access to food, medical care and income, the relationships between men and women, the relative abilities of states to provide security and services for their people, the relations between the rich and the poor within society and between rich and poor societies, the viability of different forms of rural production, the survival strategies of different types of household and community, all impinge upon a consideration of the ways in which an epidemic such as this affects societies and economies» (Barnett and Blaikie 1992.5).

«Across Africa, evidence for the seriousness of . . . downstream effects is accumulating rapidly; given the nature of the disease and the shape of the epidemic curve . . . , now is the time to take action to mitigate the worst effects in the next two decades. Because this is a long wave disaster, . . . the effects we are seeing now in Uganda and elsewhere are the result of events (personal, communal, regional, national, and international) that occurred a decade or more ago. Action taken now cannot change the present, nor can it change the immediate future. It can change the way the situation will look in the years after 2010» (Barnett and Blaikie 1992.167).

A. AIDS and Social-Economic Development

The statistics are impressive: 40 million (or perhaps 100 million, 2% of the world's population) infected with HIV by the end of the decade; seropositivity rates of 10% - 20% - even 30% among certain population groups (by age, place of residence, nationality, or gender); increasing AIDS-related mortality rates; perhaps 2/3 of those infected living in sub-Saharan Africa, with one million (perhaps many more) already infected in India and hundreds of thousands more in Southeast Asia. The problem is that as long as these issues are discussed largely in terms of statistics, they remain issues in the abstract. This is especially true (and dangerous) when the numbers remain relatively small in the developed world (particularly when compared to some earlier predictions), thus lulling it into a false sense of security and leading to the debate over the «myth of AIDS».

The need, therefore, is to go beyond the mere numbers and percentages of the infected, ill, and dead to the impact that such numbers will have on individuals, families, communities, and nations. Perhaps it is only with clearer evidence of such impact - anecdotal and descriptive, as well as statistical - that the magnitude of HIV and AIDS will become apparent and that all nations of the world and all sectors of society - even those not now visibly affected - will realize that the epidemic is **their** concern and not someone else's.

And such evidence concerning the impact of HIV infection and AIDS on the development both of communities and of nations is beginning to appear. The impact in

many regions of the world is already widespread, profound, and complex - and promises to be even more so in the future. The subsequent scenarios being written for the future of heavily affected regions of the world - and for some only now beginning to be affected - are quite devastating. And they come at a time when many societies, because of recession, debt, war, and natural disaster, are simply unable to cope with the «routine» demands of development let alone assess the impact of AIDS and respond effectively to it. (See Cohen n.d.; Miller and Rockwell 1988; Nabarro and McConnell 1989; Armstrong and Bos 1992; African Development Bank Group 1993; NORAD 1991; Reid 1992; Panos Institute 1992; World Bank and the University of Dar es Salaam 1993).

The gravity of the situation is often reinforced by the feeding of one crisis by another. Thus, economic recession, drought, and conflict «aggravate the transmission, spread, and control of HIV infection...in two major ways: directly by increasing the population at risk through increased urban migration, poverty, women's powerlessness, and prostitution, and indirectly through a decrease in health care provision» (Sanders and Sambo 1992:32). The impact then grows exponentially, from one sector to another, one level of society to another, one nation and region to another.

One aspect of this is the sheer impact on population. Although one estimate for an aggregate of 15 relatively heavily affected countries in sub-Saharan Africa showed that population will still double between 1980 and 2005, the projected increase will be 4 per cent less than what would be expected in the absence of AIDS. Another estimate claims that the population of an average sub-Saharan Africa nation will be 3.2% smaller in 2020 than would have been the case in the absence of AIDS (African Development Bank Group 1993b: 16). In some countries the expected population size may be reduced by considerably more - in Zambia by 12% and in Uganda by 8% (Population Newsletter 1992).

The impact on the individuals, families, and communities which lie behind these numbers, at the micro-level of society, can also be immense. People fall ill, cannot work, and lose income. Their families spend money on care and treatment and lose further income in taking time to care for them. People die; specialized workers, skilled artisans, and educated officials disappear and replacements are difficult to find; businesses close and farms lie fallow; current earnings are lost and future earnings, foregone; and time and money are spent on funerals and mourning. Thus, for example, in Zaire, «a single hospitalization for a child with AIDS costs four times an average worker's monthly income; and funeral expenses 11 times a month's pay» (F. Davachi et al, quoted in Panos Institute 1989:vii).

Women, too, fall ill and die, usually at an age considerably younger than men. Given their productive role in the home, in agriculture, and in the informal sector of the economy, their loss is a critical one. Widows and orphans lose their land, shelter, and inheritance; are forced to depend on relatives or migrate to cities; and may join an

urban underclass of commercial sex workers and street children. Traditional support systems are stretched and then broken, and families and communities lose their economic, social, and cultural viability and gain a sense of fear, fatalism, and helplessness. As one researcher put it:

«In any culture, people can assume to have a hierarchy of expectations which may be subjected to change in the face of crisis. The highest expectations include self-respect, a sense of worth, and the giving and receiving of affection. Other expectations may be an acceptable standard of living now and in the future. But all of these expectations of life are acutely threatened by AIDS. Expectations about relationships with children and grand children have all been profoundly disturbed» (Katahoire 1993: 19).

All of this micro-level impact adds up, at the macro-level, to a significant reduction of national productivity and output. The direct costs of health care increase dramatically, but even these are exceeded by the indirect costs to the economy due to foregone output (Cohen n.d.). This derives partly from the aggregate of losses in labour and earnings due to individual illness, disability, absenteeism, and death and partly from the collective impact on the productivity of individual firms and farms. Less labour-intensive crops, for example, are substituted for commodities traditionally sold as exports, and where (as in Laos) a large percentage of state income derives from trade and service enterprises, the impact of AIDS on industry, construction, and transport may affect tax revenues and government budgets (UNDP 1992).

There are also other causes of economic loss, in regard to:

1. **savings and investments.** «There are many reasons to believe that the effects of HIV will be to reduce total savings, and in so far as these decline there will be less investment, less productive employment, lower incomes, a slower rate of **GNP** growth, and possibly a lower level of **GNP**» (Cohen n.d.:7). As an observer in the Rakai District of Uganda explained, «young people had been discouraged from making long-term investments; they kept whatever resources they had available for when they become ill» (Katahoire 1993:93).
2. **remittances.** Restrictions on international migrant labour reduce the level of remittances returned to the sending country. «Malawi...recently reported a loss of R70 million (approximately US\$27.3 million) a year after Malawian miners were prevented from going to South Africa because of the threat of their being tested for AIDS» (Sanders and Sambo 1992:32).
3. **personnel replacement and retraining.** Illness and death lead to high job turnover and high costs of recruitment and training and, in a context of increasingly scarce trained human resources, to higher salaries - thus a reduction in «both the quantity and quality of the labour available to produce output» (Cohen n.d.:3). One projection in Uganda indicates that in order to have one person surviving to the age of 50 from the current cohort receiving education and training, 17 will need to be trained (quoted in Barnett and Blaikie 1992:126).

As a result, «under the most plausible assumptions, simulations predict that AIDS will **reduce** the rate of growth in **GDP** per capita relative to a no-AIDS scenario....In many countries [in Africa], negative growth rates in **GDP/capita** will be lowered even more as a result of the AIDS epidemic» (African Development Bank Group 1993b: 1819). One estimate, for example, claims that the loss of many skilled workers in the prime of their productivity could make Tanzania's gross domestic product fall 14-24 percent from normal levels by the year 2010 (World Bank 1992:xix), and a related survey by the Standard Chartered Bank in Zimbabwe suggests that the net economic effect of HIV/AIDS was likely to be a 1 % annual slow-down in economic growth in the country during the first twenty years of the next century (quoted in Chakaza 1993:3).

One of the most pernicious aspects of AIDS is how it may reverse some of the progress in development made over the last decade or two and make unachievable the various social targets (in regard to child survival, basic education, etc.) set by national governments and international agencies for the future.

«HIV can impede and, more significantly, reverse the gains in economic and human development reached over the last few decades by affecting programs geared to reduce poverty and improve the general health of the population. In some places, AIDS has already has a serious impact on programs affecting nutrition, STDs [sexually transmitted diseases], diarrhoea, TB prevention, immunization, childhood mortality reduction and the lengthening of life expectancy» (McGrath 1993).

Thus, the increasing rates of infant infection, illness, and death due to AIDS may eliminate the improvement in infant survival achieved over the last 20 years (Preble 1990). «. . . [I]n developing countries, where maternal HIV seroprevalence reaches 20-40%, serious erosion, and even complete reversal, of the hard-fought gains in infant and child mortality achieved since 1960 may occur» (Vermund and Sheon 1992:49). «UNICEF projects that in the absence of AIDS, mortality rates of children under 5 years of age in Central and East Africa would have dropped to 132/1000 [in 2015-2020]. However, because of the AIDS epidemic under-5 mortality will probably rise to 159-189/1000» (quote in African Development Bank Group 1993b:14). This will probably be even higher due to the impoverishment and neglect of otherwise healthy AIDS orphans. And the Ministry of Health of Uganda in 1992, as reported by Katahoire, anticipates that pregnancy-related deaths attributable to AIDS will push up the maternal mortality rate from 4 per 1000 to 13 per 1000 (1993:8).

There may also be a reverse in the gains made in life expectancy. For the 15-country aggregate mentioned above, a life expectancy at birth of 50 years in 1985-1990 should have climbed to 56 years by 1995-2000; instead it may remain unchanged - with perhaps 1/2 of the crude death rate in Africa by 2020 being attributable to AIDS (Armstrong and Bos 1992:205). Another estimate speaks of life expectancy in sub-Saharan Africa failing to 47 years rather than the 62 years expected in the absence of AIDS (**WHO** quoted in Panos Institute 1992:21). One report indicates that the average age of death of insured workers in Zambia and South Africa is now 37 years (Whiteside 1993). Another, in Zambia, reports almost a ten-fold increase in the crude

mortality rate among 21 local enterprises from 1987 to 1993 (personal communication) .

As a result of such impact - on families, communities, and societies; on population growth, social cohesion, and economic productivity; on health status and mortality a host of other effects may appear. Here we find speculation, but little experience or evidence, concerning the possible longer-term impact on political stability and national security as the weakening of a governing elite or a defense establishment, or the increasing marginalization of regions or population groups, leads to inter- and intra-group conflict. Thus:

«Several factors make the global pandemic a significant international security issue. One such [factor] involves the socioeconomic disintegration and political destabilization caused by a loss of trained and experienced military and civilian personnel...When the military is weakened, so, too, is the security of the country it is intended to defend...In complex ways, the epidemic effects national and regional development, and will play a role in regional power struggles and in the maneuverings of special interests. Whether military units are able to carry out their missions and maintain national security will ultimately be determined by readiness in the ranks and stability of leadership» (Yeager and Miller 1993:3).

This will especially be a problem where, as in some African countries, infection rates in military services are reported to approach 65 percent and where between eight and nine candidates must be screened in order to discover one who is seronegative (Yeager and Miller 1993:15).

B. The Differential Impact of HIV

«AIDS is a quintessential social disease. It neither occurs nor propagates in a social vacuum. The way in which it spreads and the impact it will have is greatly affected by the prevailing social norms, the level of development, and the role of government. Countless other variables affect the course and impact of the epidemic but the central message is clear. Whilst there may be some commonalities across societies, there should be no presumption that what works in India will work in Indonesia and vice versa. Therefore, the challenge that confronts all of us is to provide insights for the design of policies and projects which explicitly take into account social, cultural, and economic conditions and differences and which are correspondingly likely to be most effective as a result» (Thomson 1993:2).

The other very important aspect of AIDS and development relates to its «differences» - both its differences with other diseases and epidemics and its differential impact across societies and within a particular society. As a disease, it is different in various ways. Being largely sexually transmitted, it is difficult both to talk about and to control. It appears to be expanding more rapidly than many other epidemics and is

particularly dangerous because of the long incubation period between infection and evident illness. It is thought to lead inevitably to death. Its highest rates of incidence are among young, economically productive adults rather than among the particularly weak, the very young, or the very old. Because it is likely to kill spouses (and children) in the same family, its impact clusters in ways which tax even the strongest of traditional coping mechanisms. And unlike most diseases which are either inversely associated with **SES** (i.e., greater incidence among the poor) or not significantly associated with it, HIV (at least at first) affected primarily the urban technical and professional elites, with higher education, income, and skill levels (Bertozzi 1991, Panos Institute 1992).

One result of this is that higher-level officials in both public and private sectors, many of whom have received higher education locally or abroad, may be particularly affected by the epidemic. One Ugandan study found an annual mortality rate of 2.5 per cent among staff of government institutions who had studied abroad between 1986 and 1988 (Olowo-Freers et al n.d.:5) - with perhaps 2.1 per cent due to AIDS.

Now, however, there is evidence that «both the rich and poor are likely to have higher infection rates. The rich, like the powerful, are more mobile, less constrained by community norms, and can afford the lifestyles they choose, which often place them at risk of infection. The poor and the powerless alike are less able to make choices about their life circumstances, more often forced into work away from home and family, or commercial sex work. Their health and nutritional levels are low and they cannot afford to use health services» (Reid 1992:5).

Thus, in general, and perhaps increasingly «the disease affects severely those groups that may be least able to resist it, due to ignorance, prevalence of injecting drug use, and limited access to higher quality goods and services. The greater impact on these groups, many of which are on the fringe of survival, will come through reduced labor remittances, reduced availability of labor especially at peak seasons, and ultimately less food security and income. The poverty of some social groups will, therefore, intensify as a result of the epidemic» (World Bank 1991a:8).

A particularly important differential impact relates to women. «In Africa...women generally contract HIV and die of AIDS at ages five to ten years younger than men....The ability of all women to protect themselves from HIV is constrained by their status in society» (African Development Bank Group 1993a:3). This relates to the greater incidence of STDs among women, their greater frequency of intercourse, an age differential at intercourse between younger women and older men, lower levels of nutrition, and a variety of other physiological and «situational» factors including cultural beliefs and large differentials in power between men and women (UNDP n.d.b). These factors put women both at a special disadvantage - with less opportunity for schooling and employment, less ownership of land and greater insecurity over land title, less profitable self-employment (especially at a time of recession and structural adjustment), and thus with lower incomes - and at a special risk, gaining access to income through sexual relationships with men. «Women say that...now more than ever they need to find 'a spare tire'...that is, men to whom they offer

sexual services when they need ready cash to obtain health care for a sick child or to meet social obligations» (Schoepf et al 1988:269).

HIV infection and AIDS also have differential impacts by region and sector. Particular areas of a country, because of extensive poverty, cultural practices of the local population, and/or proximity to routes of transmission, may be more heavily affected than others. Also, «many sectors of the economy may be threatened by the sudden depletion of the workforce: mining, agriculture, transport, and construction, for example. The sectors most vulnerable are those which depend on highly trained personnel or upon occupational groups which may have high rates of HIV infection, such as truck drivers, construction workers, teachers, etc.» (UNDP n.d.a; see also Gillespie 1989).

Particularly mobile populations such as army personnel, senior civil servants and parliamentarians, and migrant workers are also affected, and case studies of firms in «high-risk» sectors in Uganda (transportation and construction) showed much higher than usual levels of mortality than expected (World Bank 1991:39). The result may be especially severe for industries which rely «on a pool of highly-trained workers drawn from a pipeline through which small numbers of persons move....If the pipeline for replacement of these educated workers is seriously deficient, killing people at the same rate within a small elite as within the general population would have a hollowing-out effect» (Rockwell n. d . :3,4) .

As a result of such differential impact, and «because of the way that infection is clustered in families, occupations, and geographical areas, the impact of multiple illness and death is much greater than the accumulated individual losses» (UNDP n.d.a) The whole, in other words, is much greater than the sum of its parts.

But there should be little comfort in thinking that such impact will necessarily be restricted to such limited clusters. Sooner or later, in many countries of the world, HIV infection and AIDS will have a serious effect on the quantity and nature of available human resources, on productivity, and thus on development. Perhaps up to 1/4 of the most productive, most able-bodied, and often most educated middle generation of some societies - both leaders (planners, managers, teachers, entrepreneurs, and other professionals) and producers (farmers, factory workers, miners, merchants) - will be seriously affected. They will see their mortality rates increased (perhaps doubled or tripled) and their life expectancy lowered; will be taken out of the work force and thus out of the economic life of their families, communities, and nations; and will be replaced, if at all, by people younger (perhaps two years younger on the average, by 2010, in one African scenario) and less educated, with different and perhaps less needed skills and experience (World Bank 1992). The result, already visible in some areas, will be that whole communities will be «turned into big ‘orphanages,’ with limited resources, weakened structures, poor organization, and diminishing motivation» (Ddombo 1991:8).

C. The role of education

As a major actor in the development of human resources - through the teaching of literacy and numeracy, the transmission of basic knowledge and skills for survival, and the delivery of vocational, tertiary, and professional training - the education system bears both a special burden in terms of being affected by AIDS and special responsibilities for responding to its impact. How education systems are currently being affected (or will likely be affected), how they respond to this impact (e.g., denying it and doing nothing or anticipating it and adapting themselves accordingly), and the extent to which schools and other education programs continue to be a part of the essential infrastructure of societies and communities under siege will be important determinants in how societies recover from the impact of HIV and AIDS on their economic, social and political development.

There are three issues in this regard:

1. the ways the education system must change in order effectively to deliver messages about the epidemic;
2. the impact of HIV/AIDS on the demand, supply, process, and quality of education; and
3. the longer-term response of the education system to such impact.

In the long run, the impact of HIV/AIDS on development should not be seen purely on a sectoral basis; i.e., a particular impact on health, on education, on transportation, etc. A more cross-sectoral analysis of impact must be done and more integrated responses developed. But for now, and for several reasons, a focus on education as a sector is useful:

1. Ministries of Education will likely be willing to develop appropriate and effective preventive AIDS education programs to the extent that they see that HIV/AIDS is not merely a health problem but rather a problem that may affect their daily, routine operations. This requires more awareness and understanding of the potential impact of HIV/AIDS on education.
2. Many education systems of the world, especially in those countries now seriously affected by AIDS, already face a host of challenges brought about by recession and debt, natural disaster and conflict, and a growing lack of public confidence in the quality and utility of schooling. The presence of HIV/AIDS will likely add to the challenge. Several questions should be raised in this regard. Are the educational problems related to AIDS different from problems caused by other factors? Are they different merely in quantity or degree (e.g., more drop-outs, fewer teachers)? Or, because of the nature of

the epidemic and of the risk groups concerned, are they also different in quality or kind (e.g., different causes and processes of dropping out, leading to different consequences, and requiring different solutions)? These are important issues for educational planners and managers and the donor agencies which support them. They are also issues which require considerably more investigation and analysis.

3. Different regions of the world, even different parts of a country, will likely experience different models of impact depending on a host of contextual factors: the pre-AIDS social, economic, and political context; the nature and rapidity of HIV transmission; cultural and religious beliefs and practices; the resilience of affected families and communities; the nature of the most feasible prevention methods. Before such models can be more clearly defined and predicted, however, the possible range of impact on education needs to be explored. Unfortunately, there has been relatively little research on the actual impact of HIV/AIDS on education and even only limited speculation on the potential range of impact. There is little known about what aspects of education, through what processes and mechanisms, might be affected by HIV/AIDS. Without such a «map» of possible kinds of impact, it will be difficult to determine which aspects of education, in a given society, are likely to be most (and most quickly) affected by HIV/AIDS. Once such a determination is made, it can be meshed with similar information from other sectors in order to gain a clearer picture of the social and economic impact of the epidemic; it can also be matched to the pressing educational concerns AIDS-related or not - of planners and managers in order better to develop programs to maintain, expand, and improve the system.

This paper - a mix of literature review, speculation, and recommendation - attempts to provide a beginning to such a map of possible impact. It is, for the moment, based largely on examples from sub-Saharan Africa. An important question for the future concerns whether the evidence being uncovered in this region of the world will be replicated as the epidemic expands elsewhere.

II

Impact on the Effectiveness of Education: The Delivery of Messages about AIDS

«Activities implemented now that focus on behaviour change and that are based on a realistic understanding of the changes required to reduce the spread of infection will generate enormous benefits in terms of avoidance of future costs....Low prevalence countries are in a position to act now with effective policies to prevent the spread of HIV and thus to avoid its economic, social, and psychological costs. . . it is crucial to act now, and not to wait until a point where these costs become unavoidable. The returns from effective HIV prevention activities in all countries, with high or low seroprevalence, will in most cases substantially exceed those from other investments « (Cohen n. d. :12, 27).

It is a truism that in the absence of vaccines, treatments, and cures, education leading to knowledge about the epidemic and to behaviour change is the only way to inhibit transmission of HIV. Even if biomedical solutions to AIDS are found, it is further true that, given the political economy of the world today, they will likely not be available for many years to the most affected populations of the world. But education systems - especially formal school systems, which remain, for good or bad, the primary inculcators of «modern» knowledge and attitudes - are very often unwilling and unable to address the issues, package and target the messages, and adopt the approaches needed to deliver effectively what needs to be known about AIDS. Thus, one necessary impact of HIV/AIDS on education systems will be pressures and attempts to make these systems: (1) more «open» in the topics they talk about, and (2) more able to discuss such topics in a more integrated fashion to more precisely-targeted groups through more flexible methods.

A. A more open system

«Behaviour change is a process which must essentially involve changes in community and sexual norms and values, the availability of voluntary and confidential counselling and testing services, and the creation of an environment which creates the possibility of open and honest discussion of sexuality and dying» (Reid 1992:2).

Unfortunately, although education systems, public and private, formal and non-formal, play an important role in influencing community norms and values - including sexual norms and values - they are notoriously unable (and perhaps even afraid) to support the discussion of topics such as drug abuse, sexuality and sex education, STDs and condoms, the role and status of women, or even the scientific facts of reproductive biology. This is usually true at the central level of the system, in such

areas as the development of personnel policies, curricula, textbooks, and teacher training programs. It is even truer at the school level. In decentralized education systems, schools and their teachers are often formally governed by the communities which surround them. Even in more centralized systems, they are informally influenced by these communities. In both cases, they are often reluctant to go against local norms, mores, and values, especially as these relate to sex and sexuality.

One impact of HIV/AIDS, therefore, is to push the education system, at all levels, into more open and frank discussion of these topics in the school and community, in the system itself, and in society at large. Among other things, this requires schools to have greater cultural sensitivity to, and intimacy with, the community.

B. A more integrated message in a more flexible system

This leads to the second change required of the system - that once it becomes more able and willing to deliver the message it needs to deliver, it also becomes more systematic in deciding what this message says and more flexible in deciding where, when, how, and by whom the message is delivered. In a world fraught with AIDS and with an enhanced risk of HIV infection, the education system can no longer deliver a strictly health-based message about AIDS in traditional ways - the secondary school biology teacher lecturing on the «science» of HIV.

Rather, as implied above, the message itself must be broader than this, embedded in an integrated message concerning healthy children and healthy schools and covering issues (depending on what is feasible in a given society) ranging from reproductive health, sexuality, sex education, STDs, and condoms, to discrimination and human rights, respect for women, and the information and life skills particularly needed by girls in the context of AIDS.

Such a message must be delivered to a wider range of targets - e.g., a wider age range of pupils, starting considerably earlier than usual within the school cycle. It must be delivered both in a language appropriate to the targeted audience and in a greater variety of places - both outside of school (in the media, through clubs) and in school, in subjects such as health education, family life education, population education, social studies, and life skills education. It must be taught more frankly and more creatively, in more interactive and experiential fashion (e.g., with simulations and games), accompanied by extra-curricular and community-based activities such as art and song contests, AIDS-free clubs, and popular theater and school plays such as those now being encouraged in Uganda (Katahoire 1993, Olong-Atwoki 1993). It must be communicated by appropriate teachers and by a greater variety of «teachers» - not only by those in the classroom but also by peers; by role models such as movie stars, singers, and athletes; and by respected members of the community (UNICEF 1993). The message must be developed by involving local religious and community leaders, parents and teacher organizations, other sectors. And the target audience

itself in the design and implementation of the program; for example, through materials writing workshops where members of the target groups help to write material appropriate to their peers (Hausermann 1990).

The system, in other words, must be willing to become more an advocate rather than a mere disseminator of knowledge, «selling» an appropriate message about AIDS more explicitly, more flexibly, and more effectively, especially to those (such as youth and young girls) at particular risk. Such an advocacy role cannot be developed overnight and such a message cannot be implemented by fiat - even if supported by a carefully designed program of preventive AIDS education. Ministries of Education, in other words, will likely need to change in quite fundamental ways in order to deliver an a genuinely effective message about the epidemic.

III

Impact of HIV/AIDS on Demand, Supply, and Process

«HIV is a direct threat to children....Generally, a child's vulnerability to HIV infection increases as the family's socioeconomic status decreases. Children not infected perinatally face the possibility of subsequent infection through breast milk if their mothers have HIV....All children are at risk of HIV through contaminated blood transfusions, unsterile skin-piercing instruments, and/or sexual activities - whether coercive or consensual. Few children, if any, have the control over their lives to avoid these risks» (Bailey 1992:668)

The most immediate and visible impact of HIV/AIDS has appeared already in many education systems of the world. Children infected at birth have not lived to enrol in school; some of the children enrolled have dropped out of school in order to earn money for their families and for the care of ill relatives; teachers have fallen ill and have died; and because of the presence of HIV in the classroom and the school, the process of teaching and learning itself has become more complicated and more difficult - and its quality has deteriorated. In some societies this impact is still barely noticeable, hidden by the normal processes of change and subsumed by the more obvious and immediately visible problems of poverty, drought, war, and other illnesses. In others, however, the impact is already quite clear and identifiable - an impact on the demand for education, on its supply, and on the nature and quality of teaching and learning.

A. Demand

A study in Rakai District in Uganda selected 20 pupils in the upper grades of three primary schools - 10 girls and 10 boys, 10 orphans and 10 not, randomly selected within these parameters. To quote from the results: «. . .half of the homes were headed by guardians, three...had fathers still alive, and the other seven were headed by widows...the AIDS epidemic was having a serious impact on the pupils. Nineteen of the pupils reported having been absent from school for periods ranging from five weeks to one and a half terms during the past one year. The most common responses given for absenteeism were lack of school fees and helping with the nursing of AIDS patients at home. . . all other household members including themselves were reallocated to caring for the patient or patients...It was reported by 15 of the pupils that their school life had been affected by the death of their parents or guardians. In addition to lack of school fees, pupils explained that they had to miss school sometimes because of no uniforms, books, pens, etc,...they often stayed at home for several days at a time to attend funerals of their relatives...due to the increasing number of

AIDS patients, pupils (especially girls) were required to take turns at home nursing the sick and helping out on the farm, especially with the decrease in farm labour in the homes. Most pupils indicated that they had to work on the farms in order to raise money for fees and to grow food to eat» (Katahoire 1993:6-68).

In Rakai District, as in other heavily affected regions of Africa, there are relatively fewer children than anticipated needing, wanting, able to afford, or able to complete their education. This is at least partly the result of HIV and AIDS. Fewer children will be born in a society where AIDS is present than if it were not; most children infected perinatally will develop AIDS and die before reaching school age; and many children may not enrol in school or may leave school because of the direct and indirect effects of AIDS. Thus, the demand by children for places in school, and by adults for opportunities for further education, is reduced.

In most cases, this reduction is relative to what it would be in the absence of AIDS; in other words, there will still be an increase, but a slower one, in school enrolment. Recent research in Zimbabwe, for example, has shown that other trends - younger children in the school-going cohort, the end of the drought, better learning environments and school management, school feeding schemes - were helping to increase attendance figures despite the presence of AIDS (Chakaza 1993). In some cases, however, depending on the prevailing rates of population and enrolment growth for the school-age cohort, the reduction in demand may be absolute, with decreasing numbers of children in school.

Such a decrease in demand is already evident in some areas. In the Rakai district of Uganda, total enrolment in three primary schools studied went from 1534 in 1989 to 950 in 1993. The primary school drop-out rate for the district in 1993 was 27%, considerably higher than the national rate of 15% per year (Katahoire 1993:25). In one secondary school in the district, enrolment decreased by almost 56% from 1989-1993, and in the district as a whole enrolment had decreased 12.7%. Drop-out rates at that level were 17.4% compared to the national figure of 10.1% (Katahoire 1993:80). It is clear that such a decline in enrolment and such an increase in drop-out rates in a district such as Rakai - affected, as it is, by many other problems of poverty, ill-health, and insecurity - cannot be entirely assigned to the presence of HIV/AIDS. But research in that district and elsewhere has been able to attribute some of these changes in demand to AIDS, through several different possible mechanisms:

1. The first, and perhaps most chilling, aspect of demand is that as a result of HIV and AIDS, there will be relatively **fewer children needing education**. First, fewer children will be born because of the early death of one or both parents (though there is some speculation that mothers may bear more children at an earlier age in anticipation of an early death from AIDS). A World Bank study in Tanzania estimates that in 2020, in the worst case scenario - because the school cohort will be relatively smaller when AIDS is present than when it is not - there will be 22% fewer children than anticipated enrolled in primary school and 14% fewer in secondary school (World Bank 1992:68). In addition, those children infected perinatally or from breast milk will die

before the age of entry into school (though there is now some evidence that up to 50% of them may reach school age - personal communication). This lessening of demand due to smaller numbers of children available for primary school will eventually be reflected at all levels of the system.

2. There may also be relatively **fewer children wanting education** - or fewer parents wanting their children to be educated. This will be partly due to a reluctance of parents to make the considerable investment which an education requires - estimated in Tanzania, for example, to be 26 million Tanzanian shillings for eight years of primary school, four years of secondary education, and three years of university education (World Bank 1992:70). «A death after age 18 wastes not only future production but also past education investment», leading to a kind of «secondary poverty» if the educated child needed for work and for the old-age security of parents dies (Bertozzi 1991:S48). The higher chance of the death of an educated child leads to a lower return of investment in education and therefore, perhaps, less willingness on the part of the family to sacrifice for such an education. As a result, «the uncertainties due to AIDS, the weak family economic base, and the limited number of primary and secondary education graduates finding way to further education and subsequently to formal employment have reduced the parents' ...beliefs that there was much to gain from school» (Katabaro 1993:92).

Another aspect of this disinterest in school might derive from the increased **randomness** of the education provided. Especially in systems already affected by recession, debt, poverty, and natural or man-made disasters, the added absenteeism of both teachers and pupils due to the presence of HIV and AIDS (their own illness or that of their families, funerals, etc.) will only make the education provided more sporadic and unsystematic. As one study put it, pupils lose «the subjects' sequence at school as his/her attendance is affected» (Katabaro 1993:3). Parents and children who realize this may see little point in continuing to pay for such an education.

A further aspect concerns the desire of parents to keep daughters out of what is perceived as the pernicious influence of Western-style education - an influence seen as increasing due to the presence both of AIDS in the school and of sex education in the curriculum. In Rakai district, some «parents reported that due to an increase in defilement and pregnancy among school girls, they were forced to withdraw their children from school completely since the schools had become a centre for spoiling young children» (Katahoire 1993: 89-90) .

3. A further major impact on demand results from **fewer children and their families able to afford an education**. As Ainsworth and Koda say:

«The factors affecting parents' demand for child schooling will include measures of the costs and benefits of schooling in both the current and future periods, as well as measures of the household's own budget constraints.

Specifically, these include:

- The intrinsic value that parents place on an 'education'
- The expected long-run benefits of schooling
- The current value of the child's time in productive activities inside and outside the home ...
- The other costs of schooling, including school fees, the costs of other schooling inputs and the availability of schools ...
- The quality of schooling available ...
- The household's current income and its ability to borrow for school expenses against future earnings» (1993:2).

Some of these factors relate to the discussion above on **wanting** an education; the desire for schooling may be low given a pessimistic view of the possible long-run benefits of education to children less likely to survive into productive adulthood. But most of these factors relate directly to **the ability to pay for education**. This includes a number of issues:

a. the direct loss of family income due to AIDS, from:

- **the illness and death of productive members of the family.** «Another pupil reported that her mother was having trouble paying for her to go to school because her mother's only source of income was through the sale of pawpaws from their garden. The money was used to buy soap, paraffin, salt, and so on. She mentioned that when she needed a pen or a book to take to school, it sometimes took her mother two to three days to buy it and during that time, she had to stay at home...So, with the kind of situation prevailing in the families in Lyantonde, most families seemed to have decided to postpone education not by choice but because of the prevailing circumstances. It is a choice between education and satisfying basic needs like food, clothes, etc.» (Katahoire 1993:94,96).

Considerable anecdotal information (see UNICEF 1991; Mukoyogo et al) describes how one- or two-parent orphans often are forced to leave school because of a loss of ability to pay fees and other costs (books, uniforms, etc.). Research in Uganda described how orphans came to «school in dirty and unironed school uniforms. The response given by most pupils when asked why they were dirty was that they were only allowed to wash their uniforms once a week because there was not enough soap to wash [them more often]» (Katahoire 1993:97). Although recent research in Tanzania indicates little relationship between orphanhood status and enrolment, perhaps due to the effective targeting of orphans by a myriad of public and private agencies, there is also evidence that orphans not receiving such assistance did have low enrolment rates (Ainsworth and Koda 1993; World Bank and the University of Dar es Salaam 1993);

- **the loss of income due to expenditures on treatment, care, and funeral costs.** One World Bank study showed that affected households in 1991 spent roughly \$60 per year (equivalent to rural per capita GDP) on such costs (World Bank 1993:20);

- b. **the expansion of extended families,** with many more children of school age in a family often led by less productive adults (grandparents) or teenage children. In such families, there may not be enough money to cover fees and other schooling costs of all the children; and
- c. **the loss of the traditional economic safety net** of extended family and community, a net stretched even further in many places because of migration, population pressure, infestation, drought, and war.

4. A further impact of AIDS on demand may be that **fewer children are able to complete their education.** As discussed above, much of this may be because of financial constraints, but there are several other factors which are also important in this regard. They include:

- a. **illness in school.** Even if some HIV-infected children and those ill with AIDS live to enter primary school, the increasingly debilitating episodes of HIV-related illness (perhaps up to 6 episodes prior to death) (World Bank 1992:xxvii) will likely make it difficult for them to complete schooling. Even otherwise healthy children in an AIDS-affected family may pay a price in terms of ill-health. «The household's attempt to cope with the death or ill-health of an adult may shift household labor away from health maintaining activities such as cleaning, collecting water, hygienic food preparation, and breast-feeding» (Feachem 1991, quoted in Panos Institute 1992:56).

Illness may also affect enrolment at higher levels of the system. Some of those students already sexually active at these levels (late primary school, secondary school, and tertiary education) will become infected and be unable to continue their education. One very preliminary study indicates that at least 25 % of university students in Kenya may be HIV positive with perhaps even higher rates (up to 50%) in several other African countries (Mburugu 1993); these rates will eventually result in student illness, disability, absenteeism, and the abandonment of school;

- b. **the need for children to work and to care for ill adults,** to substitute their labour for others in the family who are ill or have died - a mechanism of the household to cope with a major impact of the presence of AIDS. Such activities lead to absenteeism which may be regular (every market day) or seasonal (to help with planting, weeding, and harvesting). Preliminary results of a study in Tanzania showed that the death of an adult female in the previous 12 months is associated

with lower enrolment possibilities for both girls and boys, probably because of their substituting for female labour such as fetching firewood and collecting water (Ainsworth and Koda 1993);

- c. **trauma related to the illness and death of family members**, leading to difficulty in concentrating in class and in acquiring the skills and knowledge offered in school;

- d. **the ostracism, discrimination, and stigma** suffered by children in schools and classrooms due to infection or to membership in a family with HIV infection and AIDS deaths. As one ward officer in Rakai District said, «people look at AIDS victims with a negative eye. They treat them as promiscuous people and prostitutes. And these attitudes transcend to school pupils who use them to tease their fellow orphans» (Katabaro 1993:65). A Rakai primary 5 pupil «explained that some of her friends no longer played with her and instead pointed fingers at her saying that she might also have AIDS because her father died of AIDS. She said she felt bad and sometimes she cried. She could not share anything with other pupils and she no longer had money to buy her own snacks as before and her fellow pupils gave her nothing» (Katahoire 1993:69).

- e. **the lower motivation provided by an extended family**, perhaps caused both by the lower level of education possessed by guardian grandparents (or their lower level of awareness as to the possible usefulness of education) possessed by guardians and by the relative lack of attention, affection, and guidance provided by heads of households to orphans in such families. A 1989 study quoted by Katahoire showed that 43% of the guardians of orphans in Rakai District in Uganda were over 50 years old and 25% were over 60 years (1993:3). Further anecdotal information in Uganda indicates that «since orphans from grandparent families are not disciplined enough to accept and respect school authority, they were more likely to drop out of school» (Barnett and Blaikie 1992: 120). And research in Tanzania has shown that the odds of enrolment in school for children of the head of the household are almost twice as high as for other children in the household (Ainsworth and Koda 1993:11). It may also be that, as in one region of Uganda, orphans not only appear to die earlier and have higher mortality rates than other children but also «may be overworked by relatives or other guardians who consciously or unconsciously view them as a burden. Lack of supervision, proper caretaking, and school or vocational activities leads to poor socialization, alienation from guardians and the community, and possible delinquency. Guardians predict reduced opportunities for orphans, who remain uneducated, untrained, and unemployable...» (Hunter 1990:686);

- f. **the uprooting of people from family and community**, either because of the migration (often forced) of widows and their children to other parts of the country or because of complete orphanhood, which might lead to status as abandoned, exploited, and largely unschooled «street children»; and
- g. **the earlier marriage of girls**, and therefore their dropping out of school. This can occur for several reasons: because they are pushed out (or seek to escape) from overcrowded extended families; because men seek younger, and presumably uninfected, wives (Barnett and Blaikie 1992:45, African Development Bank Group 1993b); and because parents seek to preserve their daughters by arranging an early marriage to a «reliable» partner (van de Walle 1990).

This issue raises a crucial point: that the aggregated impact of HIV and AIDS on educational demand will likely affect the education of girls more than boys, thus affecting in turn the gains made in female education over the last decade. Girls will likely be taken out of school sooner than boys when fees cannot be paid, when ill or orphaned siblings and relatives need to be cared for, perhaps also when many kinds of productive labour must be done, and when the prospect of early marriage becomes possible.

- 5. There are two other areas where the presence of HIV/AIDS may have an impact on educational demand: early childhood education and higher education.
 - a. In the first case, **the demand for early childhood care and education may increase**. As more and more extended families are formed and as more and more traditional child-minders (older girls, grandparents) are needed for more productive labour, the need for some kind of care of young infants will grow. If the demand is not met, the care and health of these younger children may suffer.
 - b. In addition, the presence of HIV/AIDS may have **a special impact on higher education**, beyond the issues discussed above relating to the illness of university students, the lower rate of return to higher education, the increasing inability of students to pay for such education, and the need for university students to provide income for affected families. There may also be a lowering of demand for overseas study and fewer qualified candidates to fill the available slots. In the area of higher education for the military, for example, in «one central African country, 35 percent of officers applying for U.S. military training are HIV-seropositive, and in several countries commanders are finding it difficult to identify uninfected trainees» (Yeager and Miller 1993: 15).

There is also an increasing rejection of HIV-infected applicants by sponsoring agencies and host countries, from both fear of HIV transmission and concern for the costs of care in the receiving country. This may be accompanied by reluctance of the sending country to «waste» investment on infected students. One major provider of overseas fellowships has already noticed an increasing number of candidates from heavily affected countries rejected by its immigration office «for medical reasons» (presumably seropositivity), is making plans for encouraging longer lists of alternate candidates, and is concerned over how much funding can be provided in the country of study for medical treatment and/or the repatriation of students with AIDS (personal communication). Another has recommended that all students selected for study abroad be tested for HIV as part of the selection process and that those who test positive should not be allowed to begin their study (personal communication).

B. The Supply of Education

It is ironic at least - and gruesome as well - that the likely lowering of demand for education in areas heavily affected by HIV/AIDS may well be matched by a lessening of supply; fewer pupils in school, in other words, may not result in gross unemployment of teachers because the cadre of teachers may also be severely affected by HIV and AIDS. This is one of many ways in which supply may be affected, ranging from the obvious (the death of teachers, the closing of schools) to the less so (a reduction of budget for the education system as a whole and for individual schools).

1. Though little evidence is now-available concerning this issue, it seems likely that an absolute or relative decrease in the number of pupils - either through lower initial enrolment or through higher drop-out or non-continuation rates will lead to **a similar decrease in the number of classes and schools**. Fewer students in the system and lower demand for places in education programs, in other words, may lead to a smaller supply of facilities and places. Schools that have enrollments below a certain minimum may therefore be closed and their remaining pupils moved to other schools; more complex solutions, such as the introduction of multi-grade teaching, might tax both the finances and flexibility of affected school systems.

Another possible reason for smaller supply may be the lack of support and financing from the community and the government. Both will have other competing, non-educational demands for their resources, and therefore funds for maintaining current facilities and places, let alone building new ones, may be very limited.

2. Even if facilities continue to be available, **there may a lack of teachers and other personnel** (principals, supervisors and inspectors, higher level managers) to maintain previous levels of service, in terms of either quantity or quality. Among such people absenteeism from work will result from illness, attending funerals, and caring for the ill. A study about the impact of HIV/AIDS on African universities, for example, has very preliminary estimates that 14 % of the members of the academic staff of Kenyan universities may be infected, with perhaps twice that percentage in other countries in the region (Mburugu 1993). This, along with the estimate that, on the average, adults suffer approximately 17 HIV-related illnesses prior to death (World Bank 1992:xxvii), may seriously affect attendance and the regularity of teaching.

Teachers and other personnel who are infected may try to transfer to another area or, once visibly ill, «abscond» and disappear (Katahoire 1993). Others may also want to transfer out of heavily affected areas or refuse to be posted to them, thereby decreasing considerably the supply of education available. This apparently has been the case with health workers in at least one heavily affected district of Tanzania (World Bank and the University of Dar es Salaam 1993) but does not seem to be the case yet with teachers in the same district (World Bank 1992:69). In Uganda it has been reported that female teachers are reluctant to go to the Rakai District because once a potential husband finds that she has worked in that area, her chances of getting married would be reduced (Katahoire 1993:75). In areas where general poverty and AIDS have led to lower community contributions to school (and thus to the supplementing of teacher salaries), teachers may also move to seek higher income elsewhere.

And teachers, perhaps especially because of their somewhat elite and mobile status, will die. One primary school studied in Uganda reported 10 AIDS-related deaths in the last several years (Katahoire 1993:71). The World Bank study in Tanzania estimates that some 14,460 teachers will die by the year 2010 and 27,000 by 2020; the approximate cost of training replacement teachers will be US\$37.8 million (World Bank 1992:69) - an amount the Tanzanian government can ill afford. An estimate in Uganda speaks of 2200 teachers suffering or dying from AIDS between 1993 and 1996, with a cost of replacement of 1.1 billion Uganda shillings or US\$ 1 million (Along-Atwoki 1993).

At the level of managers and planners in the system, another kind of impact may occur. Assuming that the current generation of such individuals is fairly-well trained (better at least than the generation before), their illness, absenteeism, and death, and the resulting turnover of personnel, will signal a loss of considerable competence and erode the system's capacity to plan, manage, and implement educational policies and programs, both routine and innovative, that are meant to maintain and even increase the supply and quality of education. The impact will likely be especially significant in resource-poor environments.

3. As mentioned above, the supply of education will also be affected by **issues of finance**. Enrolment will be less but so will be the number of financial supporters of the system whose contributions are essential for such things as chalk, books, school maintenance, and supplementary allowances for teachers. Also, because the population as a whole will grow more slowly and will get younger, there may be less money available to maintain current levels of investment. Thus, the absolute investment in education may be less than anticipated. While the per capita investment may remain the same, there will likely not be any further qualitative improvement of the system (World Bank 1992:68). One reason is simply the amount of money that may need to be spent on health-related costs of personnel: treatment and care, insurance, death benefits, etc. Other costs, for training and then paying the replacements for affected personnel (some of whom may also still be on the payroll), may also be considerable as may be the expense of implementing an effective AIDS education program.

Another financial problem is that the Ministry of Education itself may be provided an ever smaller piece of the national budget. As demand increases for funds to sectors more clearly associated with the epidemic or more visibly affected by it (the Ministry of Health) or able to argue more strongly about potential impact (such as the Ministry of Defense), the Ministry of Education's slice of the total pie, which may already be reduced in size due to lower national productivity and product, may grow smaller.

C. The Process of Education

The «numbers» of education will clearly change as a result of HIV and AIDS. And its «tone» will also change. The social interactions and educational processes which make it work will inevitably be coloured in some way by the epidemic.

Those in class who are infected or ill, or even members of affected families - both teachers and pupils - may face discrimination, ostracism, and isolation. Teachers may face the suspension of social and health benefits and/or dismissal from the system. Pupils may face formal suspension by the system or be pressured to leave school «voluntarily». The supposedly free and open nature of school and classroom relationships may end up being governed by suspicion and fear. In itself, this will necessarily affect the teaching-learning process, an impact exacerbated by the greater randomness of teaching and learning due to higher rates of absenteeism of both teachers and pupils.

An added complication to the process of education is the frequency in some societies of sexual relations, voluntary or otherwise, among students and between teachers and students (see Caldwell et al 1989). One study of primary pupils in Uganda reported that 11 % of the female respondents said that they had been forced into having sex

(Bagarukayo et al n.d. :23). «Some male secondary teachers stated that sex is one of the fringe benefits of a poorly paid profession» (Schoepf 1988, quoted in Panos Institute 1992:16). Rape and the sexual abuse of girl students by male students and teachers is not uncommon; the latter is often in exchange for fees or various academic rewards (UNDP n.d.b) .

«A young girl who is forced to have a sugar daddy in order to go to school does not have any chance to decide when she wants safe sex. She has no control over the risks. In Kampala's slums, sixteen-year olds have prostituted themselves to get the money for school fees.... [In Mozambique] girls write to the newspapers' letters pages on what it costs in sex with the teacher or school head to get a good certificate in different subjects...a girl cannot be a virgin and at the same time get a good certificate in school» (Berman and Asbrink 1992).

Thus, while schools should be considered «sanctuaries», they are often instead the site of non-consensual sexual activities and HIV infection. This can lead to difficult relationships between the school and the community. «An example was given in one of the schools that male teachers from that school were being accused by members of the surrounding community of spoiling their girls and spreading AIDS amongst school girls to cause a conflict between the school teachers and parents. As a result, two of the teachers and the head teacher of the school were dismissed....This created a climate of mistrust between the community and the school» (Katahoire 1993:93).

In some areas this has led to more stringent laws against sexual abuse and school regulations that prohibit or discourage out-of-school contact between teachers and students. Once such rules are put in place, as has occurred in schools studied in both Uganda and Zimbabwe, a more formal, but also a stronger relationship within schools and between the school and the community may be created. As one report from Zimbabwe indicates, «teachers now visit the community freely without fear of being mugged. Both teachers and household heads attributed this improved relationship to the HIV/AIDS pandemic. In fact, one headmaster noted that the disease has brought the community and school closer as they now had a common enemy: HIV/AIDS» (Chakaza 1993 :72) .

D. The quality and quantity of education

In summary, the net result of these various kinds of impact on the demand, supply, and process of education may be a loss both of financial and human resources (and thus the quantity of education) and of efficiency and effectiveness (and thus the quality of education). Relatively fewer pupils, students, and adult learners may seek an education; those that do, may be faced with fewer available places, a more «random» sequence of teaching and learning, and fewer teachers. And those teacher that remain in the system may be less experienced and less well-trained and supervised by fewer inspectors. A study of one secondary school in Rakai District of

Uganda showed that while in 1989 81 % of its teachers (out of 22) were qualified with Grade II teaching certificates, by 1993 the figure was 36% (out of 11). A much larger percent were also temporary rather than permanent employees, and whereas in 1989 16 out of 22 had six years or more of experience, in 1993 only 1 out of 11 had such experience (Katahoire 1993:75-6). The «work place» of the school itself may also be affected by the psychological effects of having infection, illness, and death in its midst. In general, individual schools, especially in heavily affected areas, and the system as a whole may have fewer resources from families, communities, and government to maintain, improve, and expand their services.

IV

Impact on the Education System: How It Responds to HIV/AIDS

«Pressure is . . . building on educational services. Schools are competing for dwindling public funds, while Hiv is slowly eroding their private financial base. As increasing numbers of families have their structure undermined by the impact of HIV, more and more children will leave school - either because their parent or guardian can no longer afford the fees or because they must stay at home to work. Girls are the most likely to leave school first. What money is spent is likely to go to educate male children. Once a family begins to rely on a child's labor, it is highly unlikely he or she will ever return to school « (Bailey 1992. 670).

More generally and over the longer-term, the education system itself will necessarily be affected as it tries to respond to, and cope with, the more immediate, more micro-level pressures of HIV/AIDS on educational demand, supply, processes, and quality. This will include the system's need to broaden its educational and social objectives, make more flexible its operations and strategies, alter the kinds of knowledge and skills it transmits, and develop more systematic plans, flexible mechanisms, and farsighted personnel for managing and financing the system. Such a response should be framed with whatever national AIDS prevention and control program exists but should lead to a sectoral/ministerial action plan which includes clear internal personnel policies in regard to HIV/AIDS, strategies for the prevention of further HIV transmission within and through the education sector, and systematic school health policies, curriculum guidelines, and teacher training programs;

A. The clients and roles of the system

1. «Special» clients and needs

A «Ugandan study which traced 460 5-15-year-olds, children of 150 people who had died of AIDS, found high levels of deprivation. Seventy per cent had neither mother nor father. More than one in three had been abandoned or were in institutions; almost two in three had left school as a result of lack of fees; more than two in three were 'virtually' naked and malnourished; one in 30 had been sexually abused; and two in five showed signs of psychological disorder» (Panos Institute 1992:58).

As the profile of the education system's clients and their needs changes due to the presence of HIV/AIDS, so, too, must its objectives. The special clients - not necessarily completely new in nature, but in larger numbers - are several (and not mutually exclusive). They include:

- a. non-enrollees - children who have never entered school, some because of infection and illness, others for economic reasons;
- b. frequently absent students - children whose education is even more random than usual;
- c. drop-outs - children who have left school before attaining at least some minimum of literacy, numeracy, and «life skills»;
- d. working children and street children - those not in school, some working full-time, and many living outside of any home environment;
- e. orphans - of one or both parents, living either in an extended or adopted family, in an orphanage, or in the streets, and likely facing special problems of ill-health, psychological trauma, and social stigma; and
- f. girls - who likely make up more than their proper percentage of the above categories, with particular needs in terms of knowledge and skills.

2. New roles and programs for the school

In addition to facing a different set of clients, the school and its personnel may also need to take on new roles. Some of these will appear within the school itself. Even at the primary level, as more and more of its pupils drop out of school or are unable to continue to a higher level, schools may need to pay greater attention, earlier in the curriculum or outside of class hours, to workrelated technical and vocational training, including home economics, agriculture, art and crafts, and woodwork - changes already appearing in primary schools recently studied in the Rakai District of Uganda (Katahoire 1993). This may include school projects more directly focused on income generation both for the school itself, more and more strapped for funds, and for the community.

School staff may also find themselves devoting much more time and energy to counselling - a skill few teachers, especially at the primary level, now possess. Part of counselling relates to the psychological trauma arising from the disease. Another part involves advising school children about how to stay in school. In one Ugandan project focusing on school girls, the advice is simple: «We tell them they should look after themselves as individuals and important people. They should not look at boys as their future. They should stick to their education and forget about sex» (quoted in Barnett and Blaikie 1992: 164).

One particularly interesting peer program in this area is the Anti-AIDS Clubs found in various countries, most notably in Zambia. Such clubs, established largely in secondary schools, encourage youth to sign pledges to avoid sex before marriage, to spread information about AIDS to peers and family members, and to accept and actively care for those affected (Panos 1989). Such concerns may extend to the school trying consciously to become a sanctuary, a safe haven, both from the fear and stigma associated with AIDS and from the risk of HIV transmission.

As the social service institution which, in most countries, penetrates farthest down the system and farthest out to the periphery, the school may also find itself with an expanded role as a multi-purpose development and welfare agency. Its responsibilities may go beyond the usual educational ones to include, for example, the enumeration of widows and orphans, the management of welfare (food, shelter, health care) for them and for guardians of orphans, even the delivery of whatever medicines and treatment might be available. The school may also need to become more an advocate of sex education, through PTAs and local leaders, trying to convince the community (e.g., with information about mortality rates and pregnancy rates) about its usefulness.

The issue of orphans is a particularly complex one. A variety of programs for orphans in heavily affected parts of the world have now been introduced. Though they vary in detail, they generally provide funding either to the foster families or relatives who have adopted orphans or directly to the orphans - for example, for school fees and uniforms. These programs can also include income-generating projects and organized day-care centres or nurseries so that older orphans need not spend all of their time caring for younger relatives. One review of survivor assistance programs in the Kagera region of Tanzania described 11 different activities operating in this region (World Bank and the University of Dar es Salaam 1993).

Such programs, seemingly so useful and necessary in the face of AIDS, are, in fact, quite controversial (World Bank 1992, Bailey 1992, Ainsworth and Rwegarulira 1992). This arises from several factors:

- ethical issues, because of the focusing of so much attention and resources on a population which may not, in fact, be the neediest in a given area, either economically or in terms of low enrolment rates in school;
- stigmatization, because of the association of selected individuals with HIV infection, illness, and death;
- dependency, because of how families and communities with many orphans may learn to wait for outside assistance rather than attempting to handle the problem themselves; and
- ineffectiveness, because of the inability of school fees and uniforms to make much difference if the needs of orphans and their guardians are desperate.

What appears important in these kinds of programs is to have both a clear targeting strategy, preferably focused not only on AIDS survivors but also on needy families generally and on the schools which serve them, and a clearer method to assess program effectiveness. Also important is to work through local organizations and attempt to involve the entire community in the resulting programs (including income generation for both affected families and the community as a whole, assistance to guardians, vocational training, family counselling) rather than to develop isolated institutions or discrete packages focused on small parts of the population. The role of the school in such programs is obviously critical.

B. Operations of the system

The problem is that school systems, especially in quite heavily affected areas, may have a lack of financial and human resources - and energy and creativity - to develop the innovative programs needed to address the new clients and their needs and the new roles of the school which the presence of AIDS may require. Large bureaucracies such as ministries of education (and perhaps **especially** ministries of education) often find it difficult to innovate in the best of times due to the sheer size of the education system, logistical problems, and the nature of bureaucratic culture; innovating at a time of financial crisis and in the context of a challenge as complex as HIV/AIDS will be even more difficult. Management of the education system at such a time will require particular flexibility and imagination in order to develop and operate programs designed to cope with the impact of the epidemic.

Thus, in order to enable schools to respond efficiently and effectively to different clients and their needs and to assume new roles, the education system itself must change. It must learn to operate in different ways, to develop specific strategies for the new challenges it faces, and, in general, to become more non-formal and flexible in nature. Such «non-formalizing» of the formal system requires an ability to adapt usually uniform, standard aspects of the system to a great variety of contexts and needs. These aspects include:

1. school and classroom size - how to adapt to relatively smaller intakes and lower enrolment of pupils and still maintain viable schools and classrooms, especially at a time when teachers may also be in short supply. Multi-grade classrooms and alternate-year intakes of new pupils may help in this regard;
2. entry age of pupils - how to provide education for children with a greater range of age, perhaps sitting in the same classroom;
3. school calendars and timetables - how to adjust these to the particular needs of local families and communities affected by HIV/AIDS so that pupils may, for example, take time off in order to care for ill relatives or assist their families in economic activities (e.g., one day off a week to take part in local markets), or so that the frequency of funerals does not disrupt the school schedule by assigning one teacher to represent the school at local funerals;

4. venue of schooling - how to provide education, especially at the secondary level, closer to where children must be. «Special strategies are needed for children who never attend school and are, thus, even more at risk. They can be approached through youth groups, in the streets, or in the fields or factories where they work - anywhere where contact is possible and trust can be established» (Bailey 1992:674);
5. and closer links between the formal and non-formal systems - so that children can more easily move out of school and into more flexible education programs and then back to school as conditions permit.

C. Content and methods of education

In more concrete ways, the education system must also adapt to the impact of HIV and AIDS by altering the content - knowledge, skills, and values - of what it teaches and the methods it uses for teaching.

As described earlier in this paper, an education system in a society affected by AIDS must be able to teach **knowledge** of quite a different kind from that traditionally taught in most countries of the world. This includes information concerning:

1. the body and its functions. «HIV prevention requires that children learn about their bodies before puberty begins. Girls, especially, need to understand the relationship between sex and power, to see what forces drive adult behavior, to strengthen self-esteem, and to be assured of their right to make sexual decisions» (Bailey 1992:674);
2. reproductive health and sexually transmitted diseases;
3. the transmission of HIV, the prevention of infection, and the nature of the disease - in other words, how to stay HIV-negative;
4. the care and treatment of people with AIDS; and
5. human rights issues related to HIV and AIDS.

Also, for medical students higher up in the system - doctors, dentists, nurses, and other health care workers - more information concerning AIDS (its epidemiology, transmission, care, and treatment) and the social and cultural aspects of health must also be provided.

New **skills** may also need to be taught. Very practical skills related to work and income generation are especially important as are life skills related to behavioural choices, resistance to harmful and negative behaviour, and the negotiation of relations with others. These, too, are especially important to girls as those most often at a disadvantage in terms of personal security, economic independence, and relations with those who have power over them. «If the prevention needs of women are ultimately to be met, efforts must be made to reduce their socio-economic vulnerability. Women need support to attain the necessary economic independence, through basic education, other training, and the creation of employment opportunities without which they

remain vulnerable to discrimination» (African Development Bank Group 1993c:3). Greater access to information and more training in income generating skills may help redress some of this imbalance.

New **attitudes and values** related both to responsible, low-risk sexual behaviour and to human rights issues and tolerance need also to be taught. Attitudes concerning respect for girls and women and more equal partnerships between, and moral standards for, men and women must also be encouraged. These can include issues related to the treatment of widows, land and inheritance rights of women, and female circumcision. There is a need as well to develop both «creative ways to challenge stereotypes and education programmes which change expectations of the ways women and men, girls and boys, behave towards one another» (Hausermann 1990:76).

Given the new issues that need to be dealt with in any discussion of HIV and AIDS and given the greater number of client types to be reached and the variety of their needs, teachers and other personnel of the education system who are in the front line will need particularly effective pre-service and in-service training programs. These will need to focus on necessary knowledge about the epidemic, skills in dealing with the new clients of the system, and attitudes of tolerance and compassion.

Such knowledge, skills, and attitudes cannot easily be taught using traditional methods of training. The teachers themselves, some of whom may be considerably younger and less experienced than the cadre of ill and dead teachers they are replacing, must be trained in these new issues. This includes first gaining the confidence and skills which might make it easier to talk about the often difficult topics relating to AIDS. One study in Uganda, for example, showed that in one district 69 % of primary school teachers felt little confidence in teaching about AIDS (Bagarukayo et al n.d.:7). Relatively inexperienced teachers may be helped in this regard through better teacher guides, more in-service support and training, and more senior and experienced «mentors» (World Bank 1992:69).

D. Planning and Management of the System

«[E]ven if all new transmission were stopped tomorrow, there would still be a staggering number of AIDS cases, especially in Africa, with potentially profound implications for human resource development and economic growth. Thus, policymakers must also concentrate on designing measures to mitigate the consequences of the epidemic, which will involve taking stock of the potential magnitude of the epidemic as it affects various economic sectors. Since AIDS is no longer solely a health issue, ministries across the board should be involved in both planning interventions to mitigate the consequences...and disseminating preventive messages....Local communities and nongovernmental organizations (NGOs) must also be enlisted» (Armstrong 1991:17).

«...assumptions about the continuity and stability of the decision environment rests on a bounded rationality and a view of the universe of crisis events which assumes that the general features of hazard impact are understood, coded, and therefore manageable. However, in the case of the AIDS epidemic, the bounded rationality derived from past experience of drought, famine, war, and social and economic disasters...does not provide adequate guidance for coping mechanisms either for people in small rural communities or for officials responsible for government policy. New processes of understanding and of responding to a new type of hazard are required» (Barnett and Blaikie 1992:40).

Putting together the sector's response to HIV/AIDS - ensuring that the needs of new clients are addressed, that schools are able to take on new and necessary roles, that the system can be adequately «non-formalized», and that new content and methods can be internalized by the system and the teachers within it - will necessarily have an impact on the planning and management of the system as a whole. Two things are important in this regard:

1. that the Ministry of Education understands that AIDS is more than merely a health problem, to be solved through preventive education, and that it is affecting, or will affect, its daily work; and
2. that the Ministry learns to plan with greater foresight, not for the routine but for the unexpected. «Policy decisions must be made which anticipate future needs that may not yet be visible» (UNDP n.d.a). Thus, the Ministry of Education will need to develop its own particular AIDS policies and action plans related to preventing HIV transmission, to adapting the system to the impact of HIV and AIDS on the quantity and quality of education, and to coping with the consequences of those within the system who are infected and ill. This should include decisions concerning both administrative and professional policies related to HIV/AIDS and the extent of resources directed to the epidemic, especially in its early stages.

A very sincere, high-level official of the Ministry of Education in one heavily affected country once expressed the Ministry's great concern for «helping the Ministry of Health solve its AIDS problem» (personal communication, author's emphasis). Assuming this statement is characteristic of many officials, the first change in regards to the managing of the education system in the context of AIDS will be for such officials to see HIV and AIDS as **their** problem as well, particularly as it relates to the planning, management, and financing of the system.

1. System planning

We can assume: (1) that HIV/AIDS will have considerable impact on some education systems, (2) that such impact will likely be quite different across different areas of the country and may nowhere, at least early in the epidemic, be easily and clearly visible (especially from the perspective of the central ministry), and (3) that this impact may arise unexpectedly and in unexpected ways. Under such assumptions, the planning mechanisms of the Ministry of Education will need to be able not only to understand what kind of impact is occurring in the system but also to anticipate and, perhaps more rapidly than usual, plan the responses required to such impact. This may affect several different planning operations:

- a. **data collection.** Ministry officials interviewed in affected countries in eastern Africa often had a vague idea of the presence of some of the above problems, but little understanding of their magnitude. «All of the officials interviewed (in one country) indicated that they were not aware of any changes in interactions among teachers, among pupils, and between pupils and teachers. Neither were they aware of any discrimination in regard to teachers and pupils affected by AIDS. They pointed out that the district offices had not kept them informed as to whether these changes were there or not» (Katahoire 1993 :108) . In order to overcome such a lack of awareness, Ministry management information systems will need to identify what kinds of data are required in order to take stock of, understand, and plan for the impact of HIV/AIDS. This might include data on AIDS survivors, especially orphans (by age, grade level, and gender); the absenteeism of both pupils and teachers (and the reasons for such absences); the transfer of teachers; classroom or school closures; and community contributions to schools. Ministries will then need to collect these data if they are not already available, either through routine and regular questionnaires or through special surveys.

Planners should also understand more clearly the kinds of coping mechanisms already put in place by affected schools and communities. In education, as it has been said in relation to agriculture, the «people's resourcefulness in the fact of a disaster such as AIDS has probably been underestimated. Without empirical data on how households actually cope in the circumstances, it is difficult to know what the outcome...will be. Governments, and most of the planning information on which they rely, tend to overestimate the resources of poor rural producers but to underestimate their resourcefulness» (Barnett and Blaikie 1992:131) .

- b. **data analysis and projections.** The data, once collected, will need to be analyzed in different ways (e.g., desegregated to lower levels of the system, if this is not already done) in order to catch variations in impact across different parts of the country. They will also need to be analyzed more rapidly than usual. In many countries, routine statistics and the projections from them are analyzed and published only after considerable delay. Some of the impact of AIDS, however - such as an increase in drop-out rates and in requests for teacher transfers - may require more rapid action and therefore more rapid

analysis in order to determine, for example, when and where to close classrooms and schools (or where to try to keep them open, or what to replace them with), when and how to replace academic streams with technical and vocational courses, and which areas of the country are suffering the most from teacher shortages.

- c. **human resources planning.** A particularly important task of educational planners, often shared with other ministries (such as labour), regards human resource planning - the assessment of how many people trained to various levels of education for various kinds of jobs will be required in a particular firm, sector, or country. Such planning was once considered a rather exact science but now is questioned because of the frequent difficulty of predicting developments in sectors and economies buffeted by the unexpected. But it still has a role to play in the gross determination of human resource needs.

The impact of HIV/AIDS will affect this determination in several ways. First, it will mean that individual firms, especially those whose employees represent particularly high-risk groups (e.g., in trucking, construction, mining, and urban elite service sectors such as banking), will need to be better able to predict absences, illnesses, and deaths in order to retrain remaining staff and recruit and train new staff.

Secondly, the planners of different sectors (health, agriculture, transport, defense) will need to be able to predict the human resource losses within those sectors. Education must be included here because it, too, will need to assess both: (1) how many teachers, principals, and higher-level managers - at what levels of training and in what regions of the country - will likely need to be replaced, and (2) what kind of new or additional pre-service and/or in-service training programs, in which training institutions, will need to be put in place.

But education as a sector may be doubly affected in terms of human resource planning, both because of the need to ensure an adequate complement of personnel in its own system and because of the role it often plays in training for other sectors. To the extent that the education system supports various kinds of technical and vocational training institutions - which often provide graduates both for more specialized industries and firms and for the semi-skilled informal labour market - it will need to be able to adapt the quantity and nature of such training to the impact of AIDS on other sectors.

In all of these various areas of planning, two issues are of particular importance. First, because «AIDS can be described as a **long wave** disaster...that is a long time in the making and in which the major effects have already begun to occur long before the magnitude of the crisis is recognized and any response is possible» (Barnett and Blaikie 1992:56), there is the need for more **anticipatory planning** - the ability to look in data not only for the likely but also for the merely possible and even the unexpected - in order to see **what is in the process of happening or what might happen.**

Second, based on the assumptions that there will be considerable differences in the magnitude and type of AIDS impact in different parts of a country and that people closer to the reality of such impact will understand it better, there is a need for more **participatory planning** - the ability (and willingness) of Ministry personnel to encourage the involvement of more «partners» in planning and to provide greater autonomy to lower levels of the system and to other actors in regard to the development of AIDS action programs. This can be done through the greater decentralization and devolution of planning processes down to lower levels of the system (the district, sub-district, school, teachers) and out to other actors (NGOs, parent groups, community associations). As was concluded by the World Consultation of Teachers' International Organizations on Education for AIDS Prevention, organized by four major teacher unions in collaboration with UNESCO, WHO and ILO at UNESCO Headquarters in April 1990: «active involvement of teachers through their representative organizations in the development, implementation, and evaluation of AIDS-related educational policies and activities will ensure appropriate programme conception and intervention» (IFFTU et al 1990a:6).

2. System management

Two areas of seemingly routine system management are especially important in relation to the likely impact of HIV and AIDS: the management of personnel and the management of finances.

a. Personnel management

«At the level of the firm, measures need to be taken to confront the consequence of those already infected. The costs of caring for sick employees and the negative impact they have on output must at least be monitored and appropriately planned for in terms of projected employee benefits and output. For larger firms, an explicit company policy on HIV/AIDS will assist employers make such projections. Company policy can also help to reduce discrimination especially before employees develop full-blown AIDS. Many still have important contributions to make and can benefit from a supportive work environment» (World Bank 1991b:41).

Given the likely impact of HIV/AIDS on the personnel of the education system (both its direct impact through infection, illness, and death and its indirect impact through the intrusion of the epidemic into the act of teaching and learning) and the nature of the epidemic itself with its overtones of sexual behaviour, immorality, intolerance, and fear, the management of personnel within ministries of education may become particularly difficult. This is probably more the case in education than in other sectors; truck drivers and construction workers do not generally have the links with the community, nor the responsibility for children, which teachers have.

There are four areas of personnel management which are especially important. The first relates to **the management of human rights issues**. At the World Consultation of International Teachers' Organizations held at UNESCO in April 1990 «delegates took note of the persistent occurrences of discrimination and social exclusion of HIV infected persons. With respect to teachers, such discrimination in the school setting frequently leads to isolation by colleagues and authorities and often to dismissal and suspension of social and health benefits...[Such a scenario] should be considered totally unacceptable and counterproductive to progress in the domain of AIDS education and prevention» (IFFTU et al 1990b: 3) .

Teacher organizations and international fora of various kinds have strongly supported policies against job discrimination and compulsory testing for HIV infection and for the confidentiality of all medical histories and treatment. Unless there are clear, well-publicized, and fully-supported policies about these issues in a Ministry of Education, they may tend to get neglected and lead to human rights abuses.

The second relates to **the management of teachers infected with HIV or ill with AIDS**. Here there are questions concerning access to counselling, the right to transfer to areas where medical care is available, alternative working arrangements for personnel unable to work at their original job, and reintegration into work following episodes of illness.

The third relates to the **continued availability of social security and other benefits**. «HIV-infected teachers and other school staff members should not be discriminated against; they should have access to standard social security benefits and occupationally related benefits» (IFFTU et al 1990a:5).

The fourth relates to **the management of the system for the prevention of HIV transmission**, both to protect the ministry's investment in its human resources and to make the system a sanctuary against the epidemic. This involves not only pre-service and in-service education for personnel about AIDS but also policies designed to discourage high-risk behaviour. The latter might include both stronger sanctions and sexual abuse laws against personnel who force sex upon colleagues and students and policies to assign married teachers to posts where they may live with, or close to, their spouses.

b. **Financial management**

The management of budgets, raising of funds, and expenditure of resources may also be considerably complicated by the presence of AIDS. This is true at all levels of the system, from the school to the central ministry.

At the **school and community level**, as extended families grow larger, less income is earned, and ever fewer resources must be spent to support more people and to pay for expenses related to illness and death, less money will

be contributed by the community to the school. At the **system level**, less money may be available to the education system both absolutely (due to a shrinkage of the national product and government budget) and relatively (due to stronger claims made on the budget from other sectors).

More and more of this smaller budget may be needed for AIDS-related costs such as health care for those infected, death benefits, and the recruitment and training of their replacements - and, perhaps, as incentives to ensure teachers remain in heavily affected areas. At the same time, more money might be required for the various new clients and new roles which the education system may be pushed to adopt - scholarships for orphans, training of teachers in guidance and counselling, new curricula in family life education, new schoolbased programs in income generation. And the unequal distribution of the impact of the epidemic may require the often difficult re-allocation of funds across regions. Thus, the management of finances in a context both of less money and of a proliferation of tasks and roles will take special attention (UNDP and African Development Bank 1993).

c. Participation in management

«When Mugaga, an AIDS orphan, could no longer afford his school fees, a local carpenter hired him as an apprentice. Today, Mugaga runs the shop, makes wooden doors, and has two older boys as apprentices. In nearby villages, other surviving adults have set up day-care centres for orphans, started tailoring and beekeeping programs to generate income for widows, and helped them plant fruit and vegetable gardens to feed their children» (Stackhouse 1993:A6).

«Access to education and skills training is considered of prime importance in giving the orphans a decent start. The Kyabakuza AIDS Orphans Care group has registered 188 orphans of different ages. For the youngest ones they run a nursery. The group has managed to raise enough money to hire a teacher, so some of the children can receive primary education free of charge...the Kabagabo Technical Skills Development Centre offers training in masonry, carpentry, tool making and tailoring. The aim is to provide the orphans with employable skills to secure their future well-being» (Soveri 1993:7).

If there is any «positive» impact of HIV and AIDS on development, it may lie in the increase importance which will likely need to be given to the process of decentralization and community participation in the planning and management of the response to the epidemic. In general, in a system in crisis, the inclusion of more partners in the management and implementation of the system, and the strengthening of these partnerships, especially at the level of greatest impact, may help hold it together. In this case, the necessary additional partners are those affected by AIDS, their families, teachers, and the community at large. Thus, for example:

«The active involvement of teachers through their representative organizations in planning, implementing, and evaluating (in cooperation with health, communication, and social science experts) school health promotion programmes to deal with issues of AIDS and other sexually transmitted diseases (STD) is a necessity if knowledge is to be increased and risk behaviours reduced among young people. In addition, their involvement is critical in initiatives to combat ignorance and to prevent discrimination against both their colleagues and students who are HIV-infected» (IFFTU et al 1990a: 1).

Likewise, in some communities, parents and community groups, often in the absence of government action, have taken the initiative in raising funds and developing programs in response to AIDS. Such «initiative helps to achieve sustainability of programs; to instill awareness of the problem at stake; to identify target groups of beneficiaries; and to translate felt needs» (World Bank and University of Dar-es-Salaam 1993:69).

«A striking example of community care and coping is provided by nine small Christian communities in Kanwokya, a low-income suburb of Kampala, Uganda. Community members provide the first link between people with AIDS and the community, informing mobile AIDS teams of patients too ill to move, and accompanying mobile teams to provide emotional and spiritual support...Members help people with AIDS by cooking food, preparing fields for cultivation, fetching firewood or water, cleaning homes and washing soiled linen...Wherever possible, the community places orphans with relatives and provides whatever material support they can»(AfDB Group 1993c:12).

3. Inter-ministerial relations

A final necessary response of the Ministry of Education concerns its relationship with other sectors and ministries, at different levels of the system. At both the macro- and micro-levels, one issue is particularly important: the need for greater collaboration among different sectors, especially with health, labour, and social welfare. The expertise of the Ministry of Health may be needed, for example, in the design and delivery of educational materials about the disease, its transmission, and its treatment. Closer links may be needed with the Ministry of Labour in the collection and analysis of data related to human resource needs and development. And collaboration with ministries concerned with social welfare programs of various types may be thrust upon the Ministry of Education if its schools need to take on a larger role as a community development agency.

At the macro-level, another issue concerns the likely arguments among ministries over budget allocations and the need for the Minister of Education to be able to convince cabinet colleagues, faced with immediate problems such as skyrocketing health care costs and increasing seropositivity rates of army recruits, that continued and even increased investment in longer-term human resource development is essential (World Bank 1992:xxxviii).

Implications of the Impact of HIV/AIDS for Training, Research, and Donor Programming

A. Training

The planners and managers of education systems in societies seriously affected by HIV/AIDS cannot work in traditional ways. Even in countries relatively unaffected (yet) by the epidemic, or where the impact is largely restricted to particular areas or population groups, the language, concerns, and tasks of educators must change. There are new messages to be taught, new clients to be served, new roles to play. This is even more the case in heavily affected nations of the world - which are unfortunately usually those whose education systems are already stretched to their financial, infrastructural, and creative limits in simply trying to achieve their primary task of teaching basic knowledge and skills.

In most of these societies, the training of educational planners and managers must also change. The magnitude of the actual and potential impact of HIV/AIDS on educational demand, supply, processes, and quality, and the complexity of the ways in which such impact relates to larger social, economic, cultural, and political issues mean that the usual training of planners and managers designed to prepare them for the routine and the expected will not suffice. Rather, new knowledge, skills, and attitudes must be transmitted. These include:

1. greater knowledge about the delicate, difficult issues of sexual behaviour, reproductive health, and HIV transmission and about how these can more frankly be discussed in the education system;
2. greater awareness about the importance of human rights issues relating to confidentiality, discrimination, and gender equality;
3. a clearer understanding of how HIV and AIDS have affected, or will affect, important areas of education such as the education of girls and women, teacher management, finance, governance, and higher education;
4. greater knowledge about the range of policy and program options available to respond to the impact of HIV/AIDS on the system;
5. anticipatory planning skills - the ability to identify, collect, analyze, and speculate from available data and trends to future conditions and policy priorities; and
6. participatory planning and management skills - the willingness and ability to collaborate with a larger number of partners, at various levels of the system, in order better to confront the challenges presented by the epidemic.

B. Research

The nature of this epidemic also has implications for research. More research on the impact of HIV and AIDS - both on the development process in general and specifically on the sector of education - will be needed. This is true both in heavily affected societies, to determine the nature and models of impact that already exist and the factors which led to such impact, and in those societies not yet (apparently) seriously affected, to anticipate what might be the nature and magnitude of future impact.

1. At the micro-level, research must be done both on what this impact actually looks like - what actually happens in schools, communities, and families affected by HIV and AIDS in terms of educational demand, supply, processes, and quality - and on the ways in which affected parties react to, and cope with, such impact. What different decisions about education are being made? What factors in a given family, school, or community lead either to its collapse or to its coping with the impact? What actual coping mechanisms have been developed to deal with such impact? What conditions are required in order to ensure that such mechanisms succeed? Both richer anecdotal descriptions of individual areas, institutions, and programs and more systematic research, both qualitative and quantitative, on affected communities must be done.
2. At the macro-level, further research must be done on likely future scenarios for education systems related to the projected demand for different levels and kinds of education; the supply and quality of teachers, facilities, and materials; and the costs both of the epidemic to the system and of the system's response to the impact of the epidemic.

C. Programming of donors

In the light of such impact, donors must also make their response. Most generally, donors must consider their own policies in regard to HIV and AIDS, both internal to their agencies and in relation to their contact with systems and individuals affected by the epidemic. In other words, what kinds of policies should be established in relation to AIDS in the donor work-place and in regard to such issues as the testing of candidates for donor-funded scholarships in the donor country?

But there are other issues as well:

1. What kinds of questions about the impact of the epidemic should be more systematically asked of a Ministry with which further funding is being negotiated; for example:
 - a. What is known about the extent of the epidemic and its impact on education and on development? How aware is the central Ministry of the effects in individual schools and communities?

- b. What is currently being done within the Ministry itself to respond to this impact? Does the Ministry have its own AIDS action plan, its own prevention and control programs, its own set of non-discriminatory employment policies?
 - c. To what extent have the needs of especially affected groups been identified by the Ministry and addressed in new policies and programs?
 - d. To what extent is the Ministry attempting to promote planning and management processes both more anticipatory and participatory in nature?
2. How might future donor activities in a given country have an impact on HIV/AIDS? This involves two issues:
- a. **the possible impact of donor-funded programs on HIV transmission and the care and treatment of those affected by AIDS.** In other sectors, for example, such impact is quite clear: better roads speed (and localize) the transmission of the virus; structural adjustment programs might reduce funding available for health care (or, alternatively, could increase funding for primary health care). In education, for example, might locally-based or distance teacher training programs (where teachers remain in their communities) reduce transmission compared to programs which take trainees away from their families to larger metropolitan centres?
 - b. **the possible impact of HIV/AIDS on the process and success of donor programs.** How sustainable, for example, are large-scale training programs in specialized areas such as science teaching or vocational education if (say) 30 % of those trained die within five years of their training? How effective are special efforts to encourage girls to continue to secondary school (e.g., more female teachers as role models) if a host of AIDS-related factors are pushing or pulling them out of school?

In other words, how (if at all) should donors and recipients undertake an «AIDS impact assessment» in regard future donor funding?

- 3. How has the presence of the epidemic affected the extent of external resources required by the Ministry of Education? In theory, the loss of skilled human resources from illness and death associated with AIDS should lead to even greater investment by the nation in education and training. But, unfortunately, this is often likely not to be the case. If national resources available for education diminish due to a more slowly growing economy and an increase in the share of resources going to other sectors such as health and defense, the demands on donors for additional funding in education may increase. To what extent can such demands be met?
- 4. And do donors (or the NGOs they may be able to support) have a particular comparative advantage in funding and helping to organize special programs in response to HIV and AIDS, such as counselling, survivor assistance, and the training and restraining of replacement personnel?

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