The Impact of HIV/AIDS on Schooling in Zambia

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Abstract: Zambia is currently experiencing one of the worst HIV/AIDS epidemics in the world, one result being that between one-third and one-quarter of the children aged below 15 have lost one or both parents. The high rate of orphanhood and the demographic, economic and social effects of HIV/AIDS work synergistically to affect education in various ways. Demand is reduced. Supply and the resource base are jeopardised. A large section of the potential clientele for schooling is forced into activities that are not compatible with regular school attendance. Major adjustments are required in the process, content, role and organisation of education as traditionally provided. The planning and management of the system are placed under new strains. Donor support has to be re-thought. The presentation brings forward some evidence from Zambia on the HIV/AIDS impact on teacher supply and morale, on school participation, and on curriculum content. The limited availability of systematic information suggests the need for more focused research. The paper proposes a taxonomy for the guidance of such research. Noting that behavioural change is the only way currently available for dealing on a large scale with the pandemic, and that the ones most likely to be HIV-free are those in the primary and lower secondary school age-groups, the paper stresses the urgent need to make school systems in seriously affected countries proactive in communicating an unremitting series of messages and information about HIV/AIDS.

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Introduction

Zambia is experiencing one of the worst HIV/AIDS epidemics in the world. HIV infection is currently estimated at almost 20% in persons above age 15. This means that one in five of those Zambians now over the age of 15 will probably die at a young age from this disease, mostly over the next 3-10 years (MOH, 1997). The infection rate is assumed to have peaked because the rising number of deaths has begun to balance the number of new infections. Nevertheless, some 500 new infections occur each day (Hunter & Fall, 1998, p.15). Soroprevalence rates are at their highest in the urban areas of the Copperbelt, Lusaka and Central Provinces, but there is no part of the country in which the reported rates are low. The epidemic has left no corner of Zambia untouched (MOH, 1997).

Following inexorably in the wake of the epidemic is the growth in the number of orphans. Estimates vary as to just how many they are. However, it is not the differences

that matter but the fact that the number is extremely large. The *Children on the Brink* report estimated that in 2000 orphans would number 1.66 million, of whom some 750,000 would be maternal and double orphans and 910,000 would be paternal orphans (Hunter & Williamson 1997, Figure A-4). With 34.3% of its children aged below 15 having lost a mother or father or both, a percentage that is projected to rise steadily to over 38% in 2010, Zambian children rank as the most orphaned in the 23 countries included in the study. Arising largely from this situation, it is estimated that more than 7% of Zambia's 1,905,000 households are without any adult member, but are headed by children, that is, by a boy or a girl aged 14 or less (GRZ-UNICEF 1997, p. 2). Moreover, life expectancy, which stood at 54 years in the not too distant past, has plummeted to 37 and is projected to decline in the coming decade to 30.3.

This tragic scenario is already making its impact felt in the formal education system. Not enough field work has been done to support a scientific assessment of the extent of the impact, but various indicators show that it is considerable. Two groups of special concern are teachers and pupils. Respectively, these illustrate the impacts of HIV/AIDS on the supply and demand aspects of education.

Impact on Teachers and Teaching

There are at least four dimensions to the impact that HIV/AIDS is already having on teachers and teaching in Zambia: teacher mortality, teacher productivity, teacher costs, and teacher stress.

Application at district level of HIV adult prevalence estimates suggests that, out of approximately 31,600 primary school teachers in 1996/97, some 6,300 (20 per cent) were HIV-positive. This is in keeping with the international finding of a positive correlation between educational status and HIV-risk (Deheneffe, Caraël & Noumbissi, 1998), recent evidence from Malawi that the rate of infection among school teachers is higher than 30 per cent (UNICEF, 1999), and earlier Zambian evidence that teachers are a very high risk group (Fylkesnes, Brunborg & Msiska, 1994). The infections are now resulting in deaths. Ministry of Education data show that 680 teachers died in 1996, 624 in 1997, and 1,300 in the first ten months of 1998. This means that the number of teacher deaths rose from less than two per day in 1996 to more than four per day in 1998. The number of teachers who died in 1998 was more than one-fifth of the number estimated to be HIV-positive. While one cannot attribute all of these deaths to AIDS, the 1998 teacher deaths represented a mortality rate of 39 per thousand, which is about 70% higher than the mortality rate of 23 per thousand for the 15-49 year old age group in the general population (MOH, 1997). For the education system, the 1998 deaths were equivalent to the loss of about two-thirds of the annual output of newly trained teachers from all training institutions combined.

Ministry of Education officials also observe that teacher posting has become more difficult. The records show that trained teachers are concentrated in urban areas while rural schools are denied their full and fair complement. What the records do not show is that illness, much of it AIDS-related, is a major contributing factor to this situation. There has been a steady increase in the number of chronically sick teachers who, on medical grounds, must be posted near to hospitals, properly staffed clinics or medical centres. This means that they must live in or near towns, but not in remote rural areas. The urban posting of these teachers does little, of course, for the work in the urban schools, since many are too ill to assume a full teaching load or to guarantee some continuity in their teaching. Reports from school authorities and from communities speak of loss of teaching time due to the prolonged illness of teachers or to their erratic

attendance (Milimo, 1998). Communities see this as one of the factors contributing to a decline in the quality of education (and consequently, to a reduction in their preparedness to commit the time of their children to school). With an expected 12-14 AIDS-related sickness episodes occurring before the terminal illness, the contribution of many teachers to what goes on in schools becomes progressively more episodic until in the end it peters away.

Apart from distributional issues, this wasting loss of serving teachers has grave financial repercussions on the education system. As part of its structural adjustment programme, Zambia is seeking, through a Public Sector Reform Programme, to reduce the size of its public sector. Teachers constitute the largest single group in this sector. But since they cannot be severed from service while they are ill, the system must needs carry a currently unknown but large number of non-productive persons. In addition to the high costs this implies, the picture is so blurred that rational planning for teacher numbers is extremely difficult. In addition, the mortality of so many young qualified teachers represents a great national loss in terms of their earlier training at public expense, to say nothing of the experience they will have gathered in the years when they were teaching.

Teachers are also deeply affected personally by the incidence of HIV/AIDS among their relatives and colleagues. Though this is a major cause of concern for them, it is an area in which they receive little support. Thus, it has been found that less than one-third of a sample of teachers who had experienced AIDS sickness or death among their relatives had talked about the problem with friends or relatives (UNICEF, 1996). The remainder felt either unable or unwilling to do so. The unresolved HIV-related stresses which teachers experience, in the classroom and at home, need to be acknowledged in initial and ongoing teacher training. Recognising the magnitude of this personal problem, the Zambian Ministry of Education proposes to introduce HIV/AIDS counselling for teachers and other education personnel and to integrate HIIV/AIDS awareness into its inservice training programmes (MOE, 1997, pp. 76-77).

Impact on Pupils and School Enrolments

At the macro-level, AIDS will have the long-term effect of there being fewer pupils to educate. Zambia's total population is projected to reach 11.5 million in 2010, having lost 4.2 million persons to AIDS (Hunter & Williamson, 1997, Figure A-1). This loss will be because of large increases in adult and child mortality, a lower fertility rate, and some reduction in births because of the premature death of women in their child-bearing years. The possibility exists that infant and child mortality rates, already very high, may increase dramatically - the infant rate doubling and the child rate tripling (ibid., p. 9). This demographic development will reduce the number of pupils of primary school age. Projections are that the population aged 15 and below will reach 5.4 million in 2010, instead of the 6.8 it might have attained if the incidence of AIDS had been less widespread (Hunter & Fall, 1998, p.14; CSO 1995). Ironically, with 750,000 to one million fewer than expected children of primary school age, Zambia's task of achieving universal primary education will become easier, but this gain will have been bought at very high human and other costs.

Since the early 1990s Zambia has been experiencing stagnation, and at times even decline, in primary school enrolments. This has been happening at a time when the number of school-aged children is increasing, when the number of children not attending school is already very large, and when school facilities are not being used to the full. This decline in school participation rates is attributed mostly to poverty and to parental disillusion with the low quality of education which the schools provide. Although no rigorous studies have been conducted, it seems likely that some of the decline in demand is also due to AIDS, and to the impact this is having on poverty, on levels of employment, and on the quality of school provision.

Some evidence comes from micro-studies into the situation of orphans. A study in the Copperbelt - one of the regions in Zambia most badly affected by AIDS - found that 44% of the children of school-going age were not attending school, but with proportionately more orphans (53.6%) than non-orphans (42.4%) not attending (Rossi & Reijer 1995). All of these figures depart significantly from the Copperbelt's overall primary school attendance rate of 79%. Something similar was found in a rural area in the Eastern Province, where only 38% of the orphaned children of school-going age were attending school, compared with the provincial average of 51% (Katete Hospital, 1994). More recently it was found that 32 per cent of urban and 68 per cent of rural orphans were not enrolled in school. These percentages are considerably higher than those for non-orphans who were not enrolled - 25% of urban non-orphans and 48 per cent of rural non-orphans (UNICEF, 1999).

Two features stand out from these findings. One is the very low overall level of school participation. The studies found that the principal reason for this was inability to pay school costs. For many of the affected children this inability was AIDS-related. It occurred because, with AIDS in the family, either there was no longer a source of regular income or whatever income was coming in was diverted to palliative care of the sick person. This is confirmed by interviews with Lusaka teachers, every one of whom had had in their classes pupils whose parents died of AIDS. All reported that, following the death of the parent, the pupils stopped attending because of school fees and the costs of school requisites (UNICEF, 1996). The second feature is the extensive difference in attendance rates between orphans and non-orphans. Given the close link in these particular studies between AIDS and orphanhood, it seems clear that one major impact of AIDS on pupils of school-going age is to reduce the likelihood of their school attendance.

Further evidence comes from a study of two high density areas in Lusaka, which found that of 1,359 children, aged 18 and below, 67% had lost one or both parents (Webb, 1996). Some 7% of these had dropped out of school in the twelve months prior to the study. The same year, the drop-out rate for urban primary schools in Lusaka was 1.7%. Thus, orphans, mostly those from families affected by AIDS, appear to be at greater risk than non-orphans of dropping out of school.

The adverse impact of HIV/AIDS on demand for education also surfaces in a report from a remote northern area where the community has been so extensively ravaged by AIDS that it has migrated to other areas, in the hope of leaving the fatal disease behind. This has led to uncertainty about the continued need for one school, as well as to some increase in the pressure on the schools in the places where the affected families have settled.

To sum up, HIV/AIDS affects the demand for education because

- there will be fewer children to educate;
- fewer children will be able to afford the costs of education;
- for social and economic reasons, more children will drop out of school without completing the normal primary school cycle.

It also seems likely that fewer children will want to be educated, partly because of the traumas they have suffered through the experience of AIDS in their families, partly because they have to work to generate income for family support or are needed to care either for the sick or for young siblings. Heart and hope have gone out of many of them. They see little value in education as a way of surmounting their problems. They are so overwhelmed by these that they have lost interest in getting a formal school education.

Impacts on the Content, Process and Role of Education

HIV/AIDS has been documented as having other impacts on education in Zambia. One is in the area of curriculum. The most obvious instance is the inclusion of

AIDS education with a view to bringing about behaviour change. The Zambian Ministry of Education recognises the importance of education and the formation of attitudes in relation to HIV/AIDS. Consequently its policy is to ensure close attention to this matter through health education programmes, the development of life-skills, sexuality and personal relationship programmes, and Anti-AIDS clubs in schools (MOE, 1996, p.77). The Anti-AIDS clubs which have been established in a large number of schools across the country, and which have their own bi-monthly newspaper, are spearheading an awareness movement which is gradually reaching out to every pupil in the country. Given its current embattled AIDS situation, Zambia considers this development as being of crucial importance. Consequently, it is with some surprise that one notes the relatively low-key presentation of this approach in the World Bank's policy research report *Confronting AIDS.* Although the report does acknowledge that "HIV/AIDS education is likely to be a good investment in preventing HIV" (World Bank, 1997, p. 149), it goes to greater lengths in dealing with risky sexual and injecting behaviour and with prevention programmes for sub-populations that are at greatest risk. While it is important to deal with these areas, it is regrettable that the report does not pay comparable attention to the one window of hope that exists for the worst-affected countries, the children in primary school who have not yet been infected. Damage limitation appears to attract greater attention than damage prevention.

AIDS has also affected the process of education in Zambia through its impact on social interactions arising from the presence of HIV-infected individuals in schools. Some rural communities have accused teachers of being responsible for the introduction and spread of HIV/AIDS (Milimo, 1998). This has led to strained teacher-community relationships, in some instances undermining the likelihood of adequate community participation in school affairs. At a different level, because they are believed to be HIV-free, young girls run an increased risk of sexual harassment on their way to and from school. This has led to isolated cases of such girls being withdrawn from school, and to pressure from parents for schools closer to their homes.

There is also evidence that the role of the school is changing because of HIV/AIDS. Traditionally, there were very high expectations that schools would educate the whole child across the broad spectrum of the intellectual, social, moral, aesthetic, cultural, physical and spiritual domains. In practice, most schools find this impossible. Instead, they concentrate on only a few of these areas, and give the greatest emphasis in their curriculum to intellectual development (Beare, Caldwell & Millikan, 1989). But the intrusion of HIV/AIDS necessitates psychological support for the children from affected families. Teachers find that increasingly they are being called upon to counsel their pupils and help them deal with the stresses arising from HIV/AIDS in their families. Studies on orphans have identified the need to help children express their feelings in appropriate ways and the need for those working with children to be able to adopt suitable communication and counselling roles (Colling & Sims, 1996). In Zambia, programmes in counselling are being established in the universities and some teacher training institutions. The need is being increasingly perceived for teachers who can stand by children who are affected by HIV/AIDS as they strive to come to terms with their psychological turmoil. In other words, in addition to their traditional concern with intellectual development, schools are slowly recognising the need to play a more pro-active role in pupil psychological support and counselling.

Conceptual Framework[1]

When a person is infected with HIV, the immune system breaks down, leaving the individual exposed to the hazards of a multitude of opportunistic illnesses. In the absence of preventive measures, the education system in a country that is as seriously HIV-infected as Zambia is also in danger of breaking down and being prey to myriad

[1] This section owes much to Shaeffer (1994)

opportunistic problems. Some of these impacts and problems have been documented above. What remains is to present a conceptual framework for considering the multitudinous potential impacts of HIV/AIDS on the education system of a severely affected country. It is only when civil and public society get a grip on the fact that these are real possibilities, indeed that some are already in place, that appropriate action can be taken to control the situation. The framework that follows also takes into account areas where little more than anecdotal information is currently available. Great potential exists for descriptive and analytic investigations in these and the many other areas which are enumerated.

1. **HIV/AIDS affects the demand for education because of**
   - fewer children to educate;
   - fewer children wanting to be educated;
   - fewer children able to afford education;
   - fewer children able to complete their schooling.

2. **HIV/AIDS affects the supply of education because of**
   - the loss through mortality of trained teachers;
   - the reduced productivity of sick teachers;
   - the reduction in the system's ability to match supply with demand because of the loss, through mortality or sickness, of education officers, inspectors, finance officers, building officers, planning officers, management personnel;
   - the closure of classes or schools because of population decline in catchment areas and the consequent decline in enrolments,

3. **HIV/AIDS affects the availability of resources for education because of**
   - the reduced availability of private resources, owing to AIDS-related reductions in family incomes and/or the diversion of family resources to medical care;
   - reduced public funds for the system, owing to the AIDS-related decline in national income and pre-emptive allocations to health and AIDS-related interventions;
   - the funds that are tied down by salaries for sick but inactive teachers;
   - reduced community ability to contribute labour for school developments because of AIDS-related debilitation and/or increasing claims on time and work capacity because of loss of active community members.

4. **HIV/AIDS affects the potential clientele for education because of**
   - the rapid growth in the number of orphans;
   - the massive strain which the orphanhood problem is placing on the extended family and the public welfare services;
   - the need for children who are heading households, orphans, the poor, girls, and street children to undertake income-generating activities.

5. **HIV/AIDS affects the process of education because of**
   - the new social interactions that arise from the presence of AIDS-affected individuals in schools;

- community views of teachers as those who have brought the sickness into their midst;
- the erratic school attendance of pupils from AIDS-affected families;
- the erratic teaching activities of teachers, who are personally infected, or whose immediate families are infected, by the disease;
- the increased risk that young girls experience of sexual harassment because they are regarded as 'safe' and free from HIV infection.

6. **HIV/AIDS affects the content of education because of**
   - the need to incorporate HIV/AIDS education into the curriculum, with a view to imparting the knowledge, attitudes and skills that may help to promote safer sexual behaviour;
   - the need to develop life-skills which equip pupils for positive social behaviour and for coping with negative social pressures;
   - the need for earlier inclusion in the curriculum of work-related training and skills, so as to prepare those compelled to leave school early (because of orphanhood or other reasons) to care for themselves, their siblings, their families.

7. HIV/AIDS affects the role of education because of
   - new counselling roles that teachers must adopt;
   - the need for a new image of the school as a centre for the dissemination of messages about HIV/AIDS to its own pupils and staff, to the entire education community, and to the community it serves;
   - the need for the school to be envisaged as a multi-purpose development and welfare institution, delivering more than formal school education as traditionally understood.

8. HIV/AIDS affects the organisation of schools because of the need to
   - adopt a flexible timetable or calendar that will be more responsive to the income-generating burdens that many pupils must shoulder;
   - provide for schools that are closer to children's homes;
   - examine assumptions about schooling, such as the age at which children should commence, the desirability of making boarding provision for girls, the advisability of bringing together large numbers of young people in relatively high-risk circumstances.

9. HIV/AIDS affects the planning and management of the education system because of
   - the imperative of managing the system for the prevention of HIV transmission;
   - the loss through mortality and sickness of various education officials charged with responsibility for planning, implementing, and managing policies, programmes and projects;
   - the need for all capacity-building and human resource planning to take account of (a) potential personnel losses, (b) developing new approaches, knowledge, skills and attitudes that will enable the system to cope with the epidemic's impacts and will monitor how it is doing so, and (c) establishing intra-sectoral epidemic-related information systems;
   - the need for more accountable and cost-effective financial management at all levels in response to reduced national, community and private resources for education;
   - the need for sensitive care in dealing with personnel and the human rights issues of AIDS-infected employees and their dependants.

10. HIV/AIDS affects donor support for education because of

- donors' concern to build capacity and promote a self-sustaining system, both of which are inhibited by the widespread incidence of HIV/AIDS;
- donors' concern that the effectiveness of their inputs are not cancelled by the impacts of the epidemic;
- donor uncertainty about supporting extended training abroad for persons from heavily infected countries.

Conclusion

Many of these effects have already been observed in Zambia. It is expected that more focused qualitative and quantitative studies will detect even more of them. It is also expected that almost all of these effects will manifest themselves in other countries that are severely affected by HIV/AIDS. In addition, it seems likely that, *mutatis mutandis,* many of the effects will also occur in other social sectors.

Notwithstanding the limited nature of the investigations already undertaken, there can be little doubt about the existence of these multiple adverse impacts of HIV/AIDS on education and schooling. The crucial question is what to do about them. In the absence of curative drugs and prophylactic vaccines, the only way currently available for dealing on a large scale with HIV/AIDS is through behavioural change, with information being translated into behaviours that promote a healthy state of mind, body and spirit (Siame, 1998). In heavily infected countries, the ones most likely to be HIV free are those in the 5-14 age group. These are the real window of hope for the future. They are also the target population for primary and junior secondary education. The school system is the only social structure with the potential to reach out to all of these young people. Hence there is critical and urgent need to ensure that school systems in seriously affected countries are proactive in communicating an unremitting series of messages and information about HIV/AIDS.

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HIV/AIDS has potential to

- affect the demand for education
- affect the supply of education
- affect the availability of resources for education
- affect the potential clientele for education
- affect the process of education
- affect the content of education
- affect the role of education
- affect the organisation of schools
- affect the planning and management of the education system
- affect donor support for education