

## VI. IMPACT ON EDUCATION

Like every other sector of the social and economic life of an AIDS-afflicted country, the education sector has felt the impact of the HIV/AIDS epidemic. An increasing number of countries in sub-Saharan Africa face a shortage of teachers. Deaths and illnesses have also affected education sector administrators, planning and finance officials. At the same time, children in AIDS-affected households are delaying school entry or dropping out of school. Hence, the HIV/AIDS epidemic is seriously threatening the achievement of the goals of the Dakar Framework for Action, adopted by the international community at the World Education Forum, held in Dakar, Senegal in April 2000, and of the Millennium Development Goals.

Education is a major engine of economic and social development. The expansion of educational systems became a high priority for many Governments in the decades following the Second World War, as evidence accumulated that investment in human capital, particularly health and education, had important economic benefits for the whole society. Between 1970 and 2000, the percentage of the population aged 15 and over who had completed primary school increased from 23 to 43 per cent in 73 developing countries (as estimated by Barro and Lee, 2000). Improvement in sub-Saharan African countries, however, lagged behind that of most other regions. In 1970, only 16 per cent of the adult population in 22 sub-Saharan African countries had completed primary school or more, and that figure had increased to only 28 per cent by 2000. Most of the improvement occurred in the 1970s. In the 1980s, poorly performing economies resulted in no overall gain in enrolments during that decade and even led to declines in some countries. Although there is substantial variation among sub-Saharan countries, progress in educational attainment for the region was slow even before the HIV/AIDS epidemic became established. With the added burdens and costs of the disease, the task of maintaining the educational system and making it accessible to all children is daunting.

Chapter VI examines the impact of the HIV/AIDS epidemic on the supply of education, the demand for education and the quality of education. The first section proposes a conceptual framework for the impact of HIV/AIDS on education, mapping the processes through which the education sector is affected. It is followed by an examination of the available evidence of the impact of the AIDS epidemic on education. The final section presents the conclusions.

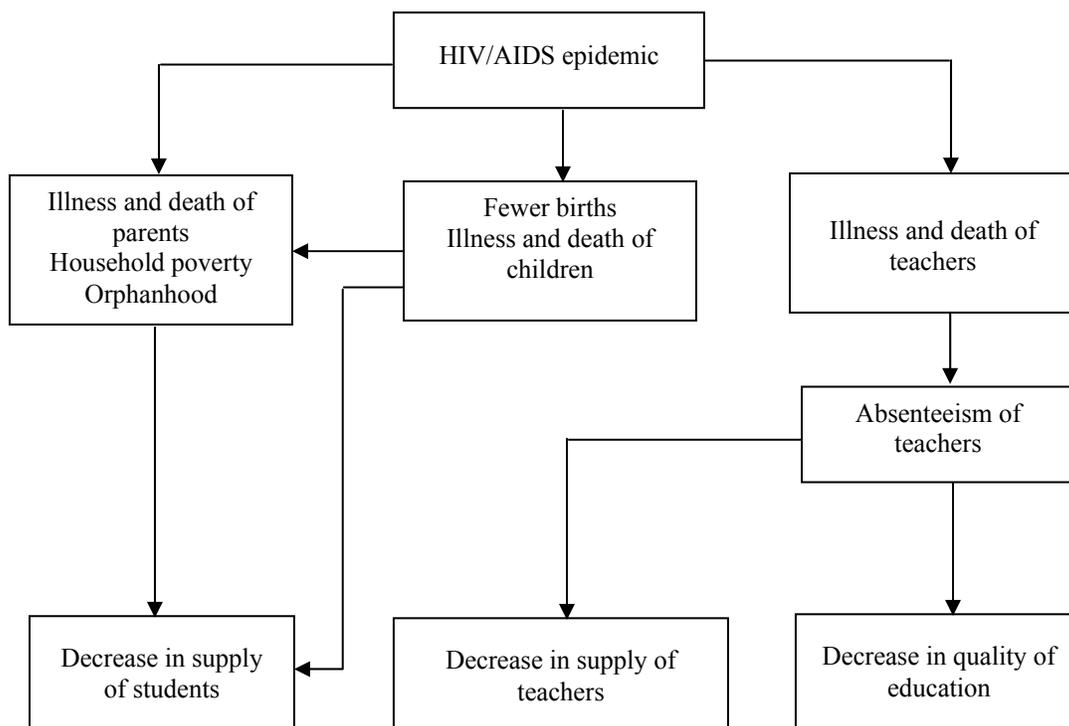
### A. CONCEPTUAL FRAMEWORK FOR THE IMPACT OF HIV/AIDS ON EDUCATION

The HIV/AIDS epidemic may affect the education sector in at least three ways (figure 11): the supply of education through the availability of teachers, the demand for education (total number of children and the number enrolled and staying in school) and the quality of education (supply of experienced teachers). In sum, as a result of HIV/AIDS, fewer children are able to enrol in school and receive the basic skills and knowledge they need, fewer teachers are available to teach them and the quality of the education they receive is consequently diminished.

The absenteeism of teachers from school and ultimately their deaths affect the teaching resources available. Teachers who are infected with the HIV virus may try to transfer to another area or, once visibly ill, may disappear (Katahoire, 1993). Other teachers may also want to transfer out of heavily affected areas or may refuse to be posted to them, thus decreasing the number of teachers available in the region.

The deaths of children or parents will affect school enrolment, as a smaller number of children will be entering the school system and more children will be dropping out of school to take care of sick parents or siblings after the death of their parents. The number of children entering the school system will diminish if AIDS orphans do not enrol, delay enrolling or leave school in large numbers.

**Figure 11. Conceptual framework for the impact of the HIV/AIDS epidemic on education**



Source: United Nations, Department of Economic and Social Affairs, Population Division.

Some school-aged children may be infected with HIV/AIDS or suffer from AIDS-related illnesses. Such illnesses may cause them to be absent from school frequently, and they may interfere with their ability to learn and their academic performance. Children who acquire the HIV virus from their mothers during childbirth or breastfeeding usually do not survive long enough to enrol in school.

Equally important is the possible decrease in the quality of education, as teachers may be absent from school or too ill to provide the same quality of schooling they were providing before becoming sick. The quality of education may also decrease if less money is invested in the education sector as countries with a high prevalence of HIV/AIDS struggle to fight the epidemic.

The HIV/AIDS epidemic may also affect education resources owing to the costs that it imposes on the system. In order to compensate for

the loss of teachers, schools may hire temporary staff at the same time that the costs of employee benefits, recruitment and training are rising. In some countries, employee benefits may be paid to teachers until they die. Hence, the education system may continue to pay a large number of non-working persons in addition to covering the financial costs of replacements.

Over time, as teachers fall victim to AIDS and the costs of training new staff mount, the school system may rely more and more on less qualified teachers with less experience, resulting in a decrease in the quality of education.

Another possible impact of HIV/AIDS on the quality of education is its effect on students as they witness the absenteeism and the deaths of their teachers. In remote rural areas, where teachers provide a role model, school children may view the disappearance of their teachers as their own destiny if they pursue schooling. Even teach-

ers who are not infected with the HIV virus may be deeply affected personally by the prevalence of HIV/AIDS among their relatives and colleagues.

#### B. AVAILABLE EVIDENCE ON THE IMPACT OF HIV/AIDS ON EDUCATION

Many studies have been conducted to estimate and predict the impact of AIDS on education. Studies undertaken under the auspices of the United Nations Children's Fund reached the conclusion that as a result of AIDS, many countries will be facing a shortage of teachers in the near future. For instance, a study conducted in Zambia showed that of about 1.7 million primary school students, approximately 56,000 lost a teacher to AIDS in 1999. The study also found that the number of teacher deaths in 1998 was equivalent to the loss of about two thirds of the annual output of newly trained teachers (UNICEF, 2000).

The same UNICEF study found that 860,000 children lost a teacher to AIDS in sub-Saharan Africa in 1999. The largest numbers of children affected were in South Africa, Kenya, Zimbabwe and Nigeria (table 17). In Malawi, 10 per cent of education personnel in urban areas were estimated to have died of AIDS by 1997, and by 2005 it is projected that this figure will increase to 40 per cent (World Bank, 1998).

In the South African province of KwaZulu Natal, where HIV/AIDS prevalence is the highest in the country, a random sample of 100 schools found that the mortality of teachers rose significantly, from 406 in 1997 to 609 in 2001 (Badcock-Walters and others, 2003).

The HIV/AIDS epidemic will have a negative impact on the learning process in school through increased absenteeism. An empirical research study found that each infected teacher will lose, on average, six months of professional time before developing full-blown AIDS and an additional 12 months after developing full blown-AIDS (Tarfica, 2000).

Evidence is available on the impact of HIV/AIDS on school enrolment. For example, focus group discussions with AIDS-affected households found that those households were un-

able to meet the costs of children's education as a result of AIDS. Furthermore, an analysis of 49 case studies of families affected by AIDS throughout Zambia found that 56 of 215 children had been forced to leave school (Haworth and others, 1991).

In the Rakai district of Uganda, a study found that total enrolments in three primary schools went from 1,534 in 1989 to 950 in 1993, a 40 per cent drop in a four-year period. The primary school dropout rate for the district was 27 per cent in 1993 compared to 15 per cent at the national level (Katahoire, 1993). Another study conducted in Uganda found that of about 5 million school students, 81,000 were estimated to have lost a teacher to AIDS in 1999 (UNICEF, 2000). In the same country, a household survey in the capital city of Kampala found that 47 per cent of households with orphans did not have enough money to send children to school, compared with 10 per cent in non-orphan households (Muller and Abba, 1990).

The impact of the HIV/AIDS epidemic on the number of school-aged children is dramatic. In Zambia, projections yield a population aged 15 and below at 5.8 million by 2010, 1.4 million less than it would have been in the absence of AIDS (Hunter and Fall, 1998). Ironically, according to the authors, "with between 750,000 and one million fewer than expected children of primary school age, Zambia's goal of achieving universal primary education would become easier to reach". Unfortunately, the goal will be achieved at very high human and other costs (Kelly, 2000). It is important to point out that in most countries affected by the HIV/AIDS epidemic, the school-age population is projected to continue to grow in spite of HIV/AIDS. Nevertheless, in a few countries, some projections show that the population aged 15 years old and under in 2010 will be smaller than it was in 2000.

A number of studies have documented the income effect of AIDS on school attendance. For example, a World Bank study reported that in the United Republic of Tanzania, school attendance by students 15-20 years old was cut in half in households that lost an adult female (World Bank, 1995). Another study from Zimbabwe found that

TABLE 17. NUMBER OF PRIMARY SCHOOLCHILDREN WHO LOST A TEACHER TO AIDS, 1999

<i>Country</i>	<i>Number of children who lost their teachers to AIDS</i>
South Africa .....	100 000
Kenya .....	95 000
Zimbabwe.....	86 000
Nigeria.....	85 000
Uganda .....	81 000
Zambia .....	56 000
Malawi .....	52 000
Ethiopia.....	51 000
United Republic of Tanzania.....	49 000
Democratic Republic of Congo .....	27 000

*Source: UNICEF, The Progress of Nations, 2000 (New York, 2000).*

31 per cent of the households interviewed had a child who was not attending school following the death of the mother (Mutangadura, 2000). That result was confirmed by another study in Zambia, which found that 55 per cent of AIDS-affected households in the Mansa district were unable to meet the costs of their children's education owing to AIDS (Kasawa, 1993).

Several studies have examined the difference in school enrolments between children who lost one or both parents and children whose parents were alive (see chapter III). Using Demographic and Health Survey data from Ghana, Kenya, the Niger, the United Republic of Tanzania and Zimbabwe, Bicego, Rutstein and Johnson (2003) found that double orphans aged 6-10 were only half as likely as non-orphans to be in the appropriate grade and that double orphans 11-14 were two thirds as likely. Case, Paxson and Ableidinger (2003) used DHS data from 10 countries; their results showed that double orphans in most countries were 10 to 30 percentage points less likely to be in school. A study of orphans in the United Republic of Tanzania found that orphanhood lowered the odds of attending school by 45 to 64 per cent (Suliman, 2003). Moreover, orphans were more likely to drop out of school and more likely to work while attending school than non-orphans. Orphans were found to have lower school atten-

dance in 44 countries for which information was available by mid-2003. Not only were orphans less likely to be attending school than children with both parents alive, but in countries with trend data, the gap was widening.

In Zambia, some evidence from microstudies shows that 44 per cent of children of school age were not attending school in the Copperbelt region, with proportionately more orphans (53.6 per cent) than non-orphans (42.4 per cent) not attending (Rossi and Reijer, 1995).

A study conducted on the impact of AIDS on the education sector in Botswana, Malawi and Uganda found country-specific results. For example, in Botswana, a country with one of the highest HIV prevalence rates, absenteeism of school children was very low and orphans had better attendance records than non-orphans, whereas in Uganda and Malawi, absenteeism was somewhat higher among orphans than among non-orphans (Bennel, Hyde and Swainson, 2002). The authors state that Botswana has a strong schooling culture and most children attend primary and junior secondary school. Moreover, household demand for child labour is low, and schools provide meals, a major incentive for disadvantaged children. In addition, the Government of Botswana has introduced a national programme of targeted support

for orphans. In Malawi and Uganda, which are more typical low-income countries, absenteeism is generally high among all schoolchildren, partly because of widespread poverty. School fees and the cost of uniforms were given as reasons for absenteeism of secondary school students in Malawi and Uganda.

Children who had lost a parent to AIDS were 50 per cent less likely to receive an education, and children who had lost both parents were 90 per cent less likely to be educated in Burkina Faso in 1998-1999, whereas children in eastern Zimbabwe who had lost their mother were less likely to have completed primary school than children who had lost their father or children whose parents were living (Nyamukapa, Gregson and Wambe, 2003).

### C. CONCLUSIONS

AIDS is degrading the supply and quality of education and may disrupt schooling for a whole generation of children. In the long run, the diminished investment in human capital may delay social and economic development. The major findings of the present chapter are as follows:

- **The HIV/AIDS epidemic is eroding and even reversing progress made in achieving universal primary education.**
- **HIV/AIDS reduces the supply of educational services as a result of teacher attrition and absenteeism.** Studies predict teacher shortages in many countries, including Kenya, Malawi, Nigeria, South Africa, Zambia and Zimbabwe.
- **The AIDS epidemic imposes higher costs on the educational system** for medical care and death benefits for afflicted teachers and for recruiting and training replacements for teachers lost to AIDS.
- **HIV/AIDS reduces the number of school-aged children.** When children are born with the virus, they rarely live long enough to attend school.
- **Children orphaned by AIDS are less likely to be enrolled or attend schools than non-orphans.** Children whose parents are ill or die of AIDS drop out of school to provide care or help with economic activities, and households with an AIDS victim may no longer be able to afford school fees for their children. Studies in sub-Saharan African countries found significantly lower enrolment rates among children who had lost both parents than among children whose parents were both alive and who were living with at least one biological parent.
- **HIV/AIDS erodes the quality of education.** Infected teachers may be absent or too ill to provide a good education for their students, and substitute teachers may have neither the qualifications nor the experience to replace them. Quality of education may also suffer if investment in the education sector declines as funds are diverted to fight the HIV/AIDS epidemic.