

Published in the series:
Education in the context of HIV/AIDS

The impact of HIV/AIDS on education and institutionalizing preventive education

Roy Carr-Hill, Kamugisha Joviter Katabaro,
Anne Ruhweza Katahoire, Dramane Oulai

A paper copy of this publication may be obtained on request from:
information@iiep.unesco.org
To consult the full catalogue of IIEP Publications and documents on our Web site: *http://www.unesco.org/iiep*

Published by:
International Institute for Educational Planning/UNESCO
7 - 9 rue Eugène-Delacroix, 75116 Paris
ISBN: 92-803-1221-9
© UNESCO 2002



International Institute for Educational Planning



Education in the context of HIV/AIDS

The impact of HIV/AIDS on education and institutionalizing preventive education

Roy Carr-Hill, Kamugisha Joviter Katabaro,
Anne Ruhweza Katahoire, Dramane Oulai



International Institute for Educational Planning

International Institute for Educational Planning www.unesco.org/iiep

The views and opinions expressed in this booklet are those of the author and do not necessarily represent the views of UNESCO, the IIEP or UNICEF. The designations employed and the presentation of material throughout this review do not imply the expression of any opinion whatsoever on the part of UNESCO, the IIEP or UNICEF concerning the legal status of any country, territory, city or area or its authorities, or concerning its frontiers or boundaries.

The publication costs of its study have been covered through a grant-in-aid offered by UNESCO and by voluntary contributions made by several Member States of UNESCO, the list of which will be found at the end of the volume.

Published by:
International Institute for Educational Planning
7-9 rue Eugène-Delacroix, 75116 Paris
e-mail: *information@iiep.unesco.org*
IIEP website: *http://www.unesco.org/iiep.*

Cover design: Pierre Finot
Typesetting: Linéale Production
Printed in IIEP's printshop
ISBN: 92-803-1221-9
© UNESCO 2002

CONTENTS

		Pages
List of tables		6
List of diagrams		8
List of abbreviations		9
Preface		11
Summary		17
A.	**Impact of HIV/AIDS on education systems**	23
I.	Introduction	24
II.	HIV/AIDS and the education sector: impacts on demand, supply and quality	33
III.	Other impacts of HIV/AIDS on children and families	50
IV.	Monitoring the impact of HIV/AIDS and the education sector	70
V.	Micro-level impacts	85
VI.	Policy options	95
B.	**Education as an instrument of prevention**	99
VII.	Institutionalizing HIV/AIDS education	100
VIII.	Problems and possibilities	126
C.	**Annexes**	139
I.	Summary of effects	140
II.	Case studies of impact on Kenya and Tanzania	145
III.	Case studies of impact on teacher absences	150
IV.	Case study of orphans and households in Uganda	157
V.	Macro trends in education enrolment and number of teachers	164
VI.	Life skills programmes in the region	167
VII.	Pro-change approach	176
VIII.	Cost-effectiveness of interventions in developing countries	179
D.	**Bibliography**	183

LIST OF TABLES

Table 4.1 HIV sero prevalence estimates, decreased educational demand and supply, and estimated number of orphans

Table 5.1 Number of different schools (interviews with 20 children)

Table 8.1 Annual costs per infection averted or per contact for interventions to prevent HIV (in US$)

Annexes

Table 1 Expenditure by production companies on AIDS

Table 2 *Central African Republic*: Supply of education

Table 3 Numbers leaving the teaching force

Table 4 Length of service

Table 5 Number of schools closed because of lack of teachers

Table 6 *Ivory Coast*: Numbers of pupils in five sub-districts

Table 7 Comparison of numbers of pupils, schools, classes and teachers

Table 8 Turnover of teachers

Table 9 Absences and length of service

Table 10 *Uganda*: Age and school status

Table 11 Breakdown of who children live with

Table 12 Years behind in education according to sex

Table 13 Mean average of years behind in education according to orphanhood status

Table 14 Years behind in education according to whom living with

Table 15 Mean average of years behind in education according to whether or not living with siblings

Table 16 Correlation between HIV/AIDS prevalence and pupil/teacher ratio in sub-Saharan Africa (38 countries)

Table 17 Trends in pupil/teacher ratios in primary schools (percentage increase or decrease)

Table 18 Trends in pupil/teacher ratios in secondary schools

LIST OF DIAGRAMS

Diagram 1 The impact of HIV/AIDS on education
Diagram 2 Impact of HIV/AIDS on children
Diagram 3 Effects of HIV/AIDS on teachers in UPE
Diagram 4 Impacts on orphans and peers
Diagram 5 Intersectoral co-operation
Diagram 6 Education and HIV prevention

LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
DRENFB	Regional Directors of Basic Training in National Education
EFA	Education for All
ESAR	East and Southern Africa Region
ESARO	Eastern and Southern Africa Regional Office
GER	Gross Enrolment Rate
HIV	Human Immuno-Deficiency Virus
IEC	Information, Education and Communication
IWGE	International Working Group on Education
LSP	Life Skills Programmes
MOE	Ministry of Education
MOH	Ministry of Health
NER	Net Enrolment Rate
NGO	Non-Governmental Organization
SCI	Sara Communication Initiative
SHEP	School Health Education Programme
SSA	Sub-Saharan Africa
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TB	Tuberculosis
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund
UPE	Universal Primary Education
USAID	United States Agency for International Development

PREFACE

Today HIV/AIDS has become the number-one killer disease of men and women in many countries in Africa. Since HIV was first identified in 1983, over 65 million people have been infected, of whom 25 million have died, and the majority of these cases are in sub-Saharan Africa. At the end of the year 2000, an estimated 40 million adults and children were living with HIV or AIDS and 28.1 million (70 per cent) of those were in sub-Saharan Africa.

UNAIDS recently-published data on HIV/AIDS indicate that 7 out of 10 newly infected people are in Africa and 85 per cent of those who have died of AIDS, and 95 per cent HIV/AIDS orphans, are in Africa. The economic and social impact of the pandemic has now reached alarming levels in these countries. The increasing spread of the pandemic in Africa is causing a human disaster, in contrast to the situation in the countries of the north, where the epidemic appears to be under control for most population groups.

Although eastern, southern and western regions of Africa were heavily infected areas, the majority of new cases are reported to be in Southern Africa. UNAIDS estimates show signs that the incidences of HIV in 2000 had stabilized in sub-Saharan Africa, but new infection still totalled 3.8 million in the Region. The same estimates indicate that at the end of 1999, 35.8 per cent of the people aged 15-49 were afflicted with HIV or AIDS in Botswana, and that, respectively, around 25 per cent of the same age group in Swaziland and Zimbabwe, 23.5 per cent in Lesotho, 19.9 per cent in Namibia, South Africa and Zambia were living with HIV or AIDS.

A number of studies are now available on the socio-economic consequences of the pandemic in many countries. A recent study in Namibia estimates that AIDS cost the country almost 8 per cent of

GNP in 1996. Another analysis predicts that Kenya's GDP will be 14.5 per cent smaller in 2005 than it would have been without AIDS, and the income per person will be 10 per cent lower. A different study carried out by FAO and UNDP on the impact of HIV/AIDS on the commercial agriculture sector in Kenya indicates that the increase in HIV/AIDS cases creates steady rising costs (medical and funeral expenses) and losses in profits and profitability for the companies. Many of the agro-estates could not achieve production targets during the past two years due to HIV morbidity. UNAIDS (2000) indicates that in South Africa, the epidemic is projected to reduce growth by 0.3-0.4 per cent annually, resulting by the year 2010 in a gross domestic product (GDP) 17 per cent lower than it would be without AIDS and wiping US$22 billion off the country's economy. The rise in morbidity and mortality rates as a result of HIV/AIDS tends to increase staff turnover, which disrupts activities of firms across productive sectors in many African countries.

The rapid spread of HIV/AIDS in countries south of the Sahara over the past decade is no longer a health problem, but a major cause for the ongoing development crisis. Education is one of the many sectors that are being devastated by the spreading of the pandemic in those countries. In the absence of appropriate responses in this sector, the human resource infrastructure of these countries will be decimated by this epidemic and their economic output will continue to decline. Subsequently, the social costs of the pandemic will continue to rise.

The IIEP has a long-standing interest in human resource development in Member States. Foreseeing the risks of a negative impact of HIV/AIDS on education, the Institute organized an international seminar on the theme in 1993. The report of that seminar, which was widely circulated, emphasized the need for planners and education managers to have a better understanding and

assessment of the impact of HIV/AIDS on education in order for them to design new practical methods for delivering educational services that cater for HIV/AIDS-affected students and educational personnel and help to prevent new infections. The report also strongly stressed the necessity for donor agencies and governments to co-ordinate their activities in order to include HIV/AIDS prevention activities in all their development policy strategies. In October 2000, the Institute organized another seminar on HIV/AIDS and education. The deliberations in the seminar showed that the situation has worsened since that foreseen in the early 1990s.

The majority of the IIEP trainees come from countries in the South Sahara region, where the impact of HIV/AIDS on education is most severe. Throughout discussions with the Institute's trainees and among its staff, there was felt the need for a training programme with special sessions on this major challenge to education development. It is to meet this felt need that the initiative was taken to write this book, with the strong hope that it will contribute to sharing information and facilitate awareness of this major development crisis among the concerned international community and national policy-makers, especially among those in the most infected countries of South Saharan Africa.

The objective of this book on *The Impact of HIV/AIDS on Education and Institutionalizing Preventive Education* is to provide a compilation of various research findings on the impact of HIV/AIDS on education in countries south of the Sahara, which is the world's most infected region. It also presents different options available to the education ministries and government decision-makers with regard to the use of education as an instrument to mitigate the effect of HIV/AIDS, as well as a tool for its prevention.

The first part of this book presents information on the impact of HIV/AIDS on education in a way that sometimes appears controversial,

as the difficulties of assessing and separating the impact of HIV/AIDS from the effects of other factors such as economic and social adjustment programmes on the education systems remain unresolved. Collecting relevant data on HIV/AIDS and education, at the macro as well as at the micro level, is fraught with difficulties linked mostly to the nature of the problem and the social and cultural environment where this occurs. These difficulties are perceived through the various findings presented in the book. The induced challenges, for education managers to plan and monitor the future development of the system using available data on the HIV/AIDS impact, are enormous. Existing data on the impact of HIV/AIDS on education are scarce and vary greatly in their quality because of the difficulties in measuring the impact and therefore need to be interpreted with care if sound prevention programmes are to be based on them.

How to institutionalize HIV/AIDS preventive education is the focus of the second part of the book, which analyzes the different possible options which education sectors may use in various environments to fight HIV/AIDS. Special attention is paid to those programmes (curriculum alteration, peer counselling during school hours, teacher training, awareness campaign etc.) that may be institutionalized. Information is presented on the various life skills programmes and other preventive programmes that have been tried in a number of countries, and on the factors underlining their successes or failures. Criteria required for successful preventive measures within or outside the school setting are discussed and the difficulties faced by government and ways to overcome these hurdles in designing instruments which aim at preventing, or mitigating, the impact of AIDS on education are laid out.

The first group of readers of this book includes IIEP trainees and students in educational planning and administration, educational planners, managers and government policy-makers who have the

responsibility of designing and implementing educational development programmes as well as running the daily operation of the system. The book also targets policy-makers in other sectors, especially the health and economic sectors, whose involvement in the fight against HIV/AIDS is indispensable for a successful outcome. The third group targeted by the book is the international community and aid agencies involved in assisting countries in their educational development.

The study was made possible thanks to finance from UNAIDS and the collaboration of many colleagues from UNESCO Headquarters who contributed to the initial discussions on the design of this book.

I am grateful to the authors, Roy Carr-Hill, Anne Katahoire, Kamugisha Joviter Katabaro and Dramane Oulai, for their contributions to this book. I am hopeful that the book will demonstrate its usefulness not only for planning practitioners, but also for policy decision-makers in combating the challenges posed by HIV/AIDS to the development of education.

Gudmund Hernes

SUMMARY

As a new millennium dawns, the HIV/AIDS pandemic continues to ravage Sub-Saharan Africa (SSA): at least 40 million people are infected with HIV in sub-Saharan Africa. Much of the impact of HIV/AIDS afflicts children and women: indeed the bulk of new AIDS cases are among young people, aged 15-25 and females are disproportionately affected. The ability of girls and women to protect themselves from HIV is constrained by their status in society.

Decades of improvements in social welfare are likely to be undermined by the uninhibited progression of the epidemic. Life expectancy in some countries has already started on a downward spiral and is expected to drop to 30 years or less in nine sub-Saharan countries by the year 2010. AIDS-related mortality has begun to eliminate the gains made in child survival over the past 20 years.

Children will be the most affected as a result of HIV/AIDS as they live with sick relatives in households stressed by the drain on their resources. They will be left emotionally and physically vulnerable by the illness or death of one or both parents. Subsequently, children who have lost one or both parents are more likely to be removed from school, to stay home to care for the sick and to be pulled into the informal economy to supplement lost income. This is especially the case for girls.

The first part of this collection describes the impact of HIV/AIDS on the education sector especially in sub-Saharan countries at both a macro and micro level; and, drawing on the experience of a few country case studies, discusses the practicability of implementing a range of indicators for monitoring the impact of HIV/AIDS on the education system. Without basic information of this kind, it is impossible to plan.

In the first section we show how AIDS epidemic is beginning to have a serious impact on the education sector, specifically on the demand for, supply of, and the management and quality of education provided at all levels. As a result of HIV/AIDS, there are relatively fewer children needing education. Fewer children are being born because of the early death of one or both parents. Moreover, families will find it increasingly difficult to afford to send their children to school. The pandemic also impacts on the numbers and availability of teachers.

The decline in the number and availability of teachers is illustrated through case studies of reports from Inspectorates in Central African countries. Their experiences demonstrates that it is feasible to 'track' the spread of AIDS through the teaching stock by examining the flows out of the system and in particular the length of absence for illness; in contrast, it is not in practice possible to obtain 'early warning' of the spread of the pandemic by examining medical records.

Assessing the impact on demand and quality is difficult. Whilst the fall in the number of teachers appears to be in parallel to the fall in the enrolment, fewer students in the education system and lower demand for places in education programmes, may lead to a smaller supply of facilities and places. Schools that have enrolments below a certain minimum may be closed and the remaining pupils moved to other schools. Even if facilities continue to be available, it may be difficult to ensure community support from the parents for the teachers and materials. The quality of learning outcomes and education will almost certainly be affected by increased problems of teacher absenteeism, and loss of teachers, education officers, inspectors, planning and management personnel.

The problem of monitoring the impact on demand is even more complicated. In particular given the state of existing EMIS in many

countries, it is concluded that, at a national or district level, it may not be appropriate to introduce a further set of indicators where the current basic data on enrolment, participation and repetition are not reliable. Whilst it is indeed very important to know the numbers affected by AIDS and in particular, of orphans, it is concluded that ascertaining parental status routinely would pose an additional burden on already over-stretched teachers. Instead the major planning effort would have to be based on the interpretation of movements in the basic enrolment and repetition.

Whatever the impact, the increased randomness of educational provision will make planning more difficult, and will have to lead even further away from the systemic models of the past. Already the international trend is to suggest devolution and flexibility of policy making, although such trends are not yet widespread in SSA. In development terms, this means a shift from administration to management (see Carron and Ngoc Chau, 1995).

However, it is also clear that the impact of the pandemic depends very importantly on the specific local culture and economy and so, in the second section, we examine the impact at a micro level. We suggest a theoretical framework for examining the micro impact illustrating with a detailed case study in Uganda. This is based on a recognition of the different stakeholders in the local education sector: children, parents, teachers, community and schools.

Importantly, these micro studies suggest that some of the generalisations made at the macro level - for example that fewer families will want to sent their children to school - cannot be sustained. However, it does appear to be true that children orphaned by AIDS are falling behind in their primary education due to drop out and repetition. Clearly it is important to monitor this and, on this basis, we propose the development of an additional 'optional' set of indicators to be used at the local level.

The final section in this first part examines the possible options that are open to Ministries, national NGOs and to community based organisations to instigate the impact of pandemic. We consider the impediments to recruitment and training and ways around them.

The second part of the paper describes the urgency and need for education systems everywhere affected by the pandemic to respond to the challenge of the negative impact of HIV/AIDS. Young people, between 5 and 14 years, both in school children and out of school youth, offer a window of hope in stopping the spread of HIV/AIDS if they can be reached by Educational Programmes. In the absence of a cure, the best way to deal with HIV/AIDS is through *prevention* by developing and/or changing behaviour and values.

Education systems have an essential role to play in reviewing the pandemic that threatens it. However, given that effective programmes have to operate at the local level, the demonstration in section three of the first part of the complexity of the relationship between HIV/AIDS and the socio-economic context, also has implications here. Specifically we 'cannot just fly-in/import' a life skills programme; indeed, the rationale for a tightly developed, uniform set of modules – as against a set of teachers – has not been established. In the first section we describe the range of responses that have been developed drawing on a variety of experiences of UNICEF and others.

This part of the paper also presents an overview of the education systems in seven countries in Sub-Saharan Africa that have attempted to impart life skills to children and young people. To date, however, few of these programmes that are targeting children and young people with information about HIV/AIDS meet the criteria for minimally effective education programmes. Many countries in the region are just beginning to explore the concept of life skills and how to advocate for it to be accepted and adopted into the education system.

In the second section, we discuss what would be involved in institutionalising a response to HIV/AIDS; and in section three how to implement such a programme. Towards the need of this section, we suggest a series of 'process' indicators to monitor them. Finally, in the fourth section, we consider the problems of evaluating such programmes and, in particular the difficulties of assessing cost-effectiveness.

PART A.
IMPACT OF HIV/AIDS ON EDUCATION SYSTEMS

I. INTRODUCTION

Effects of HIV on countries in ESAR

As a new millennium dawns, the HIV/AIDS pandemic continues to ravage sub-Saharan Africa. African countries now account globally for 70 per cent of new infections and four-fifths of AIDS-related deaths. The pandemic is concentrated in the so-called AIDS belt stretching from East through Central and Southern Africa, where infection rates are now between 20 and 30 per cent of the sexually active population. The bulk of new AIDS cases are among young people, aged 15-25 and females are disproportionately affected.

These countries will almost certainly experience the most severe demographic effects of HIV/AIDS over the next 25-30 years after the epidemic has peaked. Decades of improvements in social welfare are likely to be undermined by the uninhibited progression of the epidemic. AIDS-related mortality has begun to eliminate the gains made in child survival over the past 20 years. Life expectancy will drop to 30 years or less in nine sub-Saharan countries by 2010. Populations of Botswana, Zambia and Zimbabwe would have had life expectancies of 60-70 years without AIDS, but will have life expectancies of only 30 years with HIV/AIDS.[1]

In Kenya and Uganda, infant mortality rates are projected to increase by 50 per cent and child mortality rates to double. In Malawi, due to AIDS deaths, the 1997 population census shows that the overall population growth rate is now only 1.9 per cent per annum compared with a projected growth rate of 3.2 per cent in the 1987 census.

HIV/AIDS will continue to cause fundamental social and economic changes that will affect educational opportunities and the demand

1. USAID. 1998. "Children on the brink". Washington: USAID.

for labour. HIV/AIDS does not strike the population equally. The most recent years have shown that young people are disproportionately affected. Worldwide, some 50 per cent of all new HIV cases occur in youth between the ages of 15 and 24 years.[2] This is a severe threat to the whole society: these young people may have some productive years living with the HIV infection, but sooner or later they will develop AIDS and become dependent on care from family members. HIV/AIDS thus strikes people in their most productive years, severely disrupting the economic and social base of whole families and societies.[3]

Costs to the economy of absenteeism and reduced productivity may be higher than the costs of eventual deaths. HIV/AIDS will significantly slow the growth of the labour force and will create labour shortages in several sectors, including the education sector. The loss of women's labour in the home and in agriculture will create critical deficits in food supplies. The epidemic will continue to have a profound impact on families and communities, on the availability of social services, access to health services and the rate of poverty at the household level. Children will be the most affected since they will be required to take the place of adults in the labour market, particularly in households that are highly dependent on subsistence farming.

One way of assessing the impact of HIV/AIDS on education systems therefore relates to the impact of AIDS on the overall economy and reduced labour productivity of the country. Investment in education depends very much on a sound economy. Whilst this is very important, it is not considered in detail here (case studies of the impact in Kenya and Tanzania are given at *Annex 2*). The second

2. World Bank. 1999. "Intensifying action against HIV/AIDS in Africa: responding to a development crisis", p. 8.
3. World Bank. 1999. *ibid.*

way of assessing the impact of HIV/AIDS on education systems is to focus on the direct effects on aspects of the social fabric which are themselves directly related to the functioning of the system of education. The effects include AIDS deaths leading to changes in population structure, increased numbers of dependants (orphans and the aged), increased health-care costs, the collapse of social and traditional values and support mechanisms, low school enrolments and attendance.

The most dramatic effect is death of the parents but, unfortunately, the problems children face as a result of HIV/AIDS will have started long before their parents die, as they live with sick relatives in households stressed by the drain on their resources. Children are left emotionally and physically vulnerable by the illness or death of one or both parents, as numerous letters to newspaper editors in eastern and southern Africa already testify. Subsequently, children who have lost parents are more likely to be removed from school and pulled into the informal economy to supplement lost income. Given what we know about gender discrimination, it seems likely that this will impact especially on girls. Strains on households and families may result in increases in child abuse and neglect, while girls already face increased pressure to marry at younger ages, again, due to AIDS.

On the macro level, the appropriate indicators for assessing the impact of AIDS on education are straightforward. They are enrolment trends, school attendance, drop-out and promotion rates, the growth rate of the number of orphaned children. Geographical differences in these indicators (and, more generally, in educational performance) should correspond to the nature of the spread of AIDS in individual countries. Similarly, the death rate of teachers, pupils and parents is yet another important indicator to show the impact of the pandemic. This paper will focus on a few such indicators, as elaborated below.

A potential framework for assessing the impact

The HIV/AIDS epidemic has a multiple impact on education, at the structural, quantitative and qualitative levels. This impact can also be identified at both national and regional/local levels - down to each single family and child. The model on the next page (*Diagram 1*) is taken from the World Bank's *HIV/AIDS and education: a human capital issue* (1998c). The model gives an overview of the expected effects on the education system. Kelly (1999) has also developed a framework for looking at the impacts, which is summarized in *Annex 1*.

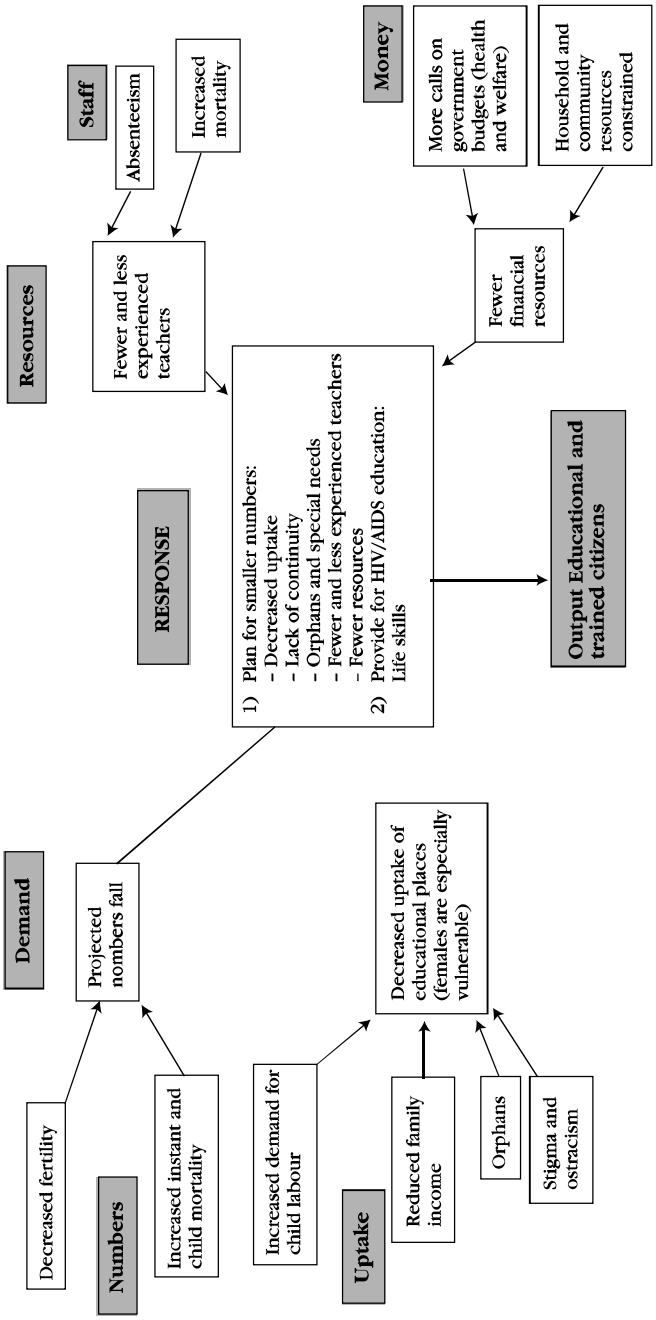
Assessing impact at the national level

Teacher posting becomes increasingly difficult. Experience from Zambia shows that trained teachers are concentrated in the urban areas. This is nothing new, but the HIV/AIDS epidemic enhances this trend. There has been a steady increase in the number of teachers who, on medical grounds, must be posted near to hospitals, properly staffed clinics or medical centres.[4] Providing qualified staff for the rural areas thus becomes even more difficult than it used to be.

The loss of trained and experienced teachers and interruption of teaching programmes due to illness will reduce the quality of education. Research shows that what teachers know and are able to do is one of the most significant determinants of what students learn. A study performed by Armour – Thomas *et al.* in 1989 found that teacher qualifications accounted for more than 90 per cent of the variation in student achievement in mathematics and reading across all grade levels.[5] The loss of the most qualified and experienced teachers hence represents a serious threat to the quality of education.

4. M.J. Kelly. 1999. "The impact of HIV/AIDS on schooling in Zambia", p .2.
5. Andrew Burke. 1999. "School effectiveness: the centrality of the teacher's role", p. 4.

Diagram 1. The impact of HIV/AIDS on education



The HIV/AIDS epidemic will require a change in the content and role of education: Curricula must be changed to meet the pupils' needs, and must focus more on life skills such as decision-making and interpreting social settings. A change of curriculum is also needed in order to reach marginalized groups. The HIV/AIDS epidemic has accentuated the need for a relevant curriculum to cope with the situation. In many countries, the existing curriculum is already too overcrowded, so comprehensive alterations are needed to adjust the curriculum to the national and local reality. These changes need to be initiated from the national level, in order to secure national coverage and high quality. It is however of great importance that actors from all levels participate in this reform. A study by Fullan and Miles in 1992 warns that the *symbols of reform* (new legislation, task forces, commissions, reports, plans etc.) are sometimes confused with the *substance of change.* If a true change is to occur, considerable work at grass-roots level is required. Changes such as a revision of curricula need to make adequate contact with and provision for the teachers on whom the success or failure of the reforms greatly depend.[6] The teacher's role may also experience a change. HIV/AIDS necessitates psychological support for the children from affected families, and teachers find that they are increasingly being used as counsellors for pupils. In Zambia, programmes in counselling are being established in the universities and some teacher training institutions in order to prepare the teachers for this role.[7]

Impact at regional/local level

Teacher absenteeism. People living with AIDS are often periodically ill. When teachers are absent due to illness or medical treatment, the children are often left without schooling due to

6. Andrew Burke. 1999. "School effectiveness: the centrality of the teacher's role", p. 15.
7. M.J. Kelly. 1999. "The impact of HIV/AIDS on schooling in Zambia", p. 6.

shortage of teacher replacements. Sometimes the sick leaves are so frequent that the Education Office chooses to give the teacher notice in order to secure stable schooling for the children.[8] If the teacher is given notice, an immediate replacement is also needed to cater for the educational needs of the children. When a teacher dies from AIDS, he/she is seldom replaced immediately due to cumbersome administrative structures and general teacher shortage. This will diminish the pupils' returns from schooling, and reduce the quality of education as such. This reduction of quality will, in a longer-term perspective, reduce parents' willingness to enrol their children. Why use time and money on low-quality schooling instead of keeping the children at home where they can work and even add to the family income?

- **Children (especially girls) drop out or never enrol in order to nurse sick parents or siblings.** In a long-term perspective, this may reduce the hard-won returns on efforts to increase girls' education. Uneducated girls will themselves become especially vulnerable to HIV/AIDS due to lack of HIV/AIDS information and reduced income possibilities.
- **Children drop out of school to engage in income-generating activities.** A reduction of financial means at household level will lead to reduced affordability – fewer children will be able to start/complete their schooling. If the breadwinner of the family is taken ill, some children need to engage in income-generating activities to keep the family economy at a minimum level.
- **In the rural areas, AIDS-illness in the family will demand greater participation from children in seasonal agricultural work**. Children are kept home in these periods, missing out on weeks of schooling.

8. Odiwuor. 1999. "AIDS scourge: which way forward for Africa?", p. 21.

- **Children drop out due to the cost of schooling.** If a family member becomes severely ill, scarce economic resources may be spent on medical treatment. Sometimes, one or more children are taken out of school in order to save money for medicines or alternative treatment. Unfortunately, in many places unscrupulous 'doctors' are taking advantage of the desperate situation in which many families are. They sell 'miracle' medicines at exorbitant prices, tapping the AIDS-affected families for savings and social security.[9]
- **Children from AIDS-affected families are under emotional strain.** Considering the prevalence of HIV/AIDS in sub-Saharan Africa, a great number of schoolchildren will come from AIDS-affected families. Most of these children are under constant emotional strain, worrying about their sick family members, or the family's financial situation etc. These are not optimal conditions for learning. In addition to this, prejudice and stigma may cause social exclusion. This in turn can depreciate their emotional well-being, and thus interfere with their ability to learn.
- **Children with AIDS are frequently kept home from school due to illness, or are taken out of school.** It is not unreasonable to believe that some parents see the costs of schooling as unnecessary if the child is not able to attend or performs badly due to illness.

The earlier IIEP workshop on the impact of AIDS on education in 1993 focused on the supply and demand for education and the scourge of AIDS. In particular, it was shown that many countries, particularly the developing ones, were likely to face many problems in the provision of education because of the impact on the teaching stock. But, the education systems in both developed and developing countries are concerned with issues of demand for and supply of

9. Odiwuor. 1999. 'AIDS scourge: which way forward for Africa?', p. 20.

education. These concerns range from equal access to education, enrolment, funding of education, provision of resources and adequate quality in order to both attract and retain children.

Despite all these problems, the impact and devastation to the education system have not been calculated or determined systematically, simply because there is little information available at the country or regional level. This paper has two key purposes: (a) to review, synthesize and disseminate existing information on the impact of HIV/AIDS on education systems, and to discuss the practicability of introducing a simple yet reliable monitoring system; and (b) to review, analyze and disseminate available information on ways in which HIV/AIDS prevention can be introduced into education programmes.

This paper, seven years later, focuses on how AIDS has impacted on the supply, demand, the quantity and quality of education because of the impact on the teaching stock. In doing this, the paper draws experiences from different countries in the sub-Saharan Africa region.

II. HIV/AIDS AND THE EDUCATION SECTOR: IMPACTS ON DEMAND, SUPPLY AND QUALITY

An overview

Education and training are critical for long-term development. The provision and growth of quality education has been directly linked to positive economic development, emancipation and health dividends. However, HIV/AIDS is a real threat to the education sector and thus potentially to human resource-based development. HIV/AIDS has a multiple and negative impact on education. It affects three key areas at the local, district, provincial and national levels. These are:

- *the demand for education;*
- *the supply of education;*
- *the quality and management of education.*

HIV/AIDS is decreasing the demand for education

The number of children needing education at different levels is important for planning and formulation of policy. It is important to note here immediately the difficulty of coming up with clear-cut indicators to reflect the impact of AIDS. The conditions prevailing in many developing countries do not allow clinical diagnosis and testing of HIV/AIDS status and persistent denial complicates any retrospective recording of cause of death; and, of course, on a macro level, there are many other changes such as structural adjustment programmes which cloud interpretation.

The pattern of demand

The pattern of ***demand for education*** may change. As a result of HIV/AIDS, relatively fewer children are being born because of the

early death of one or both parents. Some of these children are born HIV + and most die before reaching school-going age. At the individual level, a child's opportunity for a bright future is lost or destroyed since the child may become infected or is affected by HIV/AIDS. This means lower school enrolments. In Zambia, for example, primary-school enrolments stagnated between 1990 and 1996 and it is estimated that this was due in part to HIV-related causes.

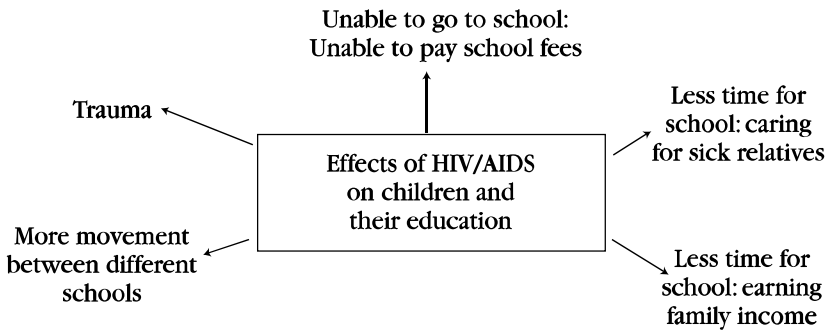
The opportunity costs and the affordability of the direct costs involved also decrease the demand for education. Families may find it more difficult to release children from domestic and agricultural tasks during the day, and caring for ill adults or other family members. Therefore, fewer children will be able to complete or even start their primary-school education even if they do not themselves fall ill. The trauma, stigma and discrimination related to the illness or death of family members can also make some children fail to complete their education. The lower motivation provided by an extended family and the earlier marriage of girls also limit expanded enrolment.

The effect on the affordability of education includes a number of issues: the direct loss of family income, due to AIDS, from the illness and death of productive members of the family and the loss of income due to the costs of treatment, care and funerals. High expenditure on treatment and funeral ceremonies and care of AIDS patients have significantly reduced the family savings for education (Tibaijuka, 1997; Mkoyogo and Williams, 1991). The effects can be summarized as in *Diagram 2*.

Many countries in sub-Saharan Africa have experienced the impact, while in other countries the impact is still unnoticeable. There are instances of a decrease in the numbers of children admitted to certain levels of education. This scenario may be a reflection of fewer children

wanting education and fewer parents wanting to send their children to school or being able to afford to educate their children.

Diagram 2. Impact of HIV/AIDS on children



It has been estimated that in Zambia, the numbers of street children swelled from 35,000 in 1991 to over 75,000 in 1996[10], and known cases of child abuse (physical and sexual) are now beginning to be discussed in public. Another study[11] anticipates that in Botswana there may be as many as 150,000 orphans by the end of this century.

Other levels that will suffer because of the HIV/AIDS impact on educational demand are early childhood education and higher education. Impact studies on early childhood care and education and higher education are still lacking in many developing countries. Firstly the increase in the demand for early childhood education may be necessitated by the need to care for young infants, as traditional child-minders are required for more productive labour in the farms

10. Hunter, S. 1998. "Orphan programming in Zambia: developing a strategy for very young children in Zambia", UNICEF Lusaka, 1998.
11. Hunter, S. 1998. "Stimulating orphan programming in Botswana: developing a supportive environment for exploration", UNICEF Gaborone, 1998.

particularly in the absence of the mother following death due to AIDS. This will mean withdrawing some children from school. Cost-sharing policies recently introduced in many developing countries will aggravate the situation. Higher education will not grow, as many households cannot afford to pay for their children. The situation may be worse for AIDS households where the breadwinner has already died.

The need to make a costly investment in children feared to have been infected by the HIV virus is curtailed by the fact that some family members regard it as a waste of limited family resources (Bertozzi, 1991). The instabilities within the families and communities due to migration of widows and orphanhood and the early marriages of young (school) girls have shown negative effects on the demand for education. Many subsequent studies have shown that these reasons have continued to affect the need for education in many different ways.

While the demand for education would be expected to go up to cater for children whose parents are bedridden or have died because of AIDS, the cost involved has proved to be beyond the capacities of many families. This is true for higher education where more trained people would be required to fill in the gaps left due to massive deaths of students and their trainers.

School enrolment

Studies both pre- and post- the 1993 IIEP conference on the impact of AIDS on education show a strong relationship, suggesting that school enrolment in AIDS-affected areas declined as a consequence of the pandemic – for Tanzania (Katabaro, 1993), for Uganda (Katahoire, 1993). A World Bank study in Tanzania suggested that HIV/AIDS may reduce the number of primary-school children by 22 per

cent and secondary-school children by 14 per cent as a result of increased infant and child mortality as well as lower attendance (World Bank, 1992). UNAIDS estimates the number of children orphaned because of AIDS at 1.1 million in 2000. Many of these children will not attend school.

Sumra (1995) compared enrolment levels in Tanzania. Giving an example of one region most affected by AIDS, he said:

> "The enrolment rates are quite low in Kagera region...One recent phenomenon that has been variably cited is the effect of AIDS. As more and more children suffer the trauma of being orphans, it has affected enrolment in schools".

The enrolment rate stood at 44.9 per cent of all children of school-going age (7-13 years). Some schools in Bukoba district were reported to have less than 50 per cent of the children's population in their catchment areas. This pattern has been observed in other parts of Tanzania, where high levels of the pandemic have been reported (Tibaijuka, 1997; Urassa et al., 1997). Recent visits to the same region show that some classes have less than 30 pupils in place of 45 (*source:* school files in Kagera). In the absence of a systematic study it may be difficult to associate this decrease to AIDS alone. It is also not clear as to how many schools have closed down because of the pandemic. Data from other countries concur with these observations (Webb, 1997; Foster et al., 1997). Foster et al. (1997) report that the enrolment rate in some areas in Zambia was low mainly due to AIDS.

Preliminary estimates suggest that in Zambia, Swaziland and Zimbabwe, the number of children of primary-school age will be more than 20 per cent lower than pre-HIV/AIDS projections by 2010 and a high percentage of these will be orphans with very limited resources and incentives to enter the system (cited by Gachuhi, 1999). The

Ministry of Education, Swaziland suggests that in 1999 the number of six year olds was 6 per cent lower than it would have been in the absence of AIDS. The same study estimates that by 2016, there will be 30 per cent fewer six year olds and 17 per cent fewer 18 year olds.

School attendance

In Tanzania there has been a general decline of school attendance and AIDS has been associated with it for various reasons. First, children in households with an AIDS patient were likely to remain absent from school because of the need for care of a sick member of the family (World Bank, 1997; Mukoyogo and Williams, 1990). School-going children, especially girls, are seen to be the only alternative care providers in many families. This is particularly so if the (remaining) parent is sick (Nindi, 1991; World Bank, 1997).

Another reason has been associated with the declining financial capacity for the AIDS-affected households to meet the school-related costs. Most of the family resources are saved in order to cater for the sick parent/member (Tibaijuka, 1997). The medical costs for AIDS-related diseases have been observed to be high and unaffordable to many families in the developing world (Ainswoth, 1993; Tibaijuka, 1997). The tendency has been to withdraw from other family expenditure, including education, to take care of the medical costs. Consequently, schoolchildren are forced to engage in casual labour as a way to assist their families in food supply and other needs. In many ways this affects school attendance (Katabaro, 1999; Mukoyogo and Williams, 1990; Tibaijuka, 1997).

A study conducted in Kagera, Tanzania, revealed that children from certain types of foster households attended school less often than children from other types of households (Katabaro, 1999). In Zambia, Foster et al. (1996) have shown that orphaned children attended school less often than non-orphans; see also earlier studies in Uganda

and Tanzania (Katahoire, 1993; Katabaro, 1993). In an in-depth study conducted in Uganda on 20 students in a district hard-hit by AIDS, 19 of the students reported having been absent from school for periods ranging from five weeks to one-and-a-half terms during the past year. The most common responses given for absenteeism were lack of school fees and helping with the care of AIDS patients at home.

Drop-out

There is lack of information about children who drop out of school as a consequence of AIDS-related problems and those children who do so because of other reasons. It is clear, however, that children who lose their parent(s) are more likely to abandon school because of failure to meet the costs of schooling (Mukoyogo and Williams 1990). General poverty levels and cultural factors still play significant roles in some districts as causes of high drop-out rates (Sumra, 1995). It can be argued here that while poor economic performance in many countries cannot be attributed fully to the impact of AIDS, it appears this impact correlates highly with the declining patterns in the education sector.

It is clear that declining enrolment in many countries of sub-Saharan Africa is already a fact of life. The lack of hard data in respect of infection rates for the school-age population makes it difficult to identify how far this decline has been accelerated by HIV/AIDS due to both reduced growth rates and the inability to take up places.

HIV/AIDS is decreasing the supply of education

HIV/AIDS is decreasing the ***supply of education***. On the supply side of education, many governments are faced with the problem of providing the resources that can make the process of education take place. These resources range from human (teachers, management and

parents) to material objects (reading and writing materials), payment of fees and other related costs.

The supply of education not only depends on the availability of teachers and teaching-learning materials in schools, but also to the capability of the education systems to man the whole sector. Schools that have enrolments below a certain minimum may be closed and the remaining pupils moved to other schools. The mere presence of school buildings without willing and solvent parents to send their children to school amounts to failure on the part of the government to provide sound education. Changes (falls) in the numbers of trained teachers, provision of teaching-learning materials, school buildings and management as indicators of the supply of education on the part of the governments are insufficient, because they do not directly show that what happens in these aspects are the result of AIDS. These indicators have to be deployed with caution so that we can remind ourselves of closely linked and intertwined factors that impede the supply of education in developing countries.

Moreover, if there are fewer students in the education system and lower demand for places in education programmes, then there may (should) be a decreased supply of facilities and places. Solutions such as the introduction of multigrade teaching, might tax the current capacity of affected school systems which are unprepared for new responses to the situation.[12]

The *supply of education* will also be affected by issues of finance. Since enrolment is declining, so will be the number of financial supporters of the system whose contributions are essential for such items as chalk, books, school maintenance and supplementary allowances for teachers. Thus, the absolute investment in education will probably be less than anticipated.

12. The impact of HIV/AIDS on education: Report of an IIEP Seminar, UNESCO, Paris, 1993.

One indicator of the supply of education is the enabling environment on the part of the community in general, and individual families in particular, to send children to school with at least the bare minimum requirements. The lower enrolment in Kagera (Sumra, 1995; World Bank, 1997) was observed to cut across all families although it was only significant in poorer households. This means that there were other reasons for lower enrolment apart from AIDS (World Bank, 1997). The average income per capita in the general population and that of families affected by AIDS is too low to support children's schooling. In Tanzania, for example, the per capita income is as low as US$180.00 (equivalent to Tsh.144,000). This is further complicated by the high costs of care and medical treatment of AIDS patients (see Tibaijuka, 1997). For example, medical charges for a household with an AIDS victim have been estimated to be about US$500.00. It is therefore likely that the majority of families in the developing countries are unable to provide an enabling environment for their children to attend school.

Number of teachers

The number of teachers in post is a function of many factors, including the capacity to train teachers, the retention of teachers in the classroom and the health conditions of those already in the field. Teachers, like many others, are not spared by HIV/AIDS so that, even if facilities continue to be available, there may be a lack of teachers and other personnel to provide teaching services. It is clear that the number of trained teachers is decreasing. Teachers who are infected may try to transfer to another area or, once visibly ill, 'abscond' and disappear. In Zambia, the number of teachers dying from AIDS is greater than the output from all teacher-training colleges. The Ministry of Education reported that 680 teachers (2.2 per cent) died in 1996 and 1,300 more teachers died in 1998. The number is expected to rise to approximately 2,000 a year by the year 2005. This

is five-six teachers dying per day.[13] In one of Kenya's eight provinces, it is reported that as many as 20-30 teachers die each month from AIDS of a total of all teachers. There is also evidence to suggest that teachers may be at higher risk from HIV than other groups since they have higher incomes than other people in rural areas and therefore greater mobility, which is a known HIV risk factor.

In Namibia, the incidence of HIV infection among teachers is also assumed to be well above that for the population as a whole, which is currently between 20 and 25 per cent.[14] By 2010, therefore, at least 3,500 serving teachers may have died in Namibia, but this figure could be as high as 6,500. In Mozambique, nearly 3.1 per cent of all Mozambican children under the age of 15 years are estimated to be HIV+.

About 14 per cent of all children will be living in a family affected by HIV/AIDS. They will help care for sick adults, and may contact tuberculosis (TB). Many girls will be forced out of school to provide care, or replace the labour of sick and dying adults. On the whole, there will be fewer students to educate. However, the reality of it is that there will also be fewer educators and managers who will be able to teach in school and manage the system.

Thus the death rate of teachers because of AIDS can be an important indicator of the impact of AIDS on education. In many countries, although information about the deaths of teachers may be included in school/district annual reports to the central Ministry of Education, they are not always co-ordinated. For example, in both Kenya and Tanzania, officials said that there were no consistent data to show the number of teachers who die because of AIDS. Data reported in literature are based on estimates.

13. Kelly, M. Prof. "The inclusion of an HIV/AIDS component in BESSIP", Lusaka, 1998.
14. HIV/AIDS and the Education Sector Strategic Plan: Paper prepared for the Education Sector Strategic Plan First Annual Review Meeting, Maputo, 1999.

In Tanzania, for example, it is estimated that 27,000 teachers will have died due to AIDS by the year 2020. The lack of a systematic method to appraise the death rate of teachers makes it difficult to establish the impact of AIDS on the teaching force. Eighteen known cases of teachers to have died of AIDS were reported in one rural district in Tanzania.

Another aspect that may interfere with teachers' performance is their commitment to the extended family members. In communities where the extended family system is still practised, teachers may find it difficult to avoid activities that involve their respective family members. Teachers are expected to attend relatives in critical conditions and this can take their time from school activities. Depending on the duration of time a patient takes before death (sometimes extending to a year), the school curricula may suffer if the time extends to more than one month.

Funeral ceremonies in the community are yet other dimensions which claim teachers' time. This may be more serious if the rate of deaths as a result of AIDS increases. In one community the number of deaths due to AIDS accounted for 56 per cent of the total (Tibaijuka, 1997). The frequency of deaths can be as high as two within one week in some areas. If this is converted into man-hours over a period of time, then the impact on education is immense given the number of teachers involved.

The theoretical framework suggested that one of the problems for the system, when suffering from the full effect of the virus, could be a shortage of qualified teachers. As the government goals from the same document say, the aim is "to ensure that 75 per cent of teachers are qualified" (UNPAC, 1993).

The effect of the increase in class sizes has been that teachers have been retrenched. This is part of the readjustment programme, reducing the spending on education. As a result, teachers in the urban area reported that there is a surplus of qualified teachers at present in the urban area, rather than a shortage of teachers as had been suggested. The situation in the rural areas, however, was not addressed through this study, and the effects of AIDS may be being felt more there.

Case studies of impact on teacher numbers and attendance

There have been a number of case studies of the impact of HIV/AIDS on education. Earlier examples tended to look at all aspects from a macro labour market point of view (see *Annex 2*). Whilst most recent ones have tended to follow Kelly's model, which is more comprehensive, very few have provided detailed *evidence* of the impact on teacher numbers and attendance. Studies in the Central African Republic and the Ivory Coast, where attempts have been made along these lines to identify the precise impacts on teacher numbers and attendance, are included as *Annex 3*.

Whilst they were able to document the numbers of deaths and the impact on teaching stock, it proved impossible to identify how many had died of AIDS. In both cases, the study teams therefore based their analysis either on the assumption that all *early* deaths were due to AIDS or via a comparison of the numbers of early deaths in these years with years prior to the HIV/AIDS epidemic.

The same studies also estimated the impact on teachers' attendance by looking at the length of time such a teacher was likely to be absent because of illness. They showed a significant but not substantial impact.

HIV/AIDS is decreasing the management and quality of education

The quality of learning outcomes and education will be affected by several confounding factors which will emerge as the pandemic takes a deeper hold in the ESAR countries. Already, education systems have begun to experience increased problems of teacher absenteeism, and loss of inspectors as well as teachers, education officers, planning and management personnel. There will be a less qualified teaching force, as trained and experienced teachers are replaced with younger and less well-trained teachers. It is quite apparent that as AIDS continues to take its toll, there will be schools with no headteachers and no inspectors of schools. This has a negative impact on the education system's ability to plan, manage and implement policies and programmes.

The school itself may also be affected by the psychological effects of having infection, illness and death in its midst. There is likely to be discrimination, ostracism and isolation in the classroom and school of those pupils and teachers who are infected or ill or are members of affected families. 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 if they have not already been pushed or dropped out.

Education managers

We can also look at the impact of AIDS from the education management perspective. Personnel in the management of educational institutions are not immune from both direct and indirect effects of AIDS. Death cases have been reported at all levels of education management. Like in other areas, it is difficult to state with certainty the causes of these deaths (at least in a scientifically proven procedure). Education managers at different levels of education

management (e.g. Ministry/regional/district ward headquarters) face the same situation as teachers as they have to attend their relatives who have suffered or are suffering because of AIDS. The impact on individual families who experience loss and/or have to attend an AIDS patient, sooner or later transcends the family borders, to the workplace. This means loss in terms of man-hours if many people have to remain absent from duty. This also has implications on the services to be rendered to the school.

In light of the changes in demand and supply of education, the whole educational process will change accordingly. While teachers and pupils affected by the epidemic in one way or the other may face discrimination, ostracism and isolation, the process of education will change in terms of time devoted to teaching and learning, availability of materials and funds to support schooling. AIDS may complicate the processes of education in several ways. These can be understood if we focus on the quality and quantity of education.

The changes in the quality and quantity of education may be due to the net result of the various kinds of impact on the demand, supply and process of education. The education system may experience loss in financial and human resources which translates to reduced enrolments, high drop-out rates, increased numbers of teacher transfers and diminished sources of funding for teaching-learning materials. The system may also suffer to a large extent in terms of efficiency and effectiveness. With high death rates of teachers, the alternative choice may be the use of untrained teachers, which compromises quality. Poor school attendance for both teachers and pupils have severe repercussions on the curricula and, therefore, the quantity of education offered could be limited.

Qualitative impact

The other type of impact is the qualitative one. Here some of the issues are more obvious. AIDS has allowed more public discussion of the full extent of the prejudice and fear held in most people concerning illness and sexuality. These were present before AIDS, particularly in relation to teenage unmarried sex, pregnancy and expressions of sexuality. The political sensitivity in relation to AIDS may have made these things more obvious. Also, as has always been the case, the issue of power lies not far behind. The tensions within education are sometimes used by those in authority (both senior pupils and teachers) to take advantage of those who are more vulnerable – girls in general and, more particularly nowadays, the growing number of orphans. With the common belief that younger people are less likely to have AIDS, there has been a growing pressure on younger people by older people to have sex.

The qualitative effects on teachers are clear. Makuka and Kalikiti (1995) write that AIDS cases and deaths among teachers have had various perceived negative impacts:

- teachers become over-concerned about their health and therefore become nervous and depressed;
- teachers are frequently absent;
- teachers' attitudes to work deteriorate;
- teachers become unable to perform well;
- there is a negative psychological impact on children;
- an average of four teacher hours were lost per week per school in 1995 in urban areas;
- combined morbidity and mortality rates represent a 25 per cent increase in public expenditure to maintain recruitment and staffing at current levels.

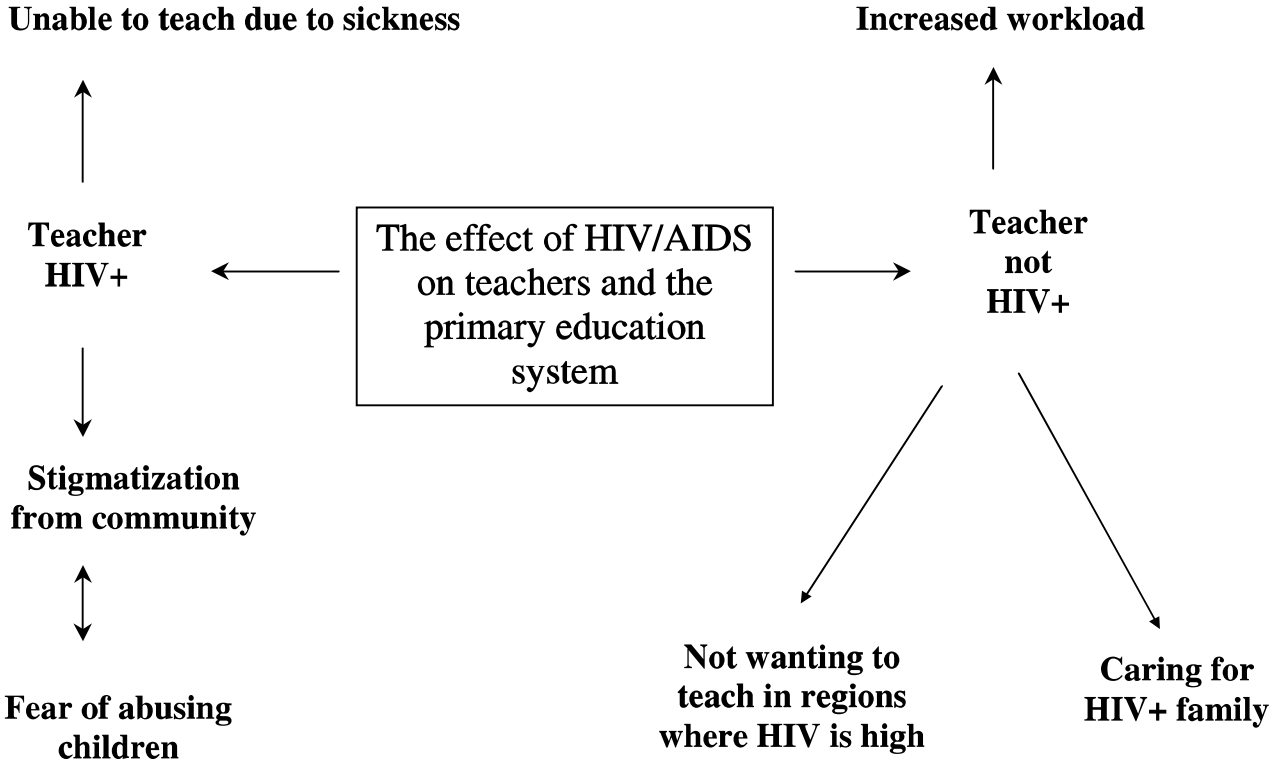
Whilst teachers will undoubtedly have a lot of stress and the same kinds of outcomes as a result of other factors (notably the absence of pay), the existence of AIDS will inevitably lead to greater stress.

Sichone and Haworth (1996) point out that:

"HIV infection levels in those that have received higher education are in the region of 40 per cent or more (v. general population: 25 per cent urban, 13 per cent rural)".

This is not only likely to remove more teachers from education, but it also affects the atmosphere and mood of the classroom. Teachers who are sero-positive, not surprisingly, tend to become unconfident and unmotivated. There is also discrimination against teachers and pupils who are known to be infected. This in turn prevents disclosure, and is psychologically and medically problematic. It also has obvious cost implications. The effects can be summarized as in *Diagram 3*.

Diagram 3. Effects of HIV/AIDS on teachers in UPE



III. OTHER IMPACTS OF HIV/AIDS ON CHILDREN AND FAMILIES

The impact of the pandemic on children in developing countries is very large indeed (Webb, 1997; Foster *et al.*, 1996). Hardest hit are those children who cannot find 'comfortable' alternative homes. Unlike in the developed countries, where there are sound welfare structures such as subsidized health cover, health insurance and a state-supported programme devised in advance (Geballe *et al.*, 1995) to cater for orphaned children, the capacity of developing countries to support its orphans is far less certain. There are already indications in Tanzania that primary education and health-care services are becoming overwhelmed (Galabawa, 1994; Ishumi, 1994; Kiwara, 1994).

The near certainty that more children will be orphaned due to AIDS in developing countries (WHO/GPA, 1995) and the prospect that traditional coping mechanisms to support orphans are now on the verge of collapse, means it is time to re-examine critically the situation of AIDS in these communities. Although different support programmes in affected areas have been initiated, the traditional coping mechanism of incorporating children into the extended family remains the most viable option as a base for community life. This option should be guided by informed decisions. For example, Hunter and Williamson (1997) have argued that "changes in family structure originate in historical patterns of labour migration and long-term economic trends" and that these can be associated with high risks of HIV infection and failure to cope with AIDS-related problems.

Different categories of orphans in need of care and support may require specialized forms of skills and support services, which are still lacking. Street children, for example, will demand different levels of attention than those adopted within their extended families or

children in orphanages. At present, the distribution of support is unclear: patterns of adoption must be clarified if further external support and meaningful intervention in essential services such as education are to succeed.

The absence of a clear government policy regarding the school attendance of orphaned children, their payment of fees and other school requirements has several practical implications. There is need to review some of the regulations that guide the provision of primary education in order to ensure equal access for all children. The reduction in the number of school sessions per day is a timely response to some related problems in severely affected areas in Tanzania. Orphans may find the change more advantageous to them than it is for non-orphans because of their extra involvement in domestic chores (World Bank, 1997). Cross and Whiteside (1996) noted that review of school timetables and other activities can help to accommodate orphans' concerns.

Orphans

The growth in the number of orphans in the region has been occurring for some time. AIDS will add further to the numbers. Coping with orphans stretches even the most extensive kinship system. Much of the care-giving that could absorb orphans is based on grandmothers. When the grandmothers inevitably die, care normally passes to the next generation, but it is likely that AIDS already affects many of that generation, so that families of orphans will have to be headed by adolescent orphans.

Whiteside and Wood (1994) note that orphans:

"Will not be able to afford school fees, uniforms and books; will not be likely to attend school because they will need to work in

order to survive, and if they do attend school they will probably perform less well because of the lack of secure home support ... they are also likely to drop out of school earlier".

However, within some communities this is being attended to. Foster (1996) writes of the FOCUS (Families, Orphans, and Children Under Stress) programme in Zimbabwe for visiting and supporting families with, and/or headed by, orphans, that:

"... by 1995, 30 women volunteers were making some 700 visits each month to about 250 needy families".

The reality of dealing with orphans in a school system is that their psychological deprivation makes schooling that much more difficult. The new additional numbers of orphans resulting from AIDS-related death makes the psychological problems more difficult.

The incidence of orphanhood

The number of orphaned children in the countries of sub-Saharan Africa is just one indicator to show the impact of AIDS on the economy in general and education in particular. The high death rate due to AIDS has resulted in correspondingly high numbers of orphaned children. In 1994 the World Health Organization (WHO) estimated that between 5 to 10 million children under 10 years of age would be orphaned by the year 2000, with 90 per cent found in Africa (WHO/UNICEF, 1994). In the sub-Saharan Africa region the number of AIDS-orphaned children was estimated to be 7.8 million, contributing to more than 90 per cent of the world total number of AIDS orphaned children (UNAIDS, 1999). World Bank (1997) projections of the number of under 15 year-old motherless AIDS orphans in four East and Central African countries are very high.

The reported number of orphans depends on who is included in the estimates. The number could be limited because the age limit of

under 15 does not correspond to the definition of childhood in some countries. In Tanzania, Kenya and Uganda a person becomes an adult after his/her 18th birthday. Using a broader definition of loss of both parents, Ainsworth and Over (1994), for example, showed that by 1990 the number of orphans in Kenya (449,000), Tanzania (545,000) and Uganda (290,000) had already surpassed those reported in 1995 estimates.

The most recent statistics show that Tanzania had a cumulative total of 730,000 AIDS orphans by the end of 1997 (UNICEF, 1999). The national estimate of orphans, however, remains inaccurate, as it is acknowledged that "national estimates of orphans are not available, but the figure of 210,000 quoted in previous reports is likely to be an underestimate" (NACP, 1997). Problems of identifying and keeping records about orphans may not be a unique feature for Tanzania, but a common experience in other countries in the developing world.

The reporting of orphans in Tanzania varies according to the sources and definition used by individual organizations. One survey in Mwanza region indicates that 470 out of 3,353 households had at least one orphan and that "orphan households had more children than other households with children (4.4 and 3.5 children, respectively)" (Urassa et al., 1996). In this study an orphan is defined as a child under the age of 18 years whose mother or father or both parents have died.

Both under-reporting and over-reporting problems have been noted in Tanzania. Urassa et al. (1996) found that among 102 children reported to be orphans, 18 were not. These were foster children whose parents lived elsewhere. On the other hand, 22 out of the 396 reported to be foster children were not, as 16 of them were orphans, while the remaining six lived with their parents. Fostered children were defined as those who live away from their biological parents with other members

of the family or community. Double counting is possible when children keep on moving from one place to the other.

Apart from the difficulty of keeping records, there can be good reasons for under- and over-reporting of orphans:

- there is a denial of AIDS being a cause of a relative's death, leading to the suppression of the orphanhood status of children to avoid further questions on the cause of death;
- some orphans may "be separated from their brothers and sisters (NACP, 1997) ...";
- grandparents may fear being left alone should their grandchildren be taken away from them;
- over-reporting may be prompted by the need for material support as orphan households with many orphans receive more food items than households with fewer orphans.

During the two years of a follow-up study, Urassa *et al.* (1996) noted that orphans and foster children had moved from one place to another significantly more often than children who lived with their two parents. The movements were attributed to the search for good living conditions, school transfers and/or forced changes of households. On the other hand, these children may not be counted at all during the surveys.

Under- and over-reporting pose serious problems in the provision of education. The size of the problem of orphanhood would give a clear picture of the impact of AIDS on enrolment, school attendance and drop-out. But, for the kind of reasons above, reliable data on the extent of orphanhood will remain difficult to determine.

The educational context

In Tanzania today, the official school-entry age is seven years. However, some pupils are admitted well beyond this age. In the 1998

school year, only 74 per cent of total primary school enrolment was in the expected age group (7-13) for this level (MOEC-URT, 1999). Admission into any level of education depends on the capability of the (fostering) parents to meet the cost of education. This is irrespective of the government policy that:

> "primary education shall be universal and compulsory to all children at the age of seven years until they complete this cycle of education... [and] shall continue to be of seven years duration and compulsory in enrolment and attendance" (MOEC-URT, 1995:17).

There is evidence to show low enrolment at primary-school level (Galabawa, 1994; Sumra, 1995; Cooksey *et al.*, 1991; World Bank, 1997) and some of the reasons advanced are the lack of families' financial capability and the different effects of AIDS (Sumra, 1995). The cost of education at primary-school level has meant that pupils are required to pay what is popularly referred to as a 'universal primary education' (UPE) contribution of about Tsh. 2000/= (equivalent to US$3.00) per annum. There are also other contributions intended to help with the maintenance and expansion of the school plant and the procurement of equipment such as desks and teaching-learning materials. Furthermore, contributions ranging from Tsh. 1,000.00 to 5,000.00 (US$1.3 to 7.0) can be instituted when deemed necessary by the school bodies and educational authorities. In addition to school contributions, parents are required to buy exercise books, ballpoint pens, school uniforms, and textbooks as government supply of textbooks is limited to a few copies only. Over and above these costs, parents face other maintenance costs on health, food and clothing.

Household support for education entails provision of essential learning materials and payment of necessary financial contributions as determined by the relevant authorities, if sponsorship from respective governments was not availed to them (Komba, 1994). The

government's withdrawal from its responsibility to provide schools with textbooks and other school materials, means that pupils' respective families have to buy textbooks as well. Furthermore, families are expected to pay school fees, as indicated before.

Thus, future government policies will have to focus on the problem of orphans' education and how these children can be integrated in the society. Institutional support may not be a solution for most of these children. In particular, it is important to examine how many households taking in AIDS orphans manage to send them to school. Such data are missing and any meaningful conclusion about the impact will have to take this into account.

Specific problems facing orphans

The support of orphaned children can often be managed for the first few days, weeks or even months after death, but will decline with time as the fostering households face the day-to-day realities of life with increased costs of care (Hunter and Williamson, 1997) and education (Shaeffer, 1993). Because of variable cultural background and socio-economic conditions, generalized conclusions for all families must be treated with caution. The adoption practices are problematic since community values have not reacted to the challenges AIDS poses to the community. Hunter and Williamson (1997) have noted that:

> "traditionally, formal adoption by a relative was not normally necessary, and if a relative took the steps to formally adopt a child, his or her motives were viewed suspiciously. Now, however, the Social Welfare Division feels it is important to use formal adoption mechanisms so the rights and responsibilities of adoptive parents and children are made explicit" (1997:411).

The practical implications of formal adoption are not clear for AIDS orphans as some may already be AIDS victims and their life

could, therefore, be shorter than expected. Furthermore, adults may adopt orphaned children so that they can gain access to the deceased's property (inheritance laws). On the other hand, adopting adults should be allowed to take these children without being forced.

Detailed information on the problems facing orphaned pupils in Tanzania is limited. Orphans are likely to experience many problems, some of which will be more acute in certain circumstances. Orphans in developing countries are likely to face similar problems related to education. These may include access to education and school performance. The WHO/UNICEF (1998) have classified these problems into the following categories:

- inability to provide school equipment and clothing;
- reduced capacity for individual families to provide for their own food and other needs;
- susceptibility to health risks and vulnerability to HIV infection with high morbidity conditions;
- psycho-social problems that affect child development;
- loss of property due to unclear and cumbersome inheritance procedures.

The Redd Barna Project in Uganda in 1991 identified some of the possible sources of psycho-social problems as (WHO/UNICEF, 1994):

- anxiety about abuse from adults, mostly relatives, and about having to drop out of school (WHO/UNICEF, 1994);
- witnessing the slow, miserable death of one, and possibly both parents;
- often the subsequent loss of their siblings, their home and property, their friends, school - in fact everything that until then has made up their world;
- a move to an unfamiliar home and pattern of life, with little or no choice in the matter;

- schoolteachers unsympathetic to their difficulties and often too ready to punish them for being late or ill equipped, without looking for explanations;
- experiencing relatives haggling over the division of their dead parent's property, sometimes immediately after the funeral;
- multiple loss, first of parents and then of the carers who had taken them in;
- the prospect for some of having to fend for themselves if their parents die.

Orphans may be more vulnerable to psychological problems soon after loss of parent(s), such as depression, withdrawal and low self-esteem. Such conditions have long-term effects on child development and active participation in society (Ngowi and Hogan, 1992; Bowlby, 1969; Lubega, 1990; Mukoyogo and Williams, 1991; Lambert, 1989). In Tanzania, these problems have been noted. Mwanga (1992) has noted that orphans are sometimes difficult to care for by their fostering parents because they display antisocial behaviour due to their underlying feelings of anger and resentment. Social and emotional conditions of orphaned children become worse (Sengendo and Nambi, 1997) upon losing their parents. They may, for example, fail to develop positive attitudes and relationships with other members in the community (Ngowi and Hogan, 1992). Elaborating on their psychological observation, clinical interviews and reports from the carer of J.K. and M.S. in Tanzania, Ngowi and Hogan (1992) noted:

> "Neither of the two children seems to have had too much difficulty academically. However, both J.K. and M.S. showed an increasing inability to adjust and adapt at school. Their behaviour became increasingly problematic and increasing signs of emotional disturbance were evident in the home ... situation became more complex as caretaker herself became increasingly distressed and made excessive demands on teachers. The teachers in turn

somehow failed to appreciate that the behaviour problems of the children in school were related to the emotional chaos they were experiencing. Finally the children terminated from school" (1992:47).

These two children are reported to have had shown aggressive behaviour and failure to comply with school regulations. Aggression was associated with J.K.'s response to the teasing and taunting he experienced from his peers, with remarks such as "your mother died of AIDS and now you are thin and you will also die". J.K. would often withdraw from any contact with any person for a whole day. He also reported somatic complaints and said that he felt others would reject him. M.S. "manifested her emotional disturbance and insecurity more directly by fearfulness". She cried a lot and was reluctant to be seen alone. These behavioural characteristics have been noted in Uganda (Sengendo and Nambi, 1997).

The pre- and post-parental death period is traumatic and likely to cause adjustment problems to children. Psycho-social stressors include hospitalization of parents, children witnessing their parents in agony and subsequently death, sibling separation, transfer from one household to another and hardships in case of lack of adequate support (Ngowi and Hogan, 1992). As observed by Bowlby (1979) children's grieving period for their lost parents takes longer than we usually think, the conditions facing orphans have far-reaching psychosocial implications.

Both teachers and carers were not equipped to detect these problems and they cannot be expected to help such children. One must not be overambitious in believing that adoption and/or fostering of orphans will always result in orphans' quick adjustment or better life in their new families.

While psychosocial problems can be linked to economic conditions, they are inherently a result of stigma, discrimination, fear, trauma and low self-esteem and they affect both a child's development and his or her performance in general social skills. For example, Sengendo and Nambi (1997) have shown that soon after the death of parents, bereaved children's achievement scores in several psychological tests declined substantially and that they experienced drastic changes in their emotions.

The high number of orphaned children has compromised the support of bereaved children (Preble, 1990; Cross and Whiteside, 1996; Bor and Elford, 1995) within the traditional extended family system. The siblings are affected most as they have to live by themselves or are split into relatives' households (Foster, 1996). In some areas, including Tanzania, some children have resorted to street life. This raises questions about how the traditional family structure is coping with the rise in the number of orphans, and how this will affect the future development of orphaned children in general and their educational attainment in particular.

The high rate of increase and the lack of a systematic method of recording the number of orphans in Tanzania (NACP, 1997), impedes the government's and NGOs' effort to realize the magnitude of the problem. This has implications for the understanding of the community's responses, which will vary according to several factors. Hunter and Williamson (1997) observed that:

> "community responses were not common for many reasons, among them poverty and competing concerns of survival; [noting further that] AIDS is not perceived as any more serious than any other common fatal illness until mortality in a community is very high" (1997:412).

One way of assessing community response to AIDS is to look at the number of households willing to take in at least one orphaned child. In a survey in Kagera region, it was observed that poor households had more orphaned children than affluent households (World Bank, 1997). The question here is why poverty-stricken households were ready to take orphans against their economic capacity to support them.

Bledsoe (1989) noted that fostered and adopted children were often given different treatment in these new homes relative to the biological children of the same family. On the quality of care fostered children receive, Hunter and Williamson (1997) observed that:

> "foster children suffer from lack of affection, exploitation of labour, denial of food or other necessities of life, and lack of educational opportunities. Instances of extreme cruelty and physical assaults have also been documented. Some caretakers take orphan-caring responsibilities in the expectation of material gain, inherited property, or the relief items donated by AIDS service organizations" (1997:410).

Mechanisms of support

There are different ways in which children can be supported in the community. Adoption of these children has an advantage of keeping children in the community. There are different types of adoption. Bor and Elford (1994) have listed three types of adoption as 'within the family', 'outside the family' and 'orphanage centres'. In the United States of America, Geballe *et al.* (1995) identified five alternative homes: living with a remaining parent, another relative, living in a foster home, being adopted by another community member, and living in other group settings such as with street children. In other countries, such as Uganda, Zambia and Zimbabwe, child-headed

families are emerging as a distinct family type (Geballe *et al.* (1995). The next section focuses on the general forms of adoption of orphaned children within and outside their family of origin.

In communities still maintaining an extended family structure, some children are or can be adopted or fostered within their own extended family. Here one or more member(s) of the family network, voluntarily or from a sense of obligation, can take the children into his/her family (usually paternal aunts, uncles, grandparents and other very close relatives). Where this coping mechanism is still functioning, all such children are mutually shared among family members. It is expected that the adopting families will assume all parental responsibilities and, in turn, these children reciprocate through respect and obedience.

An alternative adoption or fostering route is where members from outside the extended family come forward to take care of these children, usually when there are no close family members to take them. This type of adoption may be out of the sympathy that community members have towards (AIDS) orphaned children. The adopting families are expected to take the same level of responsibility for these children as they would do for their own biological children.

Another category of children are those who for some reason may not be adopted or fostered at all. This group of children falls into two sub-categories: the first is a 'child-headed' family, which leads its own life in its parents' homestead under the guidance of the older child. The children may be (usually are) supervised, albeit informally, by their adult neighbours. Being a new form of family, very little is known about how this functions. The second sub-category is of 'street children' that migrate into urban areas. These are children of no fixed abode who more often than not engage in undesirable behaviour such as theft, smoking and alcoholism. The majority of these children

would have dropped out of school, if they had been admitted before. Increasingly this is becoming a problem in the developing world and a common position may be necessary to save this future generation.

In many developing countries, the option of integrating orphans with other families is viable but is increasingly becoming impractical: it is very much subject to the existence of those families ready to bear an additional burden and the willingness and ability of orphans themselves to accept their new homes. This is particularly difficult for grown-up children who have already established close ties with their parents. Adoption without the child's consent may have emotional and social development setbacks for the child. In other areas, including Tanzania, some families' viewpoints about accepting orphans have been hampered by the belief that the orphans may spread AIDS to other children. This has been a problem in other affected areas as some schools did not wish to admit orphans for fear that they would spread AIDS to other school pupils (Barnett and Blaikie, 1992).

The element of cost is also prohibitive with respect to institutional care. Ainsworth and Over (1994) have shown that the social cost of institutional care for orphans was too high compared to subsidized homes. The institutional option should handle the immediate problems of orphans, giving the community a chance to initiate community-based programmes in collaboration with government and NGOs helping to strengthen community capacities for sustainability. This is particularly important given NGOs' funding, the time-and-space constraints and their objective-specific nature (Preble, 1990; Cross and Whiteside, 1996). It is difficult, for example, for any single NGO to support and care for an orphan from childhood through to adolescence or adulthood. It has been observed that institutional care as a substitute for family care will be limited due to the increasing number of orphans (Barnett and Blaikie, 1992). Cross and Whiteside

(1996) feel that, though subsidized, the home option remains unpredictable as a result of inadequate information about attitudes and other home facilities, particularly in relation to educational support and social services.

Institutional care, however, has several advantages over community household care for orphaned children in terms of access to education. Institutions may find it easier to provide adequate food and shelter to these children. In contrast, fostering households may put these children to task as a way of paying for the services. Enrolment, school attendance and medical care for orphans are more likely to be guaranteed in institutions than in relatives' households. Katabaro (1999) found that orphans in orphanages had higher school-attendance records than children in other households.

It may be necessary for government and NGOs to support selected bereaved and AIDS-afflicted families on the assumption that these families cannot cope with the AIDS situation alone. The family's contribution to its own maintenance is of vital importance if orphans are to become future members of society.

NGOs can and do support a limited number of orphaned children. There is, however, no formal arrangement to support the majority of affected orphans. More than 80 per cent of orphans interviewed in one survey in Kagera do not receive such help. Other organizations also help a minority of orphans (Lutainurwa, 1993). The Tanzania Red Cross Society, for example, supports only 19 out of 347 schools in Bukoba and Muleba districts. Information about orphaned children's adoption and/or fostering status and their social and emotional development is also lacking. The emotional adjustment and ability of orphaned children to cope with bereavement is a cause of concern given the stigmatization of AIDS. Hunter and Williamson (1997) noted that:

> "in most regions, the social norms for fostering relatives' children were strong, but the circle of responsible relatives is decreasing and the costs of raising children are increasing. Stigma associated with AIDS affected decisions to foster children, but the full impact was difficult to assess. The strong normative pressure to foster children may operate in the days after the death of the parent, but cannot continue when faced with the day-to-day realities of feeding, clothing, and caring for additional children. Children are universally viewed as *mzigo,* a burden or a load" (1997:409).

NGOs or religious groups operate the majority of orphanage centres in the developing countries. But because of high costs these NGOs support only a limited number of orphans. The growing number of street children belies the support and care by the community. There are, for example, many street children in the Bukoba township, only a small percentage of whom could be found at the Boona Bana drop-in centre. Similar situations have been reported in other cities in the sub-Saharan region.

Impact on the household

AIDS is seen to impact on family and society at large in many different ways and, of course, the per capita income of many families in the developing countries lies just below the subsistence level. In one survey in the Kagera region of Tanzania, three different aspects of the impact of AIDS were observed: impact on the labour force; impact on household cash flows due to expenditure and high medical costs; and impact on health, nutrition and household food security.[15] It is logical to assume that when comparing competing family needs against limited resources, the decision of the family will tend to favour

15. Similar classifications have been proposed by Barnett and Blaikie (1992); World Bank (1992) and World Bank (1997).

the treatment of a sick family member rather than to send children to school. Indeed, in the same survey, some households found that it was necessary to dispose of some of the family properties in order to meet the medical charges of the family member (Tibaijuka, 1997). This means that savings, where available, will go towards the care of the patient, and children may have to miss their education (Webb, 1997).

Impact on household and community labour force

At household level the labour loss is partly due to the time a patient spends in bed before his/her ultimate death and the amount of time the carers spend with him/her. In Tibaijuka's case study in Kagera, AIDS deaths in this area accounted for 56 per cent of overall mortality. Patients were bedridden for between three and nine months and the members of the family spent up to seven days on mourning. Both these periods, plus any expenditure on hospital admissions have to be added to calculate the total diverted effort from economic activities by the person's family.

Thus, the impact on individual families is determined not only by the number of deaths in the immediate family, plus the number of times deaths occur in the community, but also the number of family members involved in the nursing activity. If the patient is the head of the family, nursing is intensified not only in terms of financial expenditure and emotional care, but also in the involvement of every member of the family. According to Tibaijuka, the "aggregated labour stocks in labour/man equivalents dropped a full 38 per cent and as much as 83 per cent in one household which had to close down and the orphans absorbed into the households of relatives". This deprives the victim's family of a great deal of time for food production and other economic activities. And children are not spared from this family duty of caring for the sick (Mukoyogo and Williams, 1990).

At village level, there is time spent by the village community in mourning and visiting the sick. According to tradition, funerals are compulsory for every community member and defaulters are ostracised. The practice allows up to seven days of mourning the dead and all intensive-farming activities are brought to a standstill in the entire community. Thus, there is significant loss of time in the village and the amount of labour lost can be calculated by multiplying the number of days allowable by the number of burials in that community (Nindi, 1991; Tibaijuka, 1997). The economic pressure arising from funerals and nursing the sick has forced some changes in the number of mourning days from seven to three and there is now greater lenience for those who work soon after burial (Tibaijuka, 1997; Katabaro, 1993).

Impact on household cash flow

In Tibaijuka's case-study area, the average cost (nursing and funerals cost) was Tsh. 35,000 (about US$53), that is Tsh. 200 (about US$0.30) per day of the six-month period when the AIDS patient is bedridden. The range is quoted to be Tsh. 16,000-135,000 (about US$25-180) depending on the family's economic position. This average expenditure equates to about 64 per cent of the average total per capita income (family cash income and subsistence) of Tsh. 55,000 as per Tibaijuka's estimate in the area, and 96 per cent of the average household cash income of about Tsh. 36,000 per annum.

In many victim families this has led to massive borrowing and/or the sale of family properties, including farmland and livestock (Tibaijuka, 1997). In this area, for example, Tibaijuka cites cases where property had been sold to cover medical costs: indeed, out of the 18 incidences only five reported using their own family savings. Among the rest, funds were either borrowed or assets sold including: land (four cases); some cattle (two cases); all cattle (two cases); goats

(two cases); bicycle (one case); radio (one case); and [one bunch of] bananas (all cases) ... Two households reported to have sold all their cattle while one sold half of its banana-coffee plot (1997:972).

In many average families the opportunity cost is the school fees and other school needs for the family children. This suggests, and it has been observed to be true (Mukoyogo and Williams, 1990), that the remaining orphaned children find it difficult to cope in a poverty-stricken family where all resources are directed to medical attention. The only option for such children is to drop out of school. In some households in Tanzania, the impact has been experienced even without death occurring (World Bank, 1992).

Impact on household health, nutrition and food security

Health, nutrition and household food supply are yet other forms of the impact that families face as a result of AIDS. Tibaijuka (1997) argued that in the case-study area the dependency ratio, i.e. the actual number of people engaged in productive activity compared to the number of all consumers in a household, increased in some households by 34 per cent, while in others the figure doubled. These changes meant that the surviving members (the elderly and orphans) would have more difficult times than before the AIDS deaths. Along with these burdens are the changes in food supply which deteriorate as a result of reallocation of production time to nursing and care for the sick. In this area, where the bulk of the food supply is from the household farm, it can be concluded that deterioration of food supply is due to lack of labour in the households.

AIDS deaths are more frequently reported in the 15-49 age group than any other (NACP, 1995), which is the most productive section of the labour force and reproductive category (Ainsworth and Over,

1994; Mwanga, 1992; Mujinja and Over, 1993). Although AIDS does not cause the mismatch between the working and dependent groups alone, its impact is sharpening as the pandemic prevails. It is becoming increasingly difficult for many families to meet their daily needs such as clothing, medical care, school fees and other materials because of the expenditure required to care for the AIDS patient in the family. Thus, other pressing commitments and poor health conditions often face the household.

IV. MONITORING THE IMPACT OF HIV/AIDS AND THE EDUCATION SECTOR

Although attention has been paid to education *about* AIDS, people working within the education sector do not seem to have given much attention to AIDS in terms of analysis or in terms of policy. This may be because:

- factors other than AIDS are far greater in impact;
- in relation to the range of areas for which people should have education AIDS is seen to be subsumed within wider issues and it is felt that education about AIDS can be compartmentalized;
- in relation to the health of pupils and staff there are many other issues besides AIDS to consider.

Existing concerns in education

The 1995 International Working Group on Education report put the predominant concerns in educational policies as issues of resources and costs, of quality, and of effectiveness. The IWGE reviewed the renewed thinking about education's role in sustainable societal development and for poverty alleviation, and pointed to the fact that the number of illiterate people is still 800 million. It pointed to the fact that in the countries in sub-Saharan African there is an illiteracy rate of 64 per cent for females compared to an illiteracy rate of 41 per cent in males, and that this situation will not improve for the foreseeable future. In terms of female education in the region, of the 52 million children out of school, 36 million (70 per cent) are female. The male/female gap is 20 per cent at the end of primary school, and this increases to 50 per cent at the end of secondary school. It also pointed out that the number of children in general out of school is still increasing, although the numbers enrolled are also increasing.

Among the reasons given by the group for the continuing crisis in education, it listed:

- the continuing large rate of population increase which is greater than the number of schools can cope with;
- the high unit costs for education;
- the continuing recession and the impacts of the Structural Adjustment Programmes;
- the inappropriate priorities in education which are out of step with the expectations of both parents and children;
- the lack of financial expertise in countries to design cost-reduction strategies;
- the fact that increases in enrolment put such a strain on the existing education system that there are inevitable quality decreases;
- a continued over-reliance on external assistance which is not increasing;
- continued large family sizes which, in the recession, lead to less expenditure on all children;
- perceived low economic returns for educating girls;
- the lack of sexual safety, especially at schools;
- cultures that remain hostile to female education.

Most of these reasons are not new. They have been areas of concern since the start of the 1980s, and several publications and reports of the major United Nations agencies (UNDP, UNESCO, UNICEF, World Bank) have made repeated references to these problems since that time. The latest publications and statistics from UNESCO show no change in these priority concerns.

The reason for reiterating these well-known statements is that nowhere in the reports is AIDS or HIV mentioned as a priority or even as a major issue. Similarly, it is important to note that in the

protocol of the SADC Human Resource Development Sector proposal of 1996, there is no mention of HIV/AIDS and its impact on education and training.

The focus of most educational programmes during the 1990s therefore was to try to match the population increases with appropriate services, to improve quality rather than quantity, to reduce inequities (gender, race, class, wealth, rural/urban), to improve financing of education systems, to use and value the informal education sector more, and to alter the focus of education so that it becomes more and more an integral part of Human Resource Development.

Part of the focus on quality is also an effort to change approaches used in the education system, so that debate is encouraged and there is increasing attention paid to social values rather than knowledge. But such thinking remains more for future strategy whilst the major problems of drop-out, illiteracy, population increase, poverty, high repetition rates, and finding enough salaries for teachers (which remain by far the largest component of any education budget) continue.

Quantitative arguments

Part of the problem of assessing the quantitative impact of AIDS is that previous predictions concerning growth rate have been astonishingly inaccurate. Thus the growth of population in school-age cohorts was far higher than the 18 per cent predicted for the period 1960-1980 – in fact it was five times higher than expected (Bishop, 1989).

Overall figures

These growth rates were in large measure adsorbed in schools and are presumed to have had adverse effects on quality, and the

concerns amongst educational circles centre on this problem. The question here is whether AIDS has had an additional and important impact on the quality or the subsequent growth rates. To put the *quantitative* impacts on education in focus, one should examine carefully the tables published by UNESCO showing pupil/teacher/schools ratios in the SADC region (see *Annex 5*)

The first thing to notice is that the simple student/teacher ratios do not seem to have increased; indeed, if anything, there seem to have been some decreases. The tables in the second half of the Annex show percentage changes over each five-year period and the associations between those percentage changes and the current estimated HIV prevalence rate. These correlations show a statistically significant *inverse* association between the level of HIV infection and the pupil/teacher ratios in primary schools and the same tendency in secondary schools. This suggests that any decline in the numbers of teachers in each of the countries have been more than matched by a decline in the numbers of students.

The impact of other factors are well exemplified by the changes in the rates of increase of enrolment when AIDS was not an issue. Part of the earlier enrolment rates were due to the political demands for increased education in the post-independent years, and reflected the aspirations of both governments and people. However, both disillusion and economics began to have their impact in the 1980s and enrolments have stagnated.

In addition, drop-out rates appear to have increased in many countries in the region. The factors that lead to these drop-outs are similar to those on the IWGE list. What is important is that, within this context, it is almost impossible to determine the importance of AIDS in relation to the other factors that influence the education system.

Studies showing the impact of HIV/AIDS

It is important to mention that this difficulty is not for want of trying. There have been several studies in the region on the impact of AIDS on the education sector, quoting the factors discussed above such as the high level of HIV infection in teachers, the increase in orphans, the increased amount of time that children have to spend on care of infected adults, the numbers of orphans that teachers have to look after personally, the shift in education that is required to help children care for people with AIDS, the theoretical impacts of reduction in numbers of children and teachers as a result of AIDS, the impact of the increases in the number of orphans on the ability of families to provide education to all the children, and the extent to which structural adjustment programmes have influenced an increase in prostitution (and hence susceptibility to HIV) by girls of school age who are trying to get enough money to buy school books or pay for education. Some of the quantitative studies in the region are outlined in *Table 4.1* that follows.

However, while there definitely will be an increase in the numbers of teachers dying from AIDS as those who are already infected with HIV go on to develop AIDS, this has to be a hypothetical growth, and the longer the time span over which the predictions are made, the less secure they are likely to be. Certainly the predictions made earlier have not been borne out, and even within this table it is seen that the predictions of the likely numbers of orphans in 2006 made for Swaziland in 1994 were downgraded in 1995. It is also important to consider whether the continuing loss of teachers and pupils for other reasons will be at the same rates, out of phase or even compensating in some way. There is simply no way of telling at this moment. These figure therefore are inadequate for planning purposes.

Table 4.1. HIV sero prevalence estimates, decreased educational demand and supply, and estimated number of orphans

Country	Decreased demand: educational enrolments	Decreased supply	Estimated number of orphans	Source
South Africa			KwaZulu-Natal: 1993: 13,470 2000: 197,490 2006: 565,910	1) Whiteside *et al.*, 1995
Swaziland	Primary school: 1994: 214,000		1) 1993: 10,730 2006: **115,090**	2) Whiteside and Wood, 1994
	Estimate **without AIDS:** 2006: 343,000		1994: 10,060 2000: 45,540 2006: **85,910**	
	Estimate **with AIDS:** 2006: 302,000			
Tanzania	Primary: 2020: 20% less Secondary 2020: 14% less	Primary teachers: 2020: 27,000 die of AIDS		World Bank, 1991
Zambia		HIV prevalence Higher education 40%	1993: 50,000 2000: 600,000	Sichone and Haworth, 1996
Zimbabwe		1) 40% of teachers teachers	2) 15% of children under 15 years old in Mutare	1) Mukuka and Kilikiti, 1995 2) Foster, 1996

Note: The figures on demand in Swaziland indicate two projections: one without AIDS (343,000) and one with AIDS (302,000). This would mean about a 13 per cent drop in demand, relative to estimated projections.

Webb has the following to say about impact:

"The impact of HIV/AIDS within the education sector is still largely unknown. Records are scant at educational institutions and even on direct questioning only 20 per cent of one sample of school administrators claimed that AIDS had had any effect on labour costs (Kunkhuli, 1995). What the records did show is a rising trend of costs and that the highest expenditure the Ministry of Education is incurring as a result of AIDS is for funeral grants.

Mukuka and Kalikiti (1995) suggested that at present there is a considerable urban distinction in the impact. In 11 rural school studies, there was an average of five teacher deaths over the previous three years, compared to an average of 17 in the urban school studies. In general, teachers and students were unsure if AIDS had affected the quality of education in the schools".

These studies therefore do not help the region answer the fundamental questions facing this paper in terms of assessment of impact of AIDS in the context of other factors, and the extent to which new *regional* policies, actions and strategies in education should evolve with respect to AIDS. So discussion of the impact on supply and demand is of little use for planning purposes until figures are available that separate out the variety of factors, quantify them and give them a relative weighting.

The increased randomness of educational provision

There are some data and some projections that can be used, however inaccurate they may be. The current general trends and future projections for SADC countries indicate that both supply of and demand for education are likely to decrease in the medium term (see *Table 4.1*). However, the two trends are unlikely to match, neatly or rationally. What is more probable is what Shaeffer calls the increased randomness of educational provision:

"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 will only make the provision of education more sporadic and unsystematic. Parents and children who realize this may see little point in continuing to pay for such an education" (1993:11).

As can be expected from the evidence provided above, and judging from the regional trends, it is not obvious what *numerical*

impact AIDS in particular will have had on the ongoing problems. Nevertheless, AIDS has done much to highlight existing inadequacies and weaknesses in the education system in the region, and has certainly added to an existing burden of problems facing the sector.

Whatever the impact, the increased randomness of educational provision referred to above will make planning more difficult, and will have to lead us away from the systematic models of the past – especially those which espoused social engineering on a grand scale. Already the international trend is to suggest devolution and flexibility of policy-making, but such trends are not yet visible in this region. In development terms, this means a shift from administration to management.

On the face of it, therefore, AIDS has not so far by itself had a major numerical impact on the educational process or services in terms of supply and demand in comparison with other factors. This is not to say that other impacts are not important. What is needed now is research to show the relative importance of HIV and AIDS in relation to other factors.

Clearly, whether or not there is any overall impact on the teacher/pupil ratio, the epidemic does have very important impacts on the attainability of the quantitative UPE goals and on the quality of education. For planning purposes, it is therefore important to be able to track the spread of the pandemic through the system.

- There is a general lack of concrete data and research presenting figures and information about HIV/AIDS and the impact on the education sector. This is e*specially the case when it comes to staff replacement issues and human resource development generally.*
- HIV/AIDS is a complex issue, and cannot be separated from such primary goals as poverty alleviation. It has to be dealt with in a

holistic approach, targeting individuals, households, communities and nation-states. *A cross-sectoral approach is essential.*

Methodology of measuring impact

In attempting to measure the impact of HIV/AIDS on education, one faces the problem of the methodology to use in determining the extent of the impact. Whereas the indicators (as discussed before) are clear, it is difficult to isolate other factors. It is, for example, difficult to attribute some death cases to AIDS if there is no clinical diagnosis to prove the case is due to AIDS. Similarly, as illustrated above, non-enrolment and school absenteeism are due to many factors, including problems not related to AIDS. The question here is how certain should one be to attribute some of the problems to HIV/AIDS and others to different problems?

There are several possible data on the number of HIV-infected education personnel nationwide: use of files from clinics and hospitals in getting information on the causes of death (for teachers and other education personnel and the determination of the number of deaths due to HIV/AIDS), or based on routine personnel data. The extent to which planners can rely on such data (shortage of teachers due to HIV/AIDS-related illness or deaths; time spent by staff to attend the funerals of colleagues, absenteeism for staff, etc.) for decision-making is discussed below; and we also discuss the problem of interpreting information necessary for monitoring the impact on the system.

Teacher data

(a) Potential for using clinical and medical data to track AIDS among teachers

It appears clear from the studies in the two francophone countries that it is difficult to determine whether or not the cause of death was

AIDS (in Central African Republic, only 57 of the 339 deaths had a known cause; in Côte d'Ivoire, 303 out of 549). However in both cases:

- the education system itself was able to assess the number of months of illness absence;
- it appeared possible with some effort to extract information from the clinics and hospitals about teachers who had presented for diagnosis and treatment.

Whilst the latter is of clinical interest, it is little use for planning purposes as (a) it requires a special investigation, and (b) the majority had already reached the clinical stage of AIDS which would mean that their effective teaching days would already have been considerably reduced even if they survived for a long time.

(b) Using personnel records

On this basis, the most sensible set of indicators, which could be relatively easily generated from personnel systems, would be:

- number of teachers at each grade level, by standard (within country) region and by level of qualification;
- numbers and proportions of new recruits to the stock;
- number and proportions of teachers retiring at correct age;
- numbers and proportions of teachers leaving the system prematurely:
  - possibly at each grade level,
  - possibly by standard region,
  - possibly by level of qualification.

The first three should already be standard or, if not, relatively easily generated from personnel systems. The latter would require the introduction of another standard output from the civil service/ registration system.

With these data, a regular summary can be generated of the average length of service and age of teachers leaving the system prematurely, and of the average absence during the year preceding their departure from the system. These will provide the most reliable indicators of the spread of the pandemic and which class grades, regions of country and levels of teachers are most affected.

Data on children

There are three problems:

- how many children are being orphaned?
- how many children are not coming to school and how many of those are orphans?
- how many children at school on a regular basis are able to follow the lessons and how many of those are orphans?

These problems and their measurement overlap. Current routine data, at best, measure enrolments and attendances and are able to generate rates of repetition. But nearly all the estimates of gross or net enrolment rates rely on demographic population projections which are themselves becoming problematic with the pandemic (see *Introduction*). Realistically, therefore, we have to acknowledge that, in areas with high sero prevalence, we probably cannot estimate GERs or NERs with any reliability without a community survey, which is not feasible on a national level.

Other options therefore have to be explored for generating some useful national data. The possibilities are considered here: drawing on agency (NGO) records of AIDS orphans; and improving the current data on school attendance.

(a) Agency records on orphans

It is probably not feasible on a national basis to collect school-based data on orphans because this imposes the burden of

ascertainment and recording on already overstretched teachers. Moreover, it is unclear how useful a simple count of those who are orphaned would be, given the complexity of relationships and the differential likelihood of support. This can only be done on a local level with the co-operation of the parents and community leaders.

The experience in Uganda, however, suggests that considerable information can be collected by drawing on the records of those who are supporting orphans in schools such as WATOTO (see *Annex 4*). Most importantly in addition to age, sex, whether or not parents are alive, whom the child is living with, and whether child is separated from siblings, they record the year of schooling. This enables calculation of the extent to which 'orphans' (however defined) are being marginalized.

(b) Improving the current data on school attendance

In general, the administrative data on school enrolment give a reasonably accurate portrayal of the situation for the day on which they are collected: the problem is that they can bear no relation to the numbers of children who actually attend school during the year. The accepted view is that children affected by HIV/AIDS in the family are less likely to be enrolled in school, and, if they are, are less likely to attend regularly. On the other hand, we have already explained that some of the families affected by HIV/AIDS might be *more* not less enthusiastic to send their children to school. The resolution of this conflict of evidence is probably simple: different consequences occur in different situations.

However, all agree that an increasing pandemic will affect social and economic processes around death, family formation, maintenance and reproduction and rituals. For children, this implies that there will be an increasing number of occasions when they are kept at home,

either for (domestic) work reasons, or because of family problems or a funeral, or simply because of fees. Whatever the reason, the fluctuations and/or trends in attendance rates, if accurately measured, will be a good proxy indicator of local perturbations to the school system, most of which may well be due to AIDS.

Building capacity to assess the impact on education

Both field and literature surveys (limited to some areas) have suggested that there is lack of capacity to assess the impact of HIV/AIDS from the grass-roots level up to the national level in many countries. Whilst Cote d'Ivoire and the Central African Republic were able to document the numbers of teachers affected, the response to the question: 'how many teachers have died of AIDS?' in Kenya and Tanzania appeared to have no answer. There was no clear indication that such information can be collected. This paper proposes some methods that can help to improve this situation in order to be able to assess the impact of the pandemic.

In order to generate and gain access to relevant information there is need to train and sensitize teachers and educational administrators to be responsible for keeping the following records:

On teachers (and other officials):

- number of colleagues who are affected by the pandemic;
- pupils who drop out of school because of AIDS;
- time lost by teachers on matters related to AIDS (e.g. attending AIDS patients, attending funerals where the cause of death is AIDS);
- teachers falling sick with AIDS-related diseases.

On pupils:

- number of children remaining absent because of AIDS-related problems (e.g. death of a parent/relative, attending an AIDS patient);

- hours lost as a result of teacher's absence because of AIDS problems;
- constantly keep record of school pupils who become orphans because of AIDS;
- number of schools closed because of reduced number of children (probably due to AIDS);
- number of school transfers because of AIDS, e.g. number of children transferred after losing a parent/guardian.

This format can be replicated at district/regional/provincial level up to the national co-ordinating unit in the Ministry of Education. A reporting mechanism can be instituted accordingly to ensure flow of information.

More generally, there needs to be a greater understanding of household budgeting:

- to establish the extent to which family incomes have been reduced;
- to establish a reduced education budget as a consequence of reallocation of funds for health/medical care at family/household level and national level (allocation to Ministry of Health [MOH] rather than to Ministry of Education and Culture [MOEC] in Tanzania.

Practicalities

The problem, however, is not simply to enumerate sensible indicators; it is also to assess the feasibility of collecting the corresponding data. Typically, whilst data on teachers are kept reasonably consistently – if only for the purpose of paying their salaries – the reality is that, at least in sub-Saharan Africa, countries most affected by the pandemic are also those countries who are experiencing most problems with collecting even the very basic data on children reliably.

Given that the focus is on the quantitative UPE grades and on the quality of education, there are two main implications: there is no particular advantage in adding to, augmenting or improving the data on teachers any further; instead it is important to concentrate on the reliability of the basic data about children in the system.

V. MICRO-LEVEL IMPACTS

Micro-level impacts occur within a macro context. The first step therefore in any study of micro impacts is to analyze the implications of the macro situation and trends. In this case that means applying epidemiological knowledge about the current infection rates and vectors to the socio-demographics of the local population; and, where available, sociocultural understandings which will help to identify the likely socio-economic distribution of victims of the epidemic. Note that the information 'traffic' is not only one way: generalized sociocultural understandings grow out of several micro studies; ways of interpreting epidemiological findings depend on local knowledge and so on.

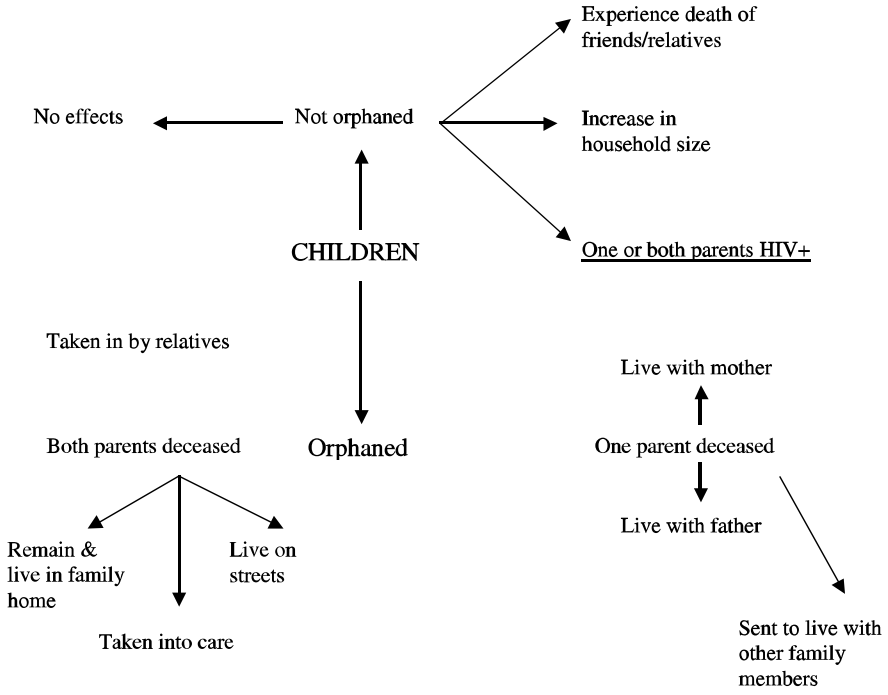
Given the macro context, the local situation is partially determined: but, of course, local actors also have an impact. These impacts can be conceptualized in terms of a stakeholder approach, and we would identify five main stakeholders around any school: the children, the parents, the teachers, the school officials themselves and the community (see *Diagram 4*).

There are five principal ways in which AIDS orphans are disadvantaged more than other children in a poor country:

(i) **Financial vulnerability**. No means to meet the demands from school in terms of uniform, books etc. Orphans are also sometimes deprived of their right to inheritance etc., and this further diminishes their financial position.[16]

16. Odiwuor. 1999. "AIDS scourge: which way forward for Africa?", p. 24.

Diagram 4. Impacts on orphans and peers



(ii) **They are often the first to be denied schooling.** Family or neighbours often take in the orphans. The carers then experience an even greater financial strain, and the orphans may not be prioritized.

(iii) **Little or no follow-up from grown-ups.** Those who take in orphans are often in a difficult position themselves. A study in Tanzania indicated that families who had themselves experienced an AIDS death were more likely to take in orphans, and that those households with the most dependants were also the most willing to take on additional children![17] It follows that

17. UNAIDS. 1997. "Children orphaned by AIDS", p. 3.

the grown-ups of these families have little means of supporting each and every child. Many orphans thus get little emotional follow-up to deal with the trauma they have been exposed to through the illness and deaths of their parents.

(iv) **Few incentives to continue schooling** instead of working.

(v) **Stigma and prejudice lead to social isolation.** About two-thirds of children born to HIV-positive mothers do not contract the virus, and hence have the potential to grow up as healthy as any other child. Evidence however suggests that AIDS orphans are more likely to die from preventable diseases because of the mistaken belief that their illness must be due to AIDS and that medical help is thus pointless.[18] Education and health care may be denied them, and the orphans are thus deprived of important channels of information about HIV/AIDS.[19]

Case study of orphans in Uganda (1)

Based on interviews with 20 children, Rice (1996) showed how the extent to which children moved between schools depended on their family status (see *Table 5.1*). There is a clear tendency for those in care to move between schools.

Table 5.1. Number of different schools (interviews with 20 children)

Number of different schools	In care	Extended family	Normal
1 school	0	7	13
2 schools	4	10	7
3 schools	10	2	0
4 schools	6	0	0

Source: Rice (1996), Table 5.2.11.

18. UNAIDS. 1997. "Children orphaned by AIDS", p. 4.
19. UNAIDS. 1997. "Children orphaned by AIDS", p .2.

Rice (1996) also interviewed the same children as to their views about what made for a good and for a bad school. These views, which are important to take into account when planning for schools, are given. The aspects mentioned by more than five children as most important in making for a good school were good latrines and good teaching; the aspects mentioned as most important in making for a bad school were no or poor latrines, weak discipline and poor teaching.

Impacts

Rice (1996) summarized the impacts on the various stakeholders as follows.

Children:

- trauma;
- stigmatization of orphans;
- movement between schools;
- attendance levels and falling behind.

Teachers:

- workload not increased;
- no evidence of not wanting to teach;
- lack of sexual abuse;
- need for counselling.

Parents, Guardians, Carers:

- relevance of education increased as did not want children to be a burden;
- quality of UPE so low, UPE schools not considered;
- drop-out rates same for boys and girls.

Schools:

- curriculum to include AIDS awareness *and* opportunity for expression;
- flexibility not seen as a problem;
- children tend to be much older than usual age for grade, partly because of absence, also because of movement.

Government:

- personnel;
- affects their ability to meet their goals.

Impact of orphans on attainment of EFA goals

Goal: Net enrolment into P1 should be 85 per cent of all six year olds (UNPAC, 1993)

Only 32 per cent of the six year olds applying for sponsorship were in P1, leaving 68 per cent of the respondents below the government target. Obviously, this is not a representative sample of the population. Taking a crude estimate that 1 in 10 children would be orphaned by AIDS by the year 2000, even if 90 per cent of all other children in the country are in P1 (which would be a very optimistic projection if the epidemic is at such a level), the final figure of 93.2 per cent would still be only just above the government's target. Moreover, as the government has identified orphans as one of the priority groups, surely it should be aiming for a similar percentage in the group as it is nationally. These figures would suggest that at present it is a long way off.

Goal: Survival rate of enrolment in P5 from P1 should be 60 per cent (UNPAC, 1993)

Only 13 per cent of children in the programme had been able to complete their primary education with no drop-out or repetition,

well below the aim of the government. The government may well be trying to achieve these figures through the opportunity of UPE. However, at present it does not seem that teachers and parents have much faith in the success or potential value of this system.

Case study in Uganda (2)

AIDS has and will continue to have a significant impact on the productive structure of the country's economy, the availability of skilled workers and professional personnel and family structures and their ability to cope with relatives needing help with nursing or care for orphans and the elderly. The effects of the epidemic are already visible in the areas which were affected by the first stages of the epidemic in the early 1980s. In the districts of Rakai and Masaka, there has been an increase in the dependency ratio, i.e. the number of children being cared for by elderly adults. There are homes in these areas with no residents older than 15 years with toddlers and old people only. Fields have gone fallow after the death of people who used to tend them (Redd Barna, 1989).

Already in Rakai district, there is an indication that it is beginning to suffer manpower shortages due to the death of skilled staff by AIDS. Five of the 15 professional staff working in a health centre in Rakai had died of AIDS (Redd Barna, 1989). In Rakai, AIDS has reduced the labour force and land under cultivation. One quarter (25 per cent) of the households in a study by Sebina (1991) reported cultivating less land over the past five years. Thirty-five per cent of those households gave sickness and death as the main reason.

Deaths are also occurring among students in institutions of higher education. In 1992, 20 deaths were recorded at Makerere University. Similar statistics although not readily available must exist in other tertiary-level educational institutions. Between 1986 to 1988 out of

the 240 officials sent to study abroad, 12 died, 10 of whom were AIDS cases (Babikwa and Kirumira, 1993).

A person's social class in this area used to be determined by the amount of land or the number of cows this person owned. Both the land and the cows were in most cases passed down from father to son through inheritance. In the 1970s, the existence of illicit economic activities in the area had a serious destabilizing effect on the, already unequal, balance between the sexes and the rich and poor in the community. Men with resources to invest participated in the trade and were in receipt of grossly inflated incomes. Their purchasing power grew greatly as compared to that of women and some of the men who remained locked in the economic circuit of the village economy. Within this they were largely excluded from the economic security of owning land. With the increase in incomes, the traders acquired multiple wives as well as girlfriends. Inflation created such an ambience of prosperity that even porters were considered rich by poor women with no other access to money than through sexual services. So it is not surprising that the first wave of afflictions and death was in trading and polygamous households. Lyantonde is reported to have lost up to three distinctive waves of business and commercial elite since 1987.

All mourners were expected to contribute towards the cost of the funeral. The main function of the community was seen as that of comforting and sharing in the bereavement and saying farewell to the dead person. Neighbours slept at the home of the bereaved, watching over the body. All agricultural work was suspended for three days. The relatives of the deceased could mourn, without work, for a month or longer.

Today, things are changing. It is now common practice for people to make contributions to buy the coffin, to pay for announcements

on the radio and to feed the mourners. This is different from the customary practice of giving a bereaved person some money either at the funeral or if one misses the funeral. Thus the community and relatives still help the bereaved household make a major life change by mobilizing resources such as labour, money, food and concern, but this is now done in a less leisured and more utilitarian way.

However, it has been observed that the growth rate of Rakai district fell by at least 23 per cent between 1980 and 1991. While the population grew at a rate of 3.9 per cent between 1969 and 1980, it recorded a lower growth rate of 3 per cent between 1980 and 1991. This decline in growth rate has been attributed to the AIDS epidemic in the district (Rakai District Environment Profile, 1992).

Methodology for assessing micro-level impacts

Our (theoretical) framework for describing what is happening at the local level also has to be the guide for developing indicators, not only for the nature of demand and of supply but also of the quality of education, learning or training which is being offered.

Demand

At the community level, it is realistic to suggest that a community-level survey of participation in school should be carried out focusing on those not at school and the reasons why. In communities where there are significant levels of discrimination against those associated with HIV/AIDS, this will require very sensitive design. But it is only through such a survey that one can begin to assess what is going on and thence begin to formulate a plan of possible action/intervention. The same survey should be used to estimate the extent to which HIV/AIDS has affected family income.

Quality of education and learning

It is impossible to implement a national survey of quality in the conditions prevailing in most developing countries (and it would be pretty difficult from a standing start in most developed countries). The Inspectorates – who might otherwise provide at least some kind of national picture – are often severely constrained in terms of resources (as well as potentially being affected by HIV/AIDS themselves). In this situation, the role of the community becomes – if possible – even more important than ever in monitoring the quality of education being provided and contributing to the best possible solution to the problem.

As a result of all these social and economic processes, the AIDS epidemic has had a serious impact on the education sector, specifically on the demand for, supply of and quality of education provided at all levels. It is not clear whether the impact has been reduced substantially even in those countries that have organized to address the epidemic. It is evident from the available statistics that the impact is and will be greatest in many areas of sub-Saharan Africa (UNAIDS, 1999). Governments in these countries and Education Ministries, in particular, will have to work tirelessly and collectively against this impact. This is important given the fact that HIV/AIDS is not merely a health problem, but rather a problem that has permeated the cultural, economic and social life of much of the community which is the life-support system for the basic education sector at least. It is therefore important to pool our experiences in order to develop the best possible responses. Collective efforts from these countries will always mean identification of those areas where experiences in policy can easily be adopted by other countries.

In conclusion, the statistics are as staggering as they are frightening and they are impacting on the quality of education. It is impossible

to overemphasize or exaggerate the scope and complexity of challenges faced by children affected by HIV/AIDS and by the families, communities and governments responsible for them. One of the most urgent responses to this tragedy should be to build the capacity of children to support themselves by enabling children to stay in school and acquire not only vocational skills but life skills. Although the primary and most traditional role of the school is to equip children with literacy and numeracy skills, the school will be expected to take on a new and perhaps daunting role, that of equipping children with survival skills.

VI. POLICY OPTIONS

The financial costs of HIV/AIDS impacting on the education system can be viewed in two ways. First, we can look at the capacity utilization of schools, trained teachers and other personnel who may not be used maximally because of the reduced number of pupils in schools as a result of truancy or drop-out. Both school pupils and teachers participate in rituals such as funeral ceremonies. Funerals are costly in terms of time and money. The World Bank (1997) shows that expenditure on funerals was slightly higher than that on medical care in Tanzania, and that this was higher for people who died of AIDS than for people who died of other causes. The time spent on funerals and that spent outside the school system can reflect the cost implication of AIDS on education.

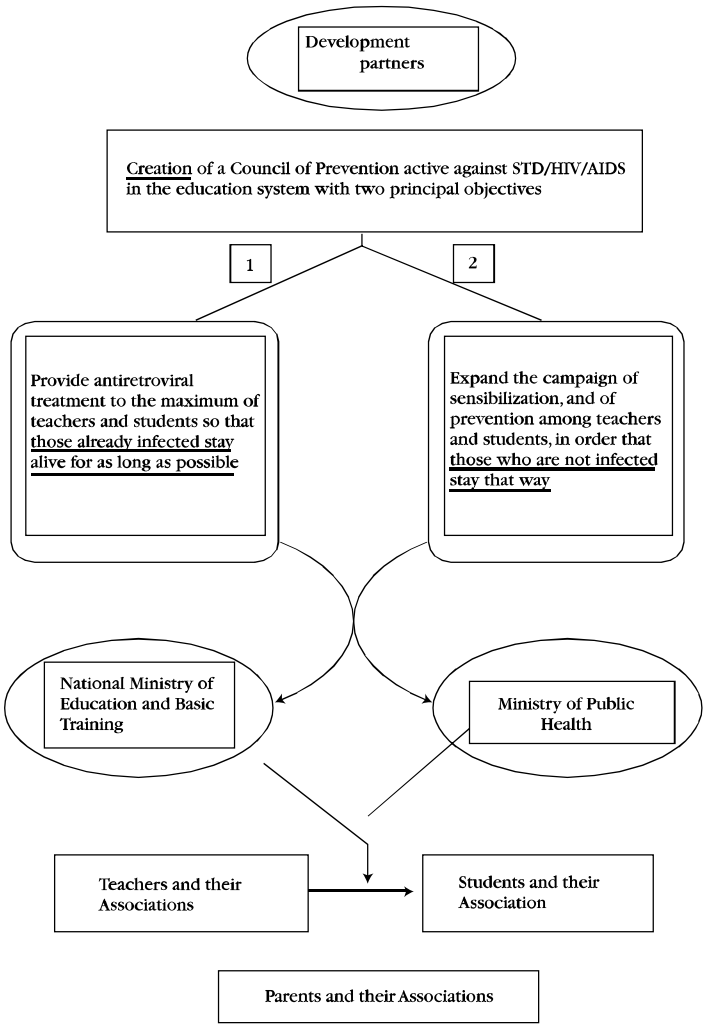
Another financial implication arises from the training of teachers and other educational personnel who eventually die of AIDS. In the absence of the number of teachers who have died due to AIDS, the estimated figures can help to provide a picture of the costs involved in this process. The cost of training one graduate teacher at the University of Dar es Salaam is about Tsh. 2.2 million per year excluding stipend. Thus a loss of 10 teachers to AIDS amounts to Tsh. 22 million. Other costs relate to medical charges that are extremely high.

The most obvious impact, which is illustrated in *Diagram 5*, is the importance of intersectoral co-operation especially between the Ministries of Education and Health. As can be seen, there has to be co-operation *at each stage* from initial consciousness-raising, in the development of a Plan of Action, and in implementing any programme that is agreed. If both partners are not fully engaged, then at best there are inefficiencies, at worst the programme fails.

Two other issues which need to be considered are:

- the potential relevance of multigrade teaching in order to keep open schools that are accessible to children as enrolments fall;
- the potential importance of non-formal alternatives to schooling.

Diagram 5. Intersectoral co-operation



Multigrade teaching, whilst it might optimize resource use in terms of the number of teachers available at any one time, will require trained teachers who are trained to that approach to pedagogy, implying additional costs. There have of course been several successful experiments with multigrade teaching (before the term was invented) in the original village schools in most of Europe during the nineteenth century and missionary schools in many other countries. But organized attempts to introduce multigrade teaching into an existing one-grade-per-teacher system have not always been successful and, clearly, the presence of HIV/AIDS only adds to the complexity.

Non-formal alternatives to schooling are, in principle, more flexible, but have also had a chequered history over the past 30 years. The basic problem is that this may be seen as a substitute, lower-quality form of education, and may thus only add to the discrimination suffered by children who are already psychologically deprived. Proceed with caution!

Why education should be stressed?

In Dar es Salaam, Tanzania, 60 per cent of 14-year old boys and 35 per cent of girls have reported that they are sexually experienced.[20] This is a clear indication that HIV/AIDS education needs to start at a young age. In heavily infected countries, the ones most likely to be HIV-free are those in the 5-14 years-old population.[21] These children are also the target group for primary and junior secondary education. Working with young people is a long-term investment. Young people are a force for change, and it is vital to implement a safe behaviour pattern *before they become sexually active.*[22] The school system is the only social structure with the potential to reach out to all of these young people.[23] This is the subject of Part B.

20. UNDP. 1999. "Adolescent sexuality, gender and the HIV epidemic", p. 2.
21. M.J. Kelly. 1999. "The impact of HIV/AIDS on schooling in Zambia", p. 10.
22. UNAIDS. 1998. "Force for change: World AIDS Campaign with young people", p. 3.
23. M.J. Kelly. 1999. "The impact of HIV/AIDS on schooling in Zambia", p. 10.

PART B.
EDUCATION AS AN INSTRUMENT OF PREVENTION

VII. INSTITUTIONALIZING HIV/AIDS EDUCATION

Introduction

The education sector is by its nature a unique tool for spreading HIV/AIDS information and awareness. It often receives the lion's share of public revenues, and is usually the major employer of public staff in a country. If the education sector was effectively used as a channel for promoting HIV/AIDS awareness, one could reach a very large audience. Not only could teachers and administrative staff in the education sector be reached, but also pupils at all levels, their parents and extended families. The education sector represents an already existing infrastructure, and the use of it as a channel for promoting HIV/AIDS education would hence be cost-effective compared to other innovations, provided that sound planning and administration is catered for. Teachers need to be appropriately trained for the successful integration of life skills and AIDS education, as well as working with peer educators.[24]

Even if school enrolments are quite low in some countries, the education sector probably represents the most effective structure to reach out to a large proportion of children and young people with this vital information.[25] Education is a national concern in all parts of the world and strong governmental commitment is thus needed to mainstream the education sector as a channel for HIV/AIDS information. UNAIDS (1999) writes:

> *"Policies on integrating quality life-skills, sexual health and HIV/AIDS education into school curricula, starting at primary school and continuing throughout a student's education must be*

24. UNAIDS. 1999. "Key ideas and issues for action. 1999 World AIDS Campaign", p. 9.
25. UNICEF. 1995. "Zimbabwe's AIDS action programmes for schools", p. 49.

developed by Ministries of Education in collaboration with PTAs (...) and student representatives".[26]

In order to get the message through to people there is a need for governmental commitment both in terms of planning and advocacy. Support from the media, parents and other community members is vital, but this cannot be obtained on a broader basis without substantial governmental effort.[27] Some of the life skills programmes in the Eastern and Southern Africa region are reviewed in *Annex 6*; and another approach that is being tested (the Pro-Change approach) in South Africa is described in *Annex 7*.

Curriculum alterations

In many countries, the curriculum is already overcrowded and even outdated. The HIV/AIDS epidemic has accelerated the need for a new curriculum with emphasis on life skills in order to encourage behaviour changes.[28] The development of HIV/AIDS teaching and learning materials would also be beneficial in order to make AIDS education less dependent on each individual teacher, and to secure the quality of the material.

Peer counselling during school hours

Peer counselling can be organized both within the education system itself and through, for example, local NGOs. Peer counsellors initiate discussions and talk sessions about HIV/AIDS in or outside the classroom during school hours. In some places, optimal peer counsellors (e.g. those with special status in a youth group) are identified in advance. In other areas, every youth that volunteers as a peer counsellor is offered remuneration in kind, such as small

26. UNAIDS. 1999. "Key ideas and issues for action. 1999 World AIDS Campaign", p. 9.
27. UNAIDS. 1999. "Key ideas and issues for action. 1999 World AIDS Campaign", p. 9.
28. USAID. "Education sector", p. 5.

scholarship or even special credit points for efforts made.[29] Peer counselling is effective in at least two ways: HIV/AIDS awareness is spread and contextualized by peers, and is thus optimally adjusted to local realities. In addition, the peer counsellors themselves represent an important group of young people who are natural role models for friends, siblings and family.

Involvement by pupils

There are a number of ways to involve pupils in HIV/AIDS education. The main thing is to strive for openness at school in order to help children communicate their experiences and knowledge about HIV/AIDS. A good learning environment is created if children are encouraged to share the information they already possess. Participatory methods such as dance and drama are effective and motivating ways of spreading information, and may help both actors and audience to name important experiences and issues. The use of participatory methods is supported by research findings from Uganda.[30] Essay writing about HIV/AIDS is another way of involving the pupils and their experiences. In Northern Thailand, HIV/AIDS essay competitions were arranged as a co-operation between schools and one of the local radio stations.[31]

Teacher training

Teachers are the key to success if schools are to become an open channel for information. However, the issue of HIV/AIDS requires a different methodology from the usual curriculum. Most teachers

29. Helland, Anne-Marie. 1997. "Has the educational establishment around HIV/AIDS in Northern Thailand been working?", p.18.
30. Carm et al. 1999. "Draft report: Evaluation of Stromme Foundation Child Sponsorship Programme".
31. Helland. 1997. "Has the educational establishment around HIV/AIDS in Northern Thailand been working?", p .24.

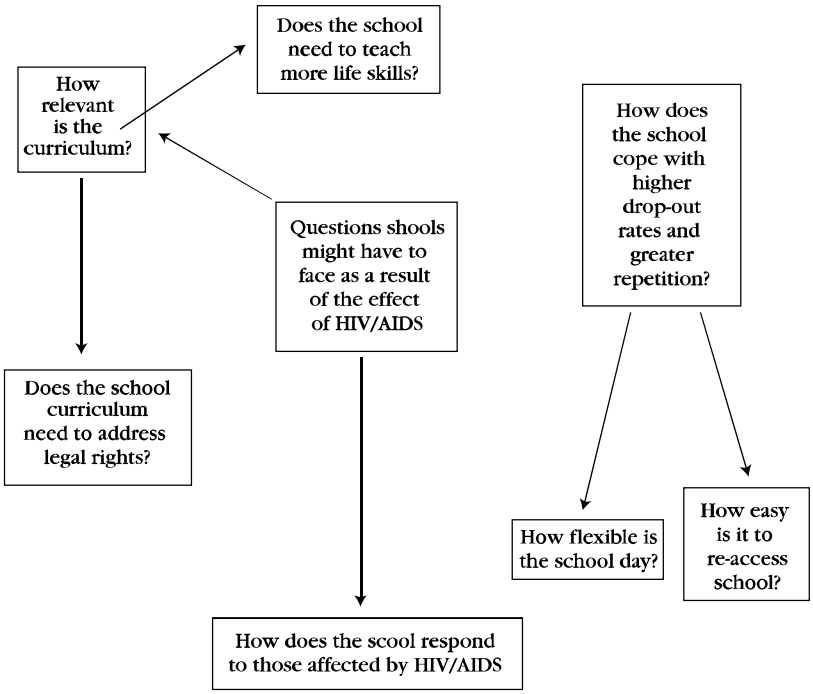
therefore need to be trained to use new material, to handle new curricula, and not least how to communicate with children and adolescents. HIV/AIDS touches very sensitive issues and taboos like sexuality, power relations and gender equity and thus requires a sensitive approach. Participatory learning and teaching techniques where discussion, communication and action are the focal points is a fruitful way of approaching the issue of HIV/AIDS. One way of preparing teachers for this new methodology is to train them as peer educators, practising participatory methods to train the pupils as peer counsellors. Music and drama teachers are especially valuable in participatory approaches.

A programme designed to train teachers for HIV prevention in Zimbabwe found that teachers were keen to undertake HIV education, but experience had taught them that support from headteachers and key personnel from the education department was key to the success of programmes of HIV education.[32] This is one of many experiences that show the importance of support throughout the *whole education system* if implementations are to succeed.

UNAIDS stresses the importance of designing country-specific responses to the HIV/AIDS epidemic.[33] Each country needs to make a policy and a strategic plan for how to tackle the issue based on the cultural and epidemiological reality of that country. UNAIDS has worked out some guidelines based on a best-practice approach. These best practices in school-based interventions include.[34]

32 Woelk et al. 1997. "Training teachers to lead discussion groups on HIV/AIDS prevention with adolescents in Zimbabwe". In: UNDP, 1999. *Adolescent sexuality, gender and the HIV epidemic* (...), p. 10.
33. UNAIDS. 1997. "Guide to the strategic planning process for a national response to HIV/AIDS", p. 3.
34. UNAIDS. 1999. "Summary Booklet of best practices", p. 173.

Diagram 6. Education and HIV prevention



- **Creating a partnership** between policy-makers, teachers, parents and religious/ community leaders in the battle against HIV/AIDS.
- **Designing a good curriculum** and/or an extracurricular programme adapted to local culture; these should have a focus on life skills rather than biomedical information.
- **Teaching life skills: primary and secondary students must learn to analyze and respond to social norms**, especially to identify those which may be potentially harmful and those which protect your well-being.
- **Good training** is important – both for teachers and peer educators.

- **HIV/AIDS prevention must start at the earliest possible age**, and definitely before the onset of sexual activity. Age-appropriate programmes should therefore start at the primary-school level. As of today, AIDS education is usually taught only in secondary schools (if it exists at all). With high drop-out rates (especially among girls), many children will have left school before secondary-school age, and hence will not get AIDS education.[35]

HIV/AIDS is however a controversial subject. In the world today, HIV/AIDS is primarily transmitted through sexual contact, with all the taboos and sensitive issues that arise. It may thus be considered too controversial to be taught. In many countries, the resistance against including HIV/AIDS in the curriculum is strong. And even if inclusion is decided on at the national level, implementation may be blocked regionally or locally. A common perception is that education about sexuality issues will increase the teenagers' curiosity and normalize sexual activity at a younger age. This may conflict with religious and cultural norms, and thus results in resistance towards sexual health education. A global assessment of such school-based programmes, however, shows that sexual health education and AIDS prevention not only delayed the start of sexual activity, but also reduced the number of partners and raised the use of contraceptives among those who became sexually active.[36] It is also encouraging to notice that when parents are asked, although often reticent at first[37], they tend to support AIDS education in schools.[38]

35. UNAIDS. 1997. "Learning and teaching about AIDS at school", p. 4.
36. UNAIDS. 1997. "Learning and teaching about AIDS at school", p. 2.
37. Focused group discussions with parents in Maputo, July 2000.
38. UNAIDS. 1997. "Learning and teaching about AIDS in school", p. 5.

A prototype

A national AIDS programme should aim towards 100 per cent coverage of schoolchildren with HIV/AIDS education

Constraints to HIV/AIDS education in school include:	Ways to overcome these constraints include:
• the subject is considered too controversial; • the curriculum is already overcrowded; • education may be limited to certain age groups; • behaviour skills are not taught, only facts about AIDS; • there may be only partial coverage in a country.	• designing a good curriculum adapted to local culture and circumstances; • establishing a partnership between policy-makers, religious and community leaders, parents and teachers; • setting sound policies on AIDS education through this partnership.

Source: UNAIDS. 1997. *'Learning and teaching about AIDS at school'*, p. 2.

(a) Use the education system as a tool for information, awareness campaigns etc., reaching out to each village

- HIV/AIDS should be integrated into the curriculum at all levels, from teacher training to basic level.
- A division of responsibility is needed. Who has the responsibility for implementing awareness within all levels of the education system?
- HIV/AIDS must be included in headteacher training and in-service training of teachers as school-based activities.
- Awareness campaigns should be launched at local level through PTAs and School Management Committees to reach parents and the local community. All awareness campaigns should be organized jointly as a holistic approach between school-, health- and local authorities.

(b) Secure effectiveness and quality of the services in spite of illness, absenteeism, lack of replacement systems etc. All levels must be considered.

- Development of strategies for replacement of staff at all levels, based on knowledge about the situation in each country and region.

- Make a strategy for the development of multi-skilled teachers and management staff in order to make staff more interchangeable.
- Awareness-raising in the educational management community (e.g. in-service courses).

(c) The development of a methodology adjusted to the recipients: gender-wise, culturally, age-wise etc.[39]

Participatory monitoring and evaluation (PM&E) techniques are now being used in a range of ways in a development context. Surveys of cases and key literature have identified three general functions of PM&E:

- Impact assessments.
- Project management and planning.
- Organizational strengthening or institutional learning.

There is a need for mainstreaming the issues of HIV/AIDS into the policy documents and the strategies for aid and development in the education sector, multilaterally and bilaterally. A closer look at current NGO practice is also recommended, since these organizations can play a crucial role in combating the epidemic.

Co-ordination is essential, across the sectors, horizontally, as well as vertically within the sectors.

There is some information available on the possible consequences that HIV/AIDS may have for the education sector. However, as conclusion (a) points out, there is very little *factual information on the extent* of these consequences. This view is supported by Kelly's (1999) recent study from Zambia. The study suggests that there is a

39. This view is supported by case studies in Uganda performed by, amongst others, the Ugandan NGO Vision Terudo in: Carm et al., 1999. "Draft report: Evaluation of Stromme Foundation Child Sponsorship Programme".

need for more focused research in order to get more systematic information.[40] Has the expenditure on sick pay for teachers increased significantly? Are girls dropping out to a larger extent than before? Is HIV/AIDS integrated into the curriculum for teachers? Are there noticeable difficulties in the administrative structures due to AIDS-related sickness and death? These are only examples of questions that remain speculations until actual numbers are on the table. The need for country-specific approaches is stressed by, among others, UNAIDS. But in order to develop a country-specific approach, basic information is needed to set priorities and plan interventions.

An example from Uganda

The approach of the formal education system in Uganda to HIV/AIDS has undergone some transformation since its inception in 1985. It has moved from provision of information on HIV/AIDS to the equipping of young people with life skills which are meant to enable them to cope with situations that might lead to HIV/AIDS transmission. Since the mid-1990s more emphasis has been placed on the training of teachers and, in some cases, youth themselves in life skills and in peer counselling. There has also been a growing emphasis in the training of counsellors in schools who are equipped with skills in handling young people's social problems. These efforts have been spearheaded by the Ministry of Education, UNICEF, National Curriculum and Development Centre, Ministry of Health and Population Secretariat. The following is a review of some of the methods currently used in Uganda to integrate culturally appropriate HIV/AIDS education into the curricula at different levels of formal education.

40. M.J. Kelly. 1999. "The impact of HIV/AIDS on schooling in Zambia", p. 1.

The School Health Education Project (SHEP)

The School Health Education Project (SHEP) was a component of the 1985-1989 and 1990-1995 Uganda Government/UNICEF country programmes. One of the aims of SHEP was to influence a reduction in STD and HIV infection among youth aged 16-20 years. Appropriate content was identified, materials produced and teachers trained to implement the project. SHEP was first introduced in Primary 6 and 7. The justification was that pupils in these classes had habits and behaviour, which were still modifiable, and the girls especially were at risk of dropping out of school and starting families of their own. It was felt to be important that young people be equipped with knowledge, skills and attitudes that would assist them to confront the challenges of everyday life. In addition it was expected that they would inform other children and their parents about the health messages they were receiving in school, thereby creating a multiplier effect since a very large number of families had children going to school. The programme was later extended to all primary-school classes.

The material on HIV/AIDS was integrated into the course unit dealing with the human reproductive system and was presented as part of the discussions on sexually transmitted diseases like gonorrhoea and syphilis. Basic information such as what was AIDS, how it attacked bodies, common symptoms and ways in which it was transmitted, and ways in which the spread of STDs could be prevented was initially presented in Primary 6. Then in Primary 7 these topics were discussed in more detail, with additional topics on how one can care for people with AIDS.

However, when an impact evaluation of SHEP was carried out it was found that while pupils' knowledge of health issues had increased significantly, there was no corresponding behaviour change. The

missing link was identified as the life skills to assist pupils to translate knowledge into positive health behaviour.

This led to the development of the Early Life Skills Initiative, a collaborative project between UNICEF and the Ministry of Education.

Early Life Skills Initiative

This Initiative was as a result of the growing awareness that life skills were an essential aspect of confronting the crisis caused by the HIV/AIDS pandemic and other social problems facing young people. It was felt that it was better to infuse life-skills activities into the syllabi used in schools and colleges than to have a separate life skills curriculum. The 1995-2000 Uganda Government/UNICEF Country Programme stresses the promotion of positive behaviour change with emphasis on women, children and adolescents. The Basic Education, Child Care and Adolescent Development Intervention (BECCAD) is one of the four interventions intended to bring about such behaviour change. The programme plan of operations states that the aim is:

To promote full cognitive and psycho-social development of children and adolescents within a supportive family and community environment which is conducive to education for all; prevention of HIV/AIDS/STDs; adequate care and protection of children and adolescents from birth to adulthood.

One important aspect of this initiative is to equip children and adolescents with life skills that will enable them to deal effectively with the demands and challenges of everyday life. In order to achieve this objective the Uganda Government/UNICEF Country Programme produced the Life Skills Education Resource Booklet (1996) for all those who work with children and adolescents, especially teachers in primary and secondary schools. Subsequently a team was identified and trained to prepare a manual for tutors and lecturers in teachers'

colleges so that they could train pre-service and in-service teachers as the first step towards introducing life skills into the schools. A baseline survey carried out to determine the level of life skills of Ugandan primary-school children revealed that:

- the children were not sufficiently equipped with life skills;
- teaching strategies in schools were content and examination oriented and therefore not suitable for equipping pupils with life skills;
- teachers appreciated the value of life skills and were willing to participate in the training programme, although they did not know much about life skills.

In 1996, BECCAD commissioned a team of writers to produce life skills training manuals for primary- and secondary-school teachers. After the first draft manual had been produced it was pre-tested and a four-day training workshop was carried out for lecturers, tutors and teachers. They were encouraged to try out the activities in the manuals with their pupils. Some of the salient issues that emerged from the pre-test were:

- Many of the participants knew little or nothing about life skills before the training.
- Participants made several suggestions for incorporating culturally sensitive material, improving activities and addressing other issues which were felt to be missing. These were then subsequently incorporated into the final draft of the manual.

The programme in Uganda draws on two main definitions of life skills, one by Edward de Bono, who refers to them as:

> "Those skills needed by an individual to operate effectively in society in an active and constructive way".

The other definition is the one by TACADE, United Kingdom, which defines life skills as:

> "Personal and social skills required for young people to function confidently and competently with themselves, with other people and with the wider community".

Traditional education in Uganda used to attempt to address the holistic view of the human personality. The formal education system in Uganda, on the other hand, has tended to prioritize knowledge at the expense of other aspects of personality growth, believing that an increase in knowledge would automatically lead to positive changes in attitudes and behaviours. At the same time it was assumed that life skills and attitudes would continue to be imparted through the family and community. However, what has happened is that such traditional education has largely broken down, thereby leaving young people more vulnerable. In addition, challenges and threats have increased, brought into sharper focus by the HIV/AIDS pandemic.

The Life Skills initiative trains youth in such skills as: interpersonal relationships; self-awareness and self-esteem; problem solving; effective communication; decision-making; negotiating sex or lack thereof; resisting peer pressure; critical thinking; negotiation; formation of friendships and empathy. These are referred to as cognitive skills and the idea is to empower youth through such training. The idea is also to help youth sustain life- and health-promoting decisions and behaviour. These programmes are meant to promote behaviour change and to help sustain it. Indeed they were developed to bridge the gap between high HIV knowledge and awareness levels and lagging behaviour change.

The Sara Communication Initiative (SCI)

The SCI is an initiative developed by UNICEF and its allies in the East and Southern African Region. This initiative is directed at the

adolescent girl and her society. Among its objectives is the communication of specific messages on education, health and development with gender equity. Among the problem areas addressed is HIV/AIDS. It was identified from the outset that in order to deal effectively with problems and challenges, the girl child needed life skills such as problem solving, critical thinking, decision-making, self-assessment and concept, assertiveness, negotiation, coping with emotions and stress, conflict management and resolution, empathy and interpersonal relationships.

Thus the Sara Communication Initiative aims at developing the life skills of girls in order to meet the challenges of life. This is done by a series of animated films produced about the different aspects of the life of the girl child, together with radio plays, comic books, story books and other activities. Sara Initiative materials such as videos, comic books and radio tapes are used by schools and colleges for provoking thought and discussion on specific youth issues in relation to life skills.

Population and family life education in the Uganda Formal Education Project

The objective of this project was to equip youth with essential knowledge, skills, attitudes and practices that would prepare them for responsible parenthood and fair relationships with persons of the opposite sex. It was noted in the training manual that social conditions in Uganda had changed and these in turn had led to changes in sexual behaviour and relationships among young people. It was noted by this project that parents and society in general tend to deny or refuse to acknowledge that adolescents engage in sex, partly due to lack of information on the subject. The concept of Aunt (Senga) and Uncle (Kojja) which used to exist in many parts of the country, where adolescents were brought up to appreciate what they

needed to do in order to become responsible citizens, has more or less disappeared, leaving no alternative mode for addressing social, economic and psychological needs of young people. As a consequence more and more young people were found to be engaging in sexual relations at an early age.

The project started in Primary 6-7 and Secondary 1-2 in a few trial schools in 16 pilot districts. The project focused on the training of teachers, who could then set up counselling services in schools. It was felt that the establishment of these counselling services would help young people to clarify their feelings, attitudes and thinking so that they could make informed decisions. The teachers were found to lack knowledge and skills related to adolescent health, life skills and gender concepts and thus found it difficult to discuss adolescent problems, especially those related to sexual behaviour.

In addition, very few health services are designed to meet the special needs of adolescents. So a training programme was designed to train teachers in counselling and communication skills. A training curriculum and manual were developed as part of this project. The manual developed combined exposure to information about developing and practising life skills, the role of gender and health, sexual and reproductive health, physical, mental and social well-being, nutrition and hygiene. The training aimed at providing a holistic look at adolescent health and empowering the teachers to provide adolescent-friendly services.

An impact evaluation carried out in relation to this project in 1997 revealed that the majority of students were able to indicate the ways through which HIV could be transmitted; however, the evaluation also revealed some information gaps with some students still holding misconceptions relating to HIV/AIDS. The evaluation recommended that students needed to be told that it was not always possible to tell

the HIV status of a person from his/her appearance only. It was emphasized that it was only through blood tests that one's HIV status could be established. This was a joint project between the National Curriculum Development Centre, Ministry of Education, Population Secretariat and UNFPA.

Information, Education and Communication (IEC) in support of reproductive health in school

This project is also a joint project between the National Curriculum Development Centre, Ministry of Education, Population Secretariat and UNFPA. In its initial stages this project conducted a baseline survey that asked specific STD and HIV knowledge and behaviour questions. The questions focused on STD and HIV transmission, symptoms, prevention and treatment. Most students (95 per cent) correctly identified AIDS as an STI. The results from both the primary and secondary school surveys suggested that, probably because of the AIDS epidemic and the public campaign, most students knew the ways through which HIV was transmitted. During focus-group discussions, students were asked the main causes of reproductive health problems among youth. According to the baseline survey, almost all discussants mentioned lack of information and general ignorance about reproductive health issues as a major cause of problems for students. Many students also blamed teachers and, particularly, parents for this information gap. Other causes mentioned included the impact of the mass media that carried sex-related materials and literature which motivated students to experiment, poor parental guidance and economic hardships, among others. While students acknowledged parents and teachers as the main sources of reproductive health information, they criticized them for not providing sufficiently detailed information and therefore leaving the students to fend for themselves. Parents themselves confessed that they found it difficult to pass on reproductive health information to

their children. They continued to find it hard to do what their parents never did. Students expressed a desire for more in-depth information from teachers. The survey noted that there were several factors that prevented teachers from providing this information in sufficient detail, these included the following:

- Teachers needed to focus on the syllabus in order to prepare the students for examinations, so they only covered what was in the syllabus.
- Some teachers shied away from covering reproductive health issues in detail for other reasons. Some were religious, others cultural, but for others it was because they themselves were engaged in contradictory behaviour and in some extreme cases they were engaged in affairs with students.

Despite these problems, parents suggested that teachers should take a lead in providing reproductive health services. They argued that teachers were more knowledgeable and therefore would provide correct information. This project has since produced an information package consisting of several information leaflets which young people could also read and refer to. This information package is distributed to all teachers who take part in the training. The themes addressed in these leaflets include:

- Making choices about sex without bending to peer pressure. Within the leaflet issues such as what is peer pressure; why people bend to peer pressure; coping with sexual feelings and using assertive skills are discussed.
- Rape and defilement. This leaflet addresses issues such as who rapes and why; if it happens to me what can I do? etc.
- Basic knowledge on common STIs.
- Growing up: information for adolescent girls and boys.
- HIV/AIDS infection.

- The project has also compiled a booklet with common reproductive health questions asked by adolescents, several of which have to do with HIV/AIDS and relationships.

In a recent study carried out by Green (1998) which reported on the situation of AIDS and the role of IEC in Uganda, it was noted that there was a large and expanding body of empirical research findings that demonstrated sexual behaviour change of the sort that reduced risk of infection. Green (1998) suggested that there was a demonstrable relationship between the type of behaviour change that has been emphasized in IEC and the type of behaviour change being measured. He argued that other societies and countries in Africa had achieved higher infection rates than Uganda had in the early 1990s and these infection rates appeared to be rising still. This suggested, according to him, that behaviour change (and probably IEC) may have had at least as great an influence as saturation in reducing HIV infection in Uganda (Green, 1998:5).

A population-based survey which was conducted by the Epidemiology and Surveillance Unit of STD/ACP in March 1998 showed that awareness about HIV/AIDS among the respondents was over 90 per cent nationwide. The survey also revealed some significant positive changes in sexual behaviour, including the following:

- reduction in the number of non-regular sexual partners;
- increase in the age at which sex was started by adolescents;
- increased condom use especially with non-regular partners (Surveillance Report, March 1998).

In recent reports and other population-based studies there have been reports of consistent declines in HIV prevalence in the young age groups (ages 15-19) over time. Analysis of data on behaviour change in light of trends in HIV infection rates suggests that there has been

more change among youth than among adults, more change among females than among males, more change among urban dwellers and the better educated than among rural dwellers and the less educated (Green, 1998).

Assessing programme impact in light of behaviour evidence, Green (1998) noted that it would appear that programme emphasis on youth had paid off. He observed that there was a strong focus on youth in the regular work of the Ministry of Health. The best measure for this, he suggested, was the sheer number of training and sensitization programmes aimed at youth and women in the district work plans, as well as the amount of HIV education integrated into school programmes.

Green noted that programmes such as Life Skills and SHEP before it, and the Sara Communication Initiative developed under UNICEF appear to be targeting exactly the groups that have changed the most in the ways that would promote the behaviour change that has occurred. These have been supported by other non-formal and informal education initiatives. Related programmes such as Straight Talk, Young Talk, Naguru Teenage Centre and the Pearl Project also seem to have had a positive impact on promoting and sustaining youthful behaviour change, using approaches similar to life skills.

Most such youth-oriented programmes have reached their audiences through schools. Universal Primary Education and the integration of HIV/AIDS education into the science curriculum also appears to have contributed substantially to AIDS-related knowledge, if not behaviour change among youths. This has required and involved significant co-operation between the Ministries of Education and Health, as well as between countless health educators and local schools. There is a new UNICEF programme of Youth Friendly Services being piloted in five districts. This programme advocates for a

minimum package being made available in the health centre that consists of IEC, counselling services, recreation, diagnosis and treatment of STDs and appropriate referrals.

Green (1998) suggests that in view of reported behaviour change and declines in HIV infection rates in the lower age cohort, IEC emphasis on targeting youths and the strategy of integrating AIDS education into school curricula and activities should be continued. The integration of HIV/AIDS education into non-formal education has been carried out mainly by non-governmental organizations, including religious bodies in the country. There is some evidence from impact studies such as the IMAU study (Kagimu et al., 1998) that AIDS-prevention activities carried out through religious leaders have had a significant impact. All the major religious groups in Uganda became involved in 1992. Taken altogether, there is considerable evidence that religious organizations and perhaps other conservative players that have advocated abstinence and fidelity have had a significant impact on the overall infection-rate decline.

Green (1998) recommended after an extensive review of the successes of IEC approaches in Uganda, that the country should keep programmatic emphasis where it has been in recent years: on youth and women and on behaviour change options of fidelity and delayed coital debut relative to condom adoption. He also recommended the programmatic emphasis on working with and through schools, using science and other school curricula for AIDS education using the life-skills approach and the like. He recommended that in order to build upon proven successes to date in the promotion of behaviour change, IEC be directed towards youth, especially female youth, aimed at promotion of delayed coital debut and fidelity. This message needs to be strengthened and disseminated more widely. Another conclusion is that religious organizations and others who have emphasized abstinence /fidelity should be given due credit for

behaviour change that is occurring and their programmes should be supported. Religious leaders and organizations have managed to desensitize themselves regarding condoms, as well as open discussions of sexual behaviour, as their programmes have progressed. Some religious leaders now provide advice about condoms while primarily promoting abstinence and fidelity.

There are a number of projects, mostly at district and lower levels, that involve mobilizing local and traditional leaders in AIDS preventive education. There have also been drama, song, dance and poetry performance groups that have come out of local villages, often through a process of public competition, that both motivate participation and ensure exposure to many varied audiences. It seems that the impact of such Ministry of Health programmes involving the training and sensitization of thousands of local opinion leaders and out-of-school youth has not been measured adequately.

There have also been mass media, particularly radio, campaigns that have reached a great many people. There is evidence that these have helped raise at least awareness and knowledge levels. Kanyunyuzi-Asaba and Mwesigye (1998) researched broadcast media in AIDS prevention and concluded that:

> "Audio-visual communication has a significant positive impact on reducing HIV spread. Broadcast media is particularly effective among populations with low literacy. It however should be used with sensitivity to prevailing cultural, religious and moral norms".

Proposals for the education of AIDS orphans

One objective of this study was to identify specific educational needs of AIDS orphans. These are listed below with initial recommendations about how the need could be met:

- *AIDS orphans should be fully integrated into the national education system*

  The first need identified by all groups in the study is the importance of not segregating AIDS orphans from other children. It was felt strongly by parents and teachers that their needs must be met within mainstream school. Removal of children to study in a school specifically to cater for orphans' needs would lead to segregation, labelling and stigmatization of children.

- *AIDS awareness training should be brought into the compulsory curriculum*

  There is the need to increase children's understanding of the cause and nature of AIDS. Reports suggest that this is particularly true in rural areas. With greater understanding, one would hope greater tolerance and support would follow for those children who have been orphaned by AIDS.

  With greater understanding it may be possible for families to share more openly family health situations, so that children have a greater understanding of what is happening in the family, rather than, as was reported, children not being told and moving school because of the embarrassment cast on the family.

  Greater understanding may also help the expected increasing cohort of children who are HIV+ in primary school.

- *Provide counselling within the school system for children who have been orphaned*

  With the reports of the change in children's behaviour on being orphaned, there is the need for children to have the opportunity to talk. Part of this need may be talk about their emotional needs, part to deal with their physical needs. Counselling should be available to children especially when they have had to move school and are having to deal with new circumstances as well as

bereavement. This may be especially true when children are living in extended families and, as has been suggested in the study, are being treated as second-class members of the family.

If teachers are to provide AIDS awareness and counselling for children they will need specific training. Training on both these issues should be introduced to teacher-training courses at all levels of the training. Courses are also needed for practising teachers. However, one of the important aspects of this training identified is to ensure the training takes place in the rural areas where it is needed most, not just in the urban training centres.

Through this training, any teacher segregation of children, according to orphan status, should be reduced.

- *Increase in time allotted to creative subjects in the curriculum*
  Identified by several of the AIDS orphans was the desire to be able to study creative subjects, and to learn skills in these areas. This includes music tuition and arts and crafts.

- *Achievement of a fully functional national curriculum*
  The aim of a fully functional national curriculum should be to enable children to be able to move between schools easily without their education suffering. The national curriculum should ensure consistency between schools. Many AIDS orphans will move school on several occasions because of their living arrangements. Many are expected to have to repeat years, costing families increased amounts of school fees, which often cannot be afforded. This is especially true when a child is moving from a rural to an urban school.

- *Flexibility of school day*
  Many schools are at present expected to be running two-phase days. In reality this is not happening, as teachers are combining

both phases to the morning and offering coaching to subsidize their meagre income. Little scope is given within this system for flexibility to meet the needs of the children and their families, to enable the child to remain in school. At present the idea of even examining the school day does not even seem to be able to be considered.

- *Provision of school lunches*
  Many of the schools at present have facilities for providing lunchtime food. The need is to make it affordable, or free for those children who need it most. A canteen was identified by 25 per cent of children from extended families as a requisite for making a school a good one. As several of the teachers pointed out, the children who were not being fed properly were having difficulty studying.

- *Children to be taught in smaller classes*
  An increase in class size was creating much difficulty for class teachers. In these situations teachers were admitting that they were only able to concentrate on the able children who were keeping up with their studies. Smaller classes would enable teachers to identify needs of individual children. For children who had missed out on schooling or moved schools frequently, this would help them to succeed.

  However, as some children pointed out, classes too small were not good, as they were seen as the sign of a school that was unpopular.

- *Schools to appoint a teacher responsible for helping children to reaccess school*
  These teachers may only be needed in schools where there is high drop-out or a high turnover of children.

The role of this teacher would be to identify educational needs children have on re-entering school and provide small-group teaching. This would be specifically aimed at children who had fallen a long way behind and who would normally have to be taught with children much younger than themselves. The small-group teaching would enable children to catch up at a quicker rate.

These teachers would also be able to keep a check on registers to see which children were not attending regularly and so follow up the situation of these children to help prevent them from dropping out of school in the first place.

- *Create a positive attitude towards UPE to encourage its use*
  At present teachers and parents have a negative attitude towards the government initiative of UPE. For this programme to have any chance of success, a positive image has to be created, and children functioning within it should be successful. The programme might only succeed with increased funding.

- *Increase of access to schools for parents/guardians/carers*
  An increase of participation and partnership is required between parents/carers/guardians and schools. Carers reported how they did not feel accepted as those with responsibility for their children by the schools. They wanted to be involved in the children's education but were being prohibited by the schools' attitude to them.

- *Creation of a support network between schools and related agencies*
  Several agencies operating in Uganda are able to offer support of different nature to AIDS orphans and their families. This information could be supplied through schools to affected families to enable them to access the support available to them, while helping to maintain the children in school.

Building administrative capacity

Coping with the impact of HIV/AIDS at school level and different administrative levels is one of the mechanisms to assess the extent to which the pandemic impacts on education. It is possible to disaggregate the costs that directly go to AIDS-related problems from other costs.

Building capacity to cope with the pandemic can involve schoolteachers, educational administrators, religious leaders and the community at large. Because of possible differences in the perceptions of the pandemic, it is necessary that training for common focused action be offered to those who will be involved. Training can focus on:

- support of affected teachers and pupils;
- enhancing awareness about the pandemic;
- encouraging people to live positively with AIDS;
- provision of AIDS education (e.g. self-protection, avoiding risk behaviour).

In the light of the prevailing situation, it will be necessary to encourage people to become open about AIDS problems. Denials are still prevalent in many of our communities regardless of the knowledge about the pandemic. This makes it difficult to make use of the indicators such as the number of deaths due to AIDS.

The approach to build capacities to assess and cope with the impact of AIDS will complement the existing mechanism for collecting data about the impact of AIDS. It will also initiate efforts to build a data bank in areas where such information is not regularly collected.

VIII. PROBLEMS AND POSSIBILITIES

It is often advocated by those debating and writing in the area that the education systems could and should do more to help prevent the spread of the pandemic among the 'generation of hope' (those who are not yet sexually active). However, there are several theoretical and practical constraints that make this a much more difficult exercise than usually envisaged.

The 'official' optimistic view

The education sector is, by its nature, a unique tool for disseminating information and awareness about HIV/AIDS. It often receives the lion's share of public revenues and is usually the major employer of public staff in a country.

Another advantage of using the education sector as the vehicle is that it already has an existing – even if degraded – infrastructure, so that using it as a channel for education about HIV/AIDS would be cost-effective compared to other proposed vehicles. One would reach a very large audience: not only teachers and administrative staff could be reached, but also pupils at all levels and, eventually, their parents and extended families. UNAIDS writes:

> "Policies on integrating quality life-skills, sexual health and HIV/AIDS education into school curricula, starting at primary school and continuing throughout a student's education must be developed by Ministries of Education, in collaboration with PTAs and student representatives (UNAIDS, 1999).

It (UNAIDS) proposes:

- the rapid development of HIV/AIDS teaching and learning materials to make HIV/AIDS education less dependent on the individual teacher;

- peer counsellors – either those with a special status among their group identified in advance, or volunteers offered incentives in the form of cash or promotion in school – act as natural role models for friends, siblings and families and can contextualize discussion appropriately to local reality;
- getting pupils involved through participatory teaching methods like dance and drama, essay-writing competitions;
- training teachers to use new materials, handle new curricula and use participatory techniques, perhaps through training them as peer educators and getting them to practise participatory methods;
- commitment throughout the system and especially strengthening the role of headteachers and key personnel in the education department, and of course extensive collaboration between the Ministries of Education and Health (although often unspoken).

There are several examples of attempts and innovations in each of these areas in the literature, although rather fewer evaluations of their effectiveness.

Problems

Practical problems

Altering the curriculum

In many countries the curriculum is already overcrowded and often outdated. For some commentators, the HIV/AIDS epidemic has accelerated the need for reform with an emphasis on life skills to encourage behaviour changes. But writing appropriate materials for a new subject is time consuming; writing a cross-cutting curriculum is likely to be even more difficult (see below). Then, in order for the new content to be effectively delivered, textbooks or other materials

have to be produced and distributed, and teachers have to be trained to use the new materials in an interactive way with their pupils.

For those acquainted with the reality of teaching in the vast majority of primary schools in the most affected countries, this will all seem rather fanciful. There are rarely sufficient textbooks for pupils to have even shared access; many teachers rely on copying out materials from their copy on to the blackboard - and sometimes their own notes from their own schooldays!; and interaction in the classroom is usually restricted to chanting responses to a teacher's question. The idea that new materials could be produced and distributed, and that teachers will be able to adopt a completely new approach to teaching seems a little unrealistic.

Peer counsellors

There has been a long history of peer counselling: the obvious example is child-to-child. Many of these initiatives appear to work but they rely on the enthusiasm of (a) key person(s) in the community and/or school for the process to take off. It is, in any case, very difficult to *programme* for such charisma, enthusiasm or interest, and it will be especially difficult in an atmosphere of suspicion and distrust that is often generated by the HIV/AIDS epidemic. With multi-age grades, sadly, the prospects of successful peer counselling are further diminished because the class peer group is more likely to become a vehicle for spreading HIV, rather than education about how to prevent it, and this is especially true in boarding institutions (Coombe, 2000).

Involving pupils through participatory methods

Once again, there have been hundreds of attempts and innovations along these lines, often on quite a large scale. Whilst the innovatory

schemes themselves rarely *fail,* they usually peter out, again because of a lack of sustained commitment and a lack of a realistic appreciation of the difficulties facing a teacher in ordinary times, let alone the 'extraordinary' situation of an HIV/AIDS epidemic (IIEP, 2000).[41]

The point is that if the teaching profession has not, as a matter of course, in teaching the 'core' subjects, involved pupils, it is very unlikely that it will be able to do so with such a delicate subject matter.

Teachers (and their training)

In many countries where the impact of the epidemic is largest, the bulk of teachers are not adequately trained for the *existing* curriculum (and often have not received any pre-service training at all), let alone to deliver the complex package being promoted by UNAIDS/UNICEF etc. Moreover, teachers themselves are sometimes perceived by the community (although often wrongly) as guilty of introducing the epidemic into the schools, and therefore as the most *inappropriate* adults in the community to explain and teach about prevention.

Even assuming that training can be provided to all teachers in the system – which is itself a tall order – the teachers will have to be trained in pedagogical approaches that will be very different from those that they themselves experienced when at school. Indeed, participatory approaches involving pupils and adults may, in some cases, be seen as culturally inappropriate for a teacher.

Commitment at all levels of the system

It sounds fine and there has been plenty of rhetoric to support it. But there is a reality for government recovering (hopefully) from the

41. IIEP Workshop on "The impact of HIV/AIDS on education". Paris: IIEP/UNESCO, 27-29 September 2000.

rigours of structural adjustment that means that worrying about HIV/AIDS tends to be sidelined, given the present levels of financing. Moreover, the presumption that there can be easy communication between the Ministries of Education and of Health ignores the history of interdepartmental suspicion that many of these countries have inherited from their ex-colonial metropolis.

Theoretical issues

There have therefore been many attempts to introduce health education into the school curricula. These vary according to the type of content and mode of delivery but, sadly, one constant is the relative lack of success relative to the aspirations of the organization. There is now a new initiative (FRESH) backed by both UNICEF and WHO to introduce life-skills education into all schools. The problem is that none of these have taken into account – or have ignored – some fundamental conceptual problems:

- the different epistemologies of health and education;
- the conflicts over how to design a curriculum;
- the limiting role of education in changing behaviour.

Epistemologies

There are differences between:

- theoreticians (academics) and senior policy-makers over the concept of health (whether it is basically collective or individual; how to influence behaviour, etc.);
- traditions, understanding, language and practice among health workers and in education sectors (for educationists, health education has to be treated as something like a subject; for health workers, 'health education has to be more closely integrated into the fabric of the school' with a wider concept of behavioural objectives).

These epistemological contrasts are compounded by the lack of any serious health institution's involvement when the education sector discusses the issue.

Conflicts over the curriculum

Curriculum planners argue over the width of the concept, scientific nature of curriculum planning, control of the school curriculum. Four strands have been emphasized at different times by different schools:

- health as hygiene knowledge and the inculcation of hygiene habits;
- scientific curriculum development;
- primary-school curriculum as preparation for further studies;
- community health and welfare.

The resolution of these depends on one's conception of the role of the school: they cannot be treated as a simple technical issue.

Limiting the role of education in changing behaviours

It is well recognized in the public health literature that, whilst health services can provide repair and comfort, they can only have a limited impact on the population's health (because they can only cure a minority of those who are chronically ill). Whilst arguments continue about the most important interventions that have contributed to the longevity of populations in the North, nearly all agree that improved quality of housing, hygiene, sanitation and water were the first crucial interventions (in the industrialized world in the nineteenth century); and that improvements in the twentieth century can be mostly ascribed to further improvements in those areas and to better diet. This relative modesty (relative because not shared by the peddlers of hi-tech medicine) contrasts with some in the education sector who appear to believe that what is taught in school is taken as gospel.

In fact, of course, there are many other influences on the child apart from both the school and the parents. The relative success in stemming the spread of HIV/AIDS in Uganda is, at least in part, ascribed to the mobilization of youth out of school.

Implications for a programme

None of this pessimism should be taken as an excuse for not trying, especially with peer education/student 'activist'-type approaches that have appeared to work, albeit on a limited and local scale. It is also clearly important to address the problem of teachers as a workforce affected by HIV/AIDS, i.e. as a target group in their own right. The analysis of the previous section is intended only to serve as a warning that preventing the spread of HIV/AIDS directly through school systems is difficult.

It is therefore clear that any proposal to deliver a programme through the school system must, given these caveats, be very carefully planned; it is not a problem that can be solved or even tackled with top-down rhetoric. Furthermore, any programme delivered through the school system has to be part of an overall approach; the contributions of other sectors – although sometimes negative – cannot be ignored.

Need for careful analysis

Prevention of HIV/AIDS needs a lot less rhetoric and a lot more understanding and confidence building, with communities drawing on the few resources that do exist.

This implies that any programme has to be based on existing activities and stakeholder interests in the communities. For example, if there is already an adult literacy class, it would be silly to re-invent such a class in order to discuss the problem of HIV/AIDS; similarly, if

there is already a functioning community-based organization, then, although it may not appear to be the most appropriate vehicle for prevention activities, it certainly cannot be bypassed.

All this, in turn, implies that the first step in any community activities should be an inventory of existing resources, including the local school resources. It is an essential prerequisite and, *if organized locally*, it does not take that much effort or time. Moreover, *if HIV/AIDS-prevention activities cannot be organized locally,* then it is unlikely that they will be sufficiently accepted locally for it to work.

Contribution of other sectors

It also needs a practical awareness that it is difficult to integrate health education into the school curricula, without the help of other actors. For example, community health workers appear to be ignored in much of the discussion; as does the positive role of the churches.

Role of community health workers/nurses

There are trained nurses throughout developing countries who might provide a better role model to children/students than teachers because they are assumed to know what they are talking about (relative to teachers that is). They have been trained:

- to discuss bodily parts relatively dispassionately;
- about the basic biological and physiological processes involved.

This not only means that they can talk about the issues confidently, but also that they can answer most of the questions that they are likely to be asked. These valuable characteristics themselves distinguish nurses from the majority of teachers. This is in no way intended as a criticism of teachers; simply a statement of the different training nurses and teachers receive and therefore their likely competences.

Of course, health workers are already overstretched in most developing countries; but then the issue is the relative priority that is to be accorded to HIV/AIDS prevention as compared to other health care. But assuming that they were fully staffed, the number of health posts would usually be sufficient to provide some community health-worker coverage for all secondary schools and upper-level primary schools and to provide some cover for all lower-level primary schools (although the latter would be more limited). With a weekly session they could, in principle, provide:

- based on materials developed by UNAIDS/UNICEF, basic preventative information for teachers in the schools;
- a regular weekly confidential advice session in each of the secondary schools and upper-level primary schools;
- based on materials developed by UNAIDS/UNICEF, a series of dance or drama events (or other vehicles seen as appropriate).

Of course, school nurses have not always been very successful in such a role (e.g. the Andhra Pradesh School Health Education Project), but such an approach does have the advantage of being cross-sectoral and can be locally led and organized.

Role of churches

Whatever the role of the state in funding, supplying personnel and training, etc., civil society implements community-based preventive efforts; and the most important actors in most civil societies are the religious organizations. Indeed, in many communities, without at least their tacit support, any attempts to disseminate preventive messages about HIV/AIDS will be pointless (for example, it is most important to make sure that they do not impede preventive efforts by preaching abstinence as the only solution).

Assuming that one moves beyond tacit support, then one would want to discuss with those organizations – preferably together but it might have to be separately – ways of collaborating and co-operating in their respective spheres of influence.

Appropriate messages and vehicles

It is only after that institutional 'mapping' (not academically, but very localized) of the potential role of other sectors and, in particular, of the health sector and of religious organizations, that a programme with any chance of success can be devised. Again, although this may seem to involve an undue delay because there are very many examples of messages and vehicles, the issue is not to develop new materials and new modes of delivery, but to make an appropriate choice from among the wide range that already exists, based on a careful analysis of the existing situation.

What works and the way forward

Cost-effectiveness of preventive interventions in developing countries

Table 8.1 below summarizes studies of the cost-effectiveness of interventions to prevent HIV in developing countries and several other studies that have measured only the costs of programme outputs, without measuring their effects (see *Annex 8*).

Table 8.1 Annual costs per infection averted or per contact for interventions to prevent HIV (in US $)

	Focus or context	Intervention	Cost per HIV averted	Cost per contact
Mwanza	6 rural areas	Treating STD patients	234	10.08
Uganda	National	Screening blood	172	
SSA	Hypothetical	Short-course AZT		
Targeted				
Nairobi	Sex workers	Info, condoms, STD	8-12	140
Nepal	IDUs	Needle exchange		3.21

Readers are advised to use this table cautiously. The estimates make assumptions about condom use (Nairobi), prevalence (Uganda) or effectiveness of STD treatment (Mwanza). Even without these caveats, the costs, effects, and ranking of different interventions differ across countries because of the degree to which the intervention is targeted to those with high rates of partner change, the prevalence of HIV in high- and low-risk groups, the length of time that an intervention has been in the field, the labour-intensity of the intervention, and the local cost of labour and other inputs (*background paper,* Mills and Watts, 1996). Thus, the results of the different studies in the table are not directly comparable with each other. Ideally, one would like measures of cost-effectiveness across multiple interventions for a single country.

UNAIDS is collating information on the cost-effectiveness of interventions to prevent HIV/AIDS in developing countries and has also developed a series of 'costing' guidelines. It sees the key problems for cost-effectiveness analysis as:

- inadequate data on programme;

- costs of information collection;
- availability of expertise;
- identifying and measuring suitable indicators to assess impact;
- consideration of all consequences including direct, indirect and intangible cost savings for the provider and patient;
- attributing impact between a number of community interventions;
- using the results of previous studies.

Implications

All the problems outlined in the first three sections of this chapter in terms of what is the appropriate organization and pedagogical style of teaching are simply an exemplification of good practice when teaching. The HIV/AIDS epidemic has served to highlight the reality of the teaching-learning experience in schools and the long route march towards good teaching practice that is needed.

The problem with applying cost-effectiveness analysis in this situation is that we have argued that the most appropriate 'intervention' is to carry out current activities as they ought to be carried out: a version of the management mantra 'Doing it right first time'. It is almost impossible to cost such improvements, but, at the same time, we have to in order to fulfil the promise of the 'Generation of Hope'.

PART C.
ANNEXES

ANNEX 1. SUMMARY OF EFFECTS (TAKEN FROM KELLY, 2000)

Impact on pupils and school enrolments

HIV/AIDS affects the demand for education because:

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

Impact on teachers, teaching and the supply of education

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; and
- the closure of classes or schools because of population decline in catchment areas and the consequent decline in enrolments.

Impact on resources

HIV/AIDS affects the availability of resources for education because of:

- the reduced availability of private resources, owing to AIDS-occasioned 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 such but inactive teachers; and
- 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.

Impact on the potential clientele for education

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 increase in the number of street children; and
- the need for children who are heading households, orphans, the poor, girls and street children to undertake income-generating activities.

Impact on the process of education

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; and

- the increased risk that young girls experience sexual harassment because they are regarded as 'safe' and free from HIV infection.

Impact on the content of education

- 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; and
- 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.

Impact on the role of education

HIV/AIDS affects the role of education because of:

- new counselling roles that teachers and the system 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; and
- 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.

Impact on the organization of schools

HIV/AIDS affects the organization 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;
- provide for orphans, for children from AIDS-infected families, and for children who are themselves AIDS-infected, for whom normal school attendance is impossible, by bringing the school out to them instead of requiring them to come into some central location; and
- 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.

Impact on the planning and management of education

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 provide for (a) potential personnel losses, (b) developing new approaches, knowledge, skills and attitudes that will enable the system to cope with the epidemic's impact and will monitor how it is doing so, and (c) establishing intrasectoral 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-affected employees and their dependants; and

- the need for a sector-wide strategic approach that will spell out how the Education Ministry intends to address HIV/AIDS.

Impact on donor support

HIV/AIDS affects donor support for education because of:

- the diversion of donor attention to coping with the epidemic;
- donors' concern to promote capacity-building and develop a self-sustaining system, both of which are inhibited by the widespread incidence of HIV/AIDS;
- donors' concern lest the effectiveness of their inputs be undermined by the impacts of the epidemic; and
- donor uncertainty about supporting extended training abroad for persons from heavily infected countries.

Mitigating impact

What education can do to mitigate the impact of HIV/AIDS

There are three levels or times when AIDS-related interventions are needed:

- while the individual is still HIV-free;
- when the individual has become HIV-infected and eventually suffers from AIDS-related illnesses; and
- when AIDS has resulted in death.

ANNEX 2. CASE STUDIES OF IMPACT ON KENYA AND TANZANIA

According to the National AIDS/STD Control Programme (1999), the impact of AIDS in Kenya can be summarized as follows:

- The impact of AIDS deaths in Kenya would result in 3.6 million fewer people by 2005.
- The cost of health care is prohibitive in Kenya and is estimated to be US$10,000 to 20,000 per year per patient, apart from other treatment associated with AIDS.
- An AIDS orphan in Kenya is defined as a child under 15 years who has lost its mother to AIDS. In the light of this definition, the number of orphans was estimated to be 860,000 by 2000 and 1.5 million by the year 2005.
- AIDS patients spend 60 days more in hospital beds than patients of other diseases.
- AIDS patients occupied more than 30 per cent of hospital beds by 1995. In severely affected areas like Busia and Kisumu, the hospital bed occupancy rate is as high as 70 per cent. It was estimated that by the year 2000, about 50 per cent of all hospital beds would be required for AIDS patients.
- About 30-40 per cent of babies born to infected mothers will be infected with HIV and the majority will develop AIDS and ultimately die before their third birthday.
- It is estimated that in Kenya, child deaths because of measles and malaria are expected to range between 5,000 and 10,000 by the year 2005. In the case of child deaths due to AIDS in the same period, the number will be 40,000 to 50,000.
- Infant mortality during the first year of life per 1,000 live births: because of AIDS, it will amount to 55-60 instead of 45-50 if there was no AIDS.

- The mortality rate for children dying before their fifth birthday per 1,000 live births may rise from the current figure of 112 to 120-125, instead of a decline to 70 if there was no AIDS.

The general impact on the production sector. Costs can also be looked at by the amount of money spent on medical care in different working places and the lost output in man-hours when workers are sick or dead because of AIDS.

- One company spends US$45 per employee per year for HIV/AIDS-related costs. This is equivalent to 3 per cent of the company profit. It is estimated that the cost will increase to US$120 per employee per year.

Expenditures on HIV/AIDS-related problems in four companies in Kenya are as shown in *Annex Table 1*.

Table 1. Expenditure by production companies on AIDS

Company	Expenditure in US dollars
A	21,312
B	61,132
C	58,303
D	40,630

Source: NASCOP, 1999.

It is also reported that HIV/AIDS had affected the agricultural sector, which supports the economy of the country. Over 80 per cent of the population live in the rural areas, of whom 90 per cent depend on agriculture. It is reported that the cumulative cases of AIDS in the agro-estates in three provinces in Kenya account for 30 per cent, 12 per cent and 3 per cent in Nyanza, Rift Valley and Eastern provinces, respectively, in terms of the workforce.

Records of man-hours lost due to morbidity kept by a company in Nyanza Province showed that between 1995 and 1997, the company lost a total of 8,007 labour days due to illness of its employees, of which a significant portion was attributed to HIV-related illnesses (Rugalema, 1997). Another Nyanza-based company reported having lost a total of 660 labour days between 1995 and 1997 due to sickness among employees affected by HIV and AIDS. Employer-paid medical costs in the agro-estates rose from K.shs. 300,000 in the 1980s to K.shs. 8.1 million in 1997. Employee-paid costs also rose from K.shs. 1.5 million in 1989 to K.shs. 11.3 million in 1997.

In Tanzania, a similar situation has been observed. There have been a wide range of study conclusions about the impact of HIV/AIDS, that can be summarized as follows.

Labour market

- Loss of experienced labour force as experienced workers are thinned by the epidemic (up to 30 per cent according to some studies).
- Loss of productivity of workers due to decline in health of those afflicted or caring for the victims.
- Loss of human capital embodied in the workforce as trained, skilled and talented workers die earlier than they would otherwise, and high costs are involved in training new workforce.
- Decline of contribution of smallholder cane-growers to the factory as more outgrowers become infected with HIV, thus worsening cane shortage at the factories.
- Reduced sugar production at the estate, as a result of the above, will put strain on the government budget as revenue which would have been collected from sales of sugar (sales tax) will not be available. This will be reflected in reduced sectoral budgets from the treasury.

- Loss of remittances to families and relatives of the victims which will in turn reduce investment and deepen poverty.

Families and households

- Disintegration of social life and culture of the area as people lose hope and possibly migrate to other areas in anticipation of finding a better life.
- Decline of the standard of living as production in the area falls and lack of better opportunities sets in.
- Potentially forced to leave company house as occupants cannot afford rent.
- Psychic costs resulting from death of spouse or parents may be high and overwhelming, to the extent of diminishing coping measures, resulting in earlier death than when supportive measures are in place.
- Stigma attached to the disease will result in orphans being subjected to psychological stress and running away from their traditional settings and ending up as street children and/or commercial sex workers (Ministry of Health, 1998; World Bank, 1997).

In terms of the general impact in Tanzania, different studies have shown the following:

- life expectancy will fall from 56 to 47 years;
- funeral costs amount to US$100.00 for every adult death;
- nursing-care costs for HIV/AIDS are between US$195.00 and US$290 for children and adults;
- the average age of the working population will decline from 31.5 to 29 years between 1992 and 2010;
- in general, youth will have less education, less training and less experience; and

- AIDS will reduce the average real GDP growth rate from 3.9 per cent to 2.8-3.3 per cent between 1985 and 2010.

In light of the above, it can be argued that the impact of AIDS will be greater for the developing countries because of other factors such as drought, floods and other natural disasters that impede the growth of the economy. As shown, the agricultural sector that supports the economy of many developing countries is directly affected by the pandemic. There is no doubt that in many of these countries, the education industry will suffer most, as the cost of education rises against a deteriorating economy. AIDS will play a significant part in collapsing the economy.

ANNEX 3. CASE STUDIES OF IMPACT ON TEACHER ABSENCES

Central African Republic: Impact of HIV/AIDS on the education system[42]

The study included five out of the seven academic inspectorates in the Central African Republic and 14 out of the 20 local inspectorates. The number of schools has *increased* by nearly 20 per cent whilst the number of teachers has *decreased* by just over 10 per cent and the number of pupils by about 5 per cent (*Annex Table 2*). The study focuses on the stock and flow of teachers. These seven inspectorates account for about 800 schools.

Table 2. Supply of education

	Schools	Classes	Teachers	Deficit
1996	730	3 268	2 905	815
1997	770	n/a	2 784	815
1998	874	n/a	2 604	786

There is a deficit compared to the number of established posts which means that, in addition to the already difficult working conditions, teachers actually in post have to put in nearly 30 per cent more effort in order that their classes function adequately.

Nationally, during the same period (1996-97-98) over the whole country (all seven inspectorates), there were 340 deaths and 366 retired (about equal to the annual deficit) (see *Annex Table 3*). During 1999 alone, 269 left the system (due to either death or retirement), i.e. more than 10 per cent of the number of teachers actually in post.

42. UNICEF. 1998. "Le VIH/sida et le Corps enseignant". Bangui (Central African Republic), Bulletin No. 5.

Table 3. Numbers leaving the teaching force

	Bangui		South Central		West		North		East Central		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
1996	65	60	39	27	30	17	35	17	16	9	185	130
1997	64	59	42	28	-	-	39	19	21	11	166	117
1998	54	50	38	26	30	18	40	19	19	11	181	124
Decrease	183	169	119	81	60	35	114	55	56	31	532	371

Whilst retirement is predictable and does not, in principle, imply any loss from expected length of service, those who die whilst in service both disturb the teaching of their classes during that year and introduce another unknown to the problem of planning.

The cause of demise for the majority of the 340 deaths is not known partly because of the climate of insecurity, but also because of the social tension generated due to strikes of officials in health and education sectors due, in turn, to late payments of salary. However, of the 228 teachers who had consulted the six main hospitals[43], 160 (or 70.2 per cent) were identified as having clinical AIDS. Teachers having reached this state were often absent from class.

Immediate consequence of death

The average length of service and age at death of those who die of AIDS are as follows in *Annex Table 4*.

43. Medical Unit Community Hospital ; Medical Unit Friendship Hospital ; STD and AIDS National Centre ; Health University and School Centre in Bangui ; National Health University Centre in Bangui ; Phthisis-pneumonia Department ; Regional Hospitals in Berberat, Bosangoa, Barnbari and Health Hospital in Bouar..

Table 4. Length of service

	Length of service		Age	
	Average	Range	Average	Range
1996	18	11-22	40	37-47
1997	22	5-33	43	36-54
1998	18	4-32	42	35-51

The majority of teachers dying of AIDS are males in their late thirties or forties with an average 10 years of service forfeited. On this basis, if there were to be perfectly elastic demand from pupils, then, we assume that 200 of the 340 deaths were due to AIDS, 100,000 additional students (200 x 50 x 10) could have been absorbed into the system.

AIDS orphans

Because of the civil service strikes, it was not easy to identify the numbers who had been orphaned because of AIDS. The enquiry identified at least 147 (with 84 under 15).

Medium/long-term consequences

- Adaptation of children to new teacher, if teacher replaced immediately;
- children redistributed among classes;
- closure of class (possibly the school) (see *Annex Table 5*) and child stays at home.

Table 5. Numbers of schools closed because of lack of teachers

	Schools	Classes	Teachers	Number of new schools	Closed schools
Bangui	50	611	1 043	4	14
South Central	175	678	634	24	17
West	174	775	409	4	16
North	252	665	402	19	31
East Central	141	592	276	15	29
	791	3 321	2 764	66	107

* Average over three years.

There are then a series of recommendations for:

- teachers and teachers associations;
- pupils, students and their associations;
- parents and parents associations;
- government;
- religious leaders and others.

Ivory Coast: impact of HIV/AIDS on the education system[44]

The study was based on all 10 DRENFB on the Ivory Coast. Whilst the number of pupils has increased by around 5 per cent, with a slightly smaller increase in the numbers of schools and classes, the number of teachers has decreased (see *Annex Tables 6-8*).

44. UNICEF. 1998. "Le VIH/sida et le corps enseignant : Impact du VIH/sida sur le système éducatif ivoirien". Abidjan (Côte d'Ivoire), Bulletin No. 4.

Table 6. Numbers of pupils ('000s) in five sub-districts

	Abengourou		Bondoukou		Odienne		Korhogo		San Pedro	
	M	F	M	F	M	F	M	F	M	F
1995-1996	21	16	37	26	36	19	n/a	n/a	49	32
1996-1997	23	17	40	29	37	19	40	28	62	41
1997-1998	24	18	44	33	40	22	45	30	59	45

Table 7. Comparison of numbers of pupils, schools, classes and teachers

	Pupils (000s)	Schools	Classes	Teachers	Deficit
1995-1996	1 464	6 692	34 207	33 304	n/a
1996-1997	1 540	6 904	35 517	33 266	2 963
1997-1998	n/a	n/a	n/a	n/a	2 857

There is a teacher deficit of about 10 per cent compared to the number of established posts, which means that teachers have to put in additional effort. Over the same period 1994-1995 to 1997-1998, there have been 1,104 deaths, 1,091 retirements (and an additional 157 enforced redundancies), making a total of 2,352 or, again, about equivalent to the annual deficit.

Table 8. Turnover of teachers

Year	94/95		95/96		96/97		97/98	
Stock	33 304		33 304		33 266			
Leavers	Dead	Total	Dead	Total	Dead	Total	Dead	Total
N	297	681	258	617	322	827	227	n/a

Whilst retirement is predictable and does not, in principle, imply any loss from expected services, those who die whilst in service both disturb the teaching of their classes during that year and introduce another unknown to the problem of planning.

For example, during the period October 1996 to June 1998, 506 teachers were identified as being affected by HIV, of whom 199 died of AIDS, and another 291 had clinical AIDS. These latter were very frequently absent. Thus the average number of months a teacher who died of AIDS was unavailable was just over six months in 1996/1997 and just less than six months in 1997/1998. This represents a substantial part of the school year. Note that the assumption here, that someone who dies from conditions other than AIDS is not available for only 10 days, seems a little optimistic.

The school year consists of 28 weeks of effective school courses; whilst those who die of 'other' causes are in hospital for 10 days, those who die of AIDS are out of action for six months (see *Annex Table 9*). Those who died of AIDS during 1996/1997 had, on average, worked 13 years in the system (and still would have had 17 years to go), whilst those who died of AIDS during 1997/1998 had, on average, worked 15½ years in the system.

Table 9. Absences and length of service

	Absence		Length of service		Age	
	Average number of days	Range months	Average	Range	Average	Range
1996-1997	62	2-11	13.0	9-18	36	33-41
1997-1998	59	3-9	15.5	10-0	38	33-42

Detailed analysis among the DRENFB shows that:

- the teacher deficit as a ratio of the number of teachers actually in post varies from 6 per cent to 21 per cent (for an overall national rate of 8.9 per cent);

- the number of deaths as a proportion of the deficit varies from under 4 per cent in San Pedro (South West) to over 58 per cent in Abengonon (East) and 30 per cent in Korhogo (North);
- the retirement rate is much more stable, varying between 36 per cent in Man (West) to 67 per cent in Bonake (North Central).

Orphans

There are 447 orphans under the age of 15; 222 over 15 years; and 127 of unknown age. There are hence a minimum of 796 children who have lost at least one parent to AIDS.

Impact on the school: examples of repercussions in the aged 6-11 cohort

- Readaptation of child (if mother is replaced);
- children redistributed among other classes;
- closure of class with children staying at home.

A series of recommendations were then made focusing on:

- prevention and sensibilization;
- retroviral treatments;
- increased investment in human resource;
- annual medical follow-up;
- redeployment;
- reduction of doubling up of classes; multigrade teaching;
- forbidding sexual relations.

ANNEX 4. CASE STUDY OF ORPHANS AND HOUSEHOLDS IN UGANDA

Rice (1996)[45] carried out a detailed study in Uganda of those applying to WATOTO (an NGO specializing in the care of orphaned children) for support for the education/schooling of orphaned children. Their (WATOTO) registration form collected details on:

- sex of child;
- year child entered programme;
- age of child entering programme;
- parents still alive;
- which year of schooling the child was attending;
- who the child was living with;
- number of siblings;
- if siblings lived together or had been separated;
- which district of Uganda child was permanently resident in.

Reliability of information

The information on the sheet referring to the child was provided in the majority of cases by the immediate carer or other relative. The information was being provided to secure funds for the child's upbringing.

There may be the possibility of the information provided being skewed deliberately to depict a situation which the informant might believe would increase the chance of assistance being given. For example, as the main contribution being awarded by WATOTO was school fees, the information provider may have believed that

45. Rice, D. 1996. "The impact of HIV/AIDS on primary education in Uganda". Dissertation for MA in Education and international development. Institute of Education, University of London, UK.

providing the information that the child was in the chronologically correct year group would imply that the child would be a good investment for educational assistance. On the other hand, the view could be taken that acceptance on to the programme was more likely if the child had fallen behind in its schooling and was more in need of assistance to be able to continue its education.

There is also the possibility that the information may be skewed, but unintentionally, due to the information providers describing situations which they believe to be true but are actually incorrect. On several of the forms the children's age did not appear to match the accompanying photograph. This may have been due to the information giver relying on the child for information, and the child not knowing its exact date of birth and, hence, age, or the child wanting to appear older, or younger, for different reasons.

Validity of information

This information was being provided by a very specific group of people. They were adults who were living in difficult circumstances, supporting minors, of whom the majority had lost one or both of their parents. This group does not represent necessarily a random sample of carers of orphaned children. This can be argued for two major reasons.

First, this group may only represent those who are trying to maintain the position of their child in school. This group may not truly represent those whose children have dropped out a significant time before, and so now believe that too much school time has been lost and would not be able to be made up.

Secondly, this group may not contain carers who have calculated the advantage of having a child provide its own income to support

the family, rather than attending school. In this situation even if school fees were provided, the family would be in a negative situation financially (Source: Rice, *idem*, pp. 44-45).

The 958 applicants ranged from 1 to 14 years old. There were 499 girls and 459 boys, which is itself an interesting commentary as to how parents perceive the relative importance of schooling for boys and girls; although it is true that among the 504 rural applicants there were 270 boys compared to 230 girls.

Over three-quarters were aged between 5 and 10, i.e. should have been at the end of nursery or the beginning of primary (see *Annex Table 10*). Only a quarter were not in school at all, which is rather different from the picture sometimes painted of orphaned children: of course, it may be that the sample is biased towards those guardians (or parents) who are more concerned about schooling. The revealed preference to apply for sponsorship for the earlier grades and for the younger children is probably because the guardians prefer to keep older children at home to contribute to the household economy.

Only a quarter of those registered with WATOTO were 'truly' orphans in the sense that both parents were dead; although for a further 60 per cent their father – usually the parent most likely to be earning income to pay for school fees – was dead (*Annex Table 10*). More than 70 per cent of the latter group lived with their mother; but where both parents were dead, there was a wide spread of carers/guardians, at least among the paternal relatives (*Annex Table 11*). There was no obvious pattern according to the gender of the child.

Annex Table 10. Uganda: Age and school status

Age	Total	Not at school	Nursery	G1	G2	G3	G4	G5	G6	G7
1	1	1	0	0	0	0	0	0	0	0
2	4	4	0	0	0	0	0	0	0	0
3	23	22	1	0	0	0	0	0	0	0
4	66	43	23	0	0	0	0	0	0	0
5	97	38	58	1	0	0	0	0	0	0
6	132	46	42	41	2	0	0	1	0	0
7	135	29	11	72	20	2	1	0	0	0
8	122	18	4	38	40	22	0	0	0	0
9	136	22	0	16	38	43	15	2	0	0
10	124	13	1	12	28	24	30	16	0	0
11	53	5	0	5	5	12	12	6	7	1
12	46	2	0	0	4	6	10	9	12	3
13	16	0	0	0	0	4	3	3	2	4
14	3	0	0	0	0	0	0	0	3	0
Total	958	243	140	185	137	113	71	37	24	8

Source: Rice, *idem,* Figure 5.11, p. 5.

Table 11. Breakdown of who children live with

	F+M	F	F1	F2	F3	M	M1	M2	M3	O	Totals
Both parents alive	18	1	9	0	1	28	6	0	1	1	65
Father alive/Mother deceased	0	19	9	2	6	0	1	0	0	8	45
Mother alive/Father deceased	0	0	48	16	14	428	32	2	6	59	605
Both parents deceased	0	0	61	22	33	0	29	2	3	92	242
Totals	18	20	127	40	54	456	68	4	10	160	957

Source: Rice, *idem,* p. 58A.

*Codes for parent/guardian that child living with:

M: with mothers
F: with father
M1: with maternal grandparents
M2: with maternal uncle
M3: with maternal aunt
F1: with paternal grandparents
F2: with paternal uncle
F3: with paternal aunt
O: other

Whilst 188 (or nearly 20 per cent) were three or more years 'behind' with their schooling relative to their chronological age, it must be remembered that it is typical for there to be some delay in developing countries. Indeed, it is perhaps more noteworthy that 63 per cent of girls and 56 per cent of boys were, at most, one year behind with their schooling, and that, although the gender mix is different, the same pattern is reproduced in both rural and urban areas.

Table 12. Years behind in education according to sex

Number of years behind in education	0	1	2	3	4	5	6	7	Total
Girls	141	176	82	57	29	10	2	2	499
Boys	100	157	114	44	23	16	5	0	459
Total	241	333	196	101	52	26	7	2	958
Urban									
Number of years behind in education	0	1	2	3	4	5	6	7	Total
Girls	79	111	38	28	8	0	1	0	265
Boys	47	68	43	15	7	7	2	0	189
Total	126	179	81	43	15	7	3	0	454

Rural

Number of years behind in education	0	1	2	3	4	5	6	7	Total
Girls	62	65	44	29	21	10	1	2	234
Boys	53	89	71	29	16	9	3	0	270
Total	115	154	115	58	37	19	4	2	504

Rice also analyzed the breakdowns of years behind in education (see *Annex Tables 12-15*) according to the children's orphanhood status, who they were living with, number of siblings and whether or not they were living together or apart from their siblings.

Comparing the small numbers where both parents were still alive, with those where both parents were deceased, it can be seen that the latter were likely to be further behind in their schooling and that this was true in both rural and urban areas.

Table 13. Mean average of years behind in education according to orphanhood status

Mean average of years behind in education	Urban	Rural	Total
Both parents alive	1.43	1.60	1.51
Father alive	1.64	1.96	1.78
Mother alive	1.25	1.63	1.42
Both parents deceased	1.45	1.86	1.61

Source: Rice, *idem,* p.63.

There was much more variation according to whom the orphan applicant was living with, from under one year for those living with both parents to over 2.5 years for those living with only their father.

Table 14. Years behind in education according to whom living with

Key	Living with	All	Urban	Rural
F+M	Both parents	0.94	1.0	0.75
F	Father	2.65	2.18	3.22
F1	Paternal grandparents	1.44	1.33	1.54
F2	Paternal uncle	1.53	1.07	1.80
F3	Paternal aunt	1.39	1.18	1.53
M	Mother	1.41	1.20	1.60
M1	Maternal grandparents	1.38	0.96	1.63
M2	Maternal uncle	1.75	0.66	5.0
M3	Maternal aunt	1.70	1.29	2.66
O	Other	1.71	1.56	1.79

Source: Rice, *idem,* p. 64.

It can be seen that the orphan children were likely to be further behind in their schooling if they were living apart from their siblings, and even further behind if an only child (probably because they were from poorer one-parent families); and this was also true in both rural and urban areas. In contrast, there seemed to be no obvious association between the number of years behind and number of siblings (apart from those who were only children).

Table 15. Mean average of years behind in education according to whether or not living with siblings

	Urban	Rural	Total
Siblings not apart	1.24	1.56	1.40
Siblings apart	1.35	1.73	1.58
Only child	1.6	2.05	1.84

Source: Rice, *idem,* p. 66.

ANNEX 5. MACRO TRENDS IN EDUCATION ENROLMENT AND NUMBER OF TEACHERS

There are two obvious quantitative effects of HIV/AIDS on the education system: the reduction in the number of pupils, and deaths among teachers. Whilst both might decline, in management terms, the most important issue is what happens to the pupil/teacher ratio. The trends in the pupil/teacher ratio over five-year periods since 1980 as compared to the current HIV/AIDS prevalence are shown in Annex Tables 17 and 18; and the *correlation* between HIV/AIDS prevalence (usually current estimates) and movements in the pupil/teacher ratio is shown in *Annex Table 16*.

It can be seen that, unfortunately, there is no obvious impact of the death of teachers on the pupil/teacher ratio; students are either dying or abstaining as fast or faster (see *Annex Tables 16-18*).

Table 16. Correlation between HIV/AIDS prevalence and pupil/teacher ratio in sub-Saharan Africa (38 countries)

Primary schooling

		1980-1985	1985-1990	1990-1995
HIV/AIDS prevalence (%)	Pearson correlation	-.133	-.170	-.123
	Sig. (2-tailed)	.426	.308	.462
	N	38	38	38
		1980-1985	**1985-1990**	**1990-1995**
HIV/AIDS prevalence (%)	Spearman's rho	-.095	-.427	-.132
	Sig. (2-tailed)	.569	.008	.430
	N	38	38	38

Secondary schooling

		1980-1985	1985-1990	1990-1995
HIV/AIDS prevalence (%)	Pearson correlation	-.088	-.091	-.318
	Sig. (2-tailed)	.633	.619	.078
	N	32	32	32
		1980-1985	**1985-1990**	**1990-1995**
HIV/AIDS prevalence (%)	Spearman's rho	-.108	.036	-.389
	Sig. (2-tailed)	.558	.845	.028
	N	32	32	32

Table 17. Trends in pupil/teacher ratios in primary schools (percentage increase or decrease)

Country/Year	HIV/AIDS prevalence (%)	1980-1985	1985-1990	1990-1995
Angola	2.12	-0.56	1.93	-14.73
Benin	2.06	-30.53	9.50	43.81
Botswana	25.10	-0.94	-1.18	-19.48
Burkina Faso	7.17	6.01	-1.91	-11.86
Burundi	8.30	53.58	19.02	-24.92
Cameroon	4.89	-1.51	0.70	-6.35
Central African Republic	10.77	10.11	17.36	n/a
Congo	7.78	13.00	6.09	8.07
Cote d'Ivoire	10.06	-6.37	0.06	13.06
Democratic Republic of the Congo	4.35	n/a	9.27	11.82
Equatorial Guinea	1.21	-0.53	n/a	1.97
Eritrea	3.17	n/a	07.25	10.07
Ethiopia	9.31	-24.79	-24.98	5.05
Gabon	4.25	1.65	5.37	15.49
Gambia	2.24	-4.97	35.12	-3.41
Ghana	2.38	-19.17	25.04	3.18
Guinea	2.09	1.12	9.68	23.39
Guinea-Bissau	2.25	8.02	0.36	n/a
Kenya	11.64	-11.30	-7.81	-2.74
Lesotho	8.35	15.43	-1.65	12.51
Madagascar	0.12	-12.35	1.53	-8.02
Malawi	14.92	-5.48	0.01	-3.76
Mauritania	0.52	21.97	-11.63	15.27
Mozambique	14.17	-24.47	-11.35	5.61
Niger	1.45	-9.90	11.68	-8.45
Nigeria	4.12	19.87	-3.04	-9.25
Reunion	n/a	-21.47	-3.31	n/a
Senegal	1.77	1.62	13.77	10.04
Sierra Leone	3.17	18.65	-12.97	n/a
Somalia	0.25	-43.18	n/a	n/a
South Africa	12.91	-10.77	n/a	36.05
Sudan	n/a	2.99	-1.98	-9.50
Swaziland	18.50	-0.71	-3.48	3.89
Togo	8.52	-16.38	26.48	-12.72
Uganda	9.51	2.46	-14.83	19.91
United Republic of Tanzania	9.42	-17.26	1.91	5.57
Zambia	19.07	1.69	-10.88	-11.17
Zimbabwe	25.84	-10.06	-9.44	9.31

Table 18. Trends in pupil/teacher ratios in secondary schools

Country/Year	HIV/AIDS prevalence (%)	1980-1985	1985-1990	1990-1995
Botswana	25.10	17.00	-22.97	0.24
Burundi	8.30	-10.62	55.54	-0.34
Cameroon	4.89	18.12	-18.52	N/a
Central African Republic	10.77	2.95	-41.95	n/a
Congo	7.78	-3.94	-24.16	12.05
Democratic Republic of the Congo	4.35	n/a	n/a	12.11
Eritrea	3.17	n/a	n/a	11.33
Ethiopia	9.31	n/a	-11.58	-15.10
Gabon	4.25	14.82	7.51	-5.63
Gambia	2.24	47.05	17.82	-23.11
Ghana	2.38	-8.21	-9.55	n/a
Guinea	2.09	7.63	-28.03	57.39
Guinea-Bissau	2.25	17.69	n/a	n/a
Kenya	11.64	-20.76	5.42	n/a
Lesotho	8.35	1.10	2.01	27.63
Madagascar	0.12	n/a	-20.88	n/a
Malawi	14.92	10.15	39.02	-18.80
Mauritania	0.52	n/a	-12.24	37.35
Mozambique	14.17	1.78	6.16	-4.11
Niger	1.45	n/a	-3.76	-5.64
Nigeria	4.12	-36.54	-27.71	41.80
Reunion	n/a	-3.27	-0.10	-4.70
Senegal	1.77	2.42	5.74	n/a
Seychelles	n/a	50.10	22.73	-6.28
Sierra Leone	3.17	53.63	-45.52	n/a
Somalia	0.25	-21.86	n/a	n/a
Sudan	n/a	18.43	-9.96	7.75
Swaziland	18.5	n/a	0.41	0.78
Togo	8.52	n/a	25.21	12.53
United Republic of Tanzania	9.42	-13.98	19.24	-17.10
Zambia	19.07	-2.96	11.84	n/a
Zimbabwe	25.84	53.36	-2.24	-3.84

ANNEX 6. LIFE SKILLS PROGRAMMES IN THE REGION[46]

Learning for life in the twenty-first century requires equipping children with basic education in literacy and numeracy as well as the more advanced, complex skills for living that can serve as a foundation for life, enabling children to adapt and change with life circumstances. Nowhere is this more critical than in sub-Saharan Africa.

While there have been various attempts to impart life skills to children and young people in ESAR, to date there is no consensus on the definition, scope and methods for including life skills education in the school curriculum. This may account for the reason why the implementation of life skills programmes has been sporadic and why some countries have yet to start such programmes.

The following section presents some examples of life skills programmes and activities in school systems in ESAR.

Zimbabwe Life Skills Programme

In Zimbabwe, which has one of the highest AIDS prevalence rates on the continent, the Ministry of Education and Culture began to offer a school-based HIV/AIDS and Life Skills Education Programme for schools in 1992. The AIDS Action Programme for Schools targets students and teachers from Grades 4-7 in all primary schools and Form 1-6 in all secondary schools. It is a separate subject on the timetable. AIDS education is compulsory in all primary and secondary schools, and tertiary institutions. HIV/AIDS information is also integrated in relevant subjects. The AIDS Action Programme for Schools has helped to bring the HIV/AIDS problem in Zimbabwe out into the open for discussion.

46. Taken from Gachuhi (1999).

The goal of Zimbabwe's AIDS Action Programme for Schools is to effect attitudinal and behaviour change amongst pupils in order to reduce the risk of HIV infection. The programme aims at developing pupils' life skills such as problem solving, informed decision-making, and avoiding risky behaviour. Participatory methods and experiential learning processes are expected to be used to teach life skills.

Zimbabwe's AIDS Action Programme for Schools has a number of important achievements to its credit. Over 6,000 schools are now teaching the prescribed curriculum, using high-quality materials that have been produced and introduced into the schools. All national, regional and district education officers have received training through the programme and more than 2,000 teachers have received in-service training in the use not only of specific AIDS education materials, but also of participatory life skills methods generally. At the tertiary level, more than 5,000 teacher trainees have begun similar training in teacher-training colleges.

An effective research and monitoring component has been built up and the data generated from this system have been used to effect mid-course adjustments in the programme. The programme has drawn on resources from within the existing education system and its managers have demonstrated a readiness to assess their problems and make corrections as needed. The programme has the full support of the government and others, including the churches.

In an evaluation conducted in 1995, it was found that only one-third of the teachers had received any in-service training and were unfamiliar with experiential learning and participatory methods. Moreover, many teachers felt embarrassed to handle sensitive topics related to sex and HIV/AIDS.

According to the substantial experience in countries around the world[47], life skills programmes are more effective when teachers:

- explore their own attitudes and values and establish a positive personal value system;
- establish an open and positive classroom climate;
- place education about STIs/AIDS within the context of a general programme on personal development, health and living skills;
- use a positive approach which emphasizes awareness of values, assertiveness, and other relationship skills, decision-making and self-esteem;
- apply teaching about STIs/AIDS to situations with which students identify.

The Zimbabwe programme was the first of its kind in ESAR and although there is a need for longer initial training and more days for refresher courses for teachers, the programme has tried to incorporate some better practices, including strengthened teaching training, and has set a good precedent for others in the region.

Namibia Life Skills Programme

The Ministry of Education and Culture, with UNICEF assistance, has focused initially on life skills training for 15-18 year olds, for school youth after and outside school. ***My Future is My Choice*** is an HIV risk-reduction intervention. By December, 1998, more than 21,000 young people had passed through an intensive peer education effort, and an additional 30,000 were planned to be reached in 1999. It appears that the programme reduced adolescent sexual risk behaviour.

This effort has not only filled a void in Namibia, but it has also created a demand for similar training targeting youth aged 10-14 years.

47. UNESCO. 1991. Some of the successful and exemplary AIDS education programmes highlighted in this report include those from Australia, Canada, the Philippines and Uganda.

The Namibian Catholic Bishops Conference has joined the initiative to combat HIV/AIDS.[48]

The Namibian Ministry of Education and Culture has made progress in incorporating an HIV-prevention framework throughout the primary- and secondary-school curriculum. The curriculum sends very direct and clear messages with regard to both abstinence and condom use. The primary- and secondary-school syllabus reinforces the issue of HIV prevention at frequent intervals from 5th to 10th grade in the Life Sciences Curriculum and in the Population Education Curriculum. Nearly all Namibian youth are in school up to Grade 8 and therefore most youth are reached by the school programme.

However, it has been reported that some teachers are uncomfortable with AIDS materials and do not wish to teach it. Many are still lecturing instead of using participatory methods.[49] Furthermore, it has been suggested that many 15-18 year-old youth, especially high-risk youth, feel disenfranchised by the formal school system and are therefore not likely to be responsive to risk-reduction messages presented in a school setting.[50] In conclusion, there is need for mobile teams to reach young people where they are. The programme has been able to successfully reach almost 51,000 young people out of a total national population of about one and a half million. There are plans to start a similar programme for children between 10-14 years of age.

Uganda Life Skills Programme

In the early 1990s, Uganda had a comprehensive School Health Education Programme (SHEP) which provided health information to pupils, although the intention had been to also change behaviour. An

48. UNICEF, CP Medium-Term Review, p. 7, 1999.
49. Stanton, Bonita. "HIV prevention efforts in formal curriculum of Ministry of Basic Education and Culture: Targeting youth 10-14 years of age in Namibia", Maryland University, p.2, 1999.
50. Ibid. p.3.

evaluation in 1994 revealed that the curriculum had indeed been successful in raising knowledge about health issues, but it reportedly had little impact on attitudes and values and no discernible impact on health practices.

It was pointed out that behaviour and practice needed to be targeted more effectively. The study therefore led to the development of a Life Skills Programme and recommended using experiential and participatory methods. In 1994 the programme was launched with a national sensitization seminar for senior policy-makers, opinion leaders and NGO representatives. Baseline surveys were conducted in primary and secondary schools followed by the development of life skills reference manuals for teachers. Another reference manual for training out-of-school children and youth facilitators was also developed. Primary teachers' college tutors were trained in 1997/1998.

In a one-year trial using the WHO-UNESCO in-school Life Skills Manual in Masaka district in Uganda, a curriculum and materials were developed. Some 100 primary- and 32 secondary-school teachers were trained. A control group of schools was included as well. One key feature of this programme was to do a pre- and post-test on knowledge, attitudes and practices related to STI/HIV/AIDS and sexual behaviour. This trial was part of an overall IEC intervention in the district. Following the intervention, it was found that there was no significant difference between the control group and the intervention school for the following reasons:

- teachers were not confident to carry out experiential learning activities such as role play and therefore reverted to more conventional teaching methods;
- teachers avoided teaching sensitive topics such as those on, or those that referred to, condoms, for fear of losing their job and due to religious affiliations;

- since it was not an examinable subject and not on the curriculum, it was not perceived to be important;
- teachers said they taught about 70 per cent of the life skills lessons officially included on the timetable, while the pupils claimed they only taught about 30 per cent of the lessons.

Some lessons learned from this intervention point to the need for a more concerted effort to ensure that life skills programmes are developed with an agreed-upon methodological approach and strategically placed in the curriculum with the commitment of all players. There is need to enlist the support and co-operation of inspectors and local authorities. Teachers require *skills* and confidence to facilitate experiential learning activities in life skills lessons.

Currently, effective advocacy has created a supportive environment for life skills education and plans are under way to develop a better-designed curriculum, sufficient and sustained training and basic but essential teaching materials to bring life skills education effectively into primary and secondary schools. Life skills will be infused in health/science as the carrier subject.

The Ministry is now in the process of developing a curriculum, designing training approaches and writing teaching materials, to bring life skills education into schools. The initial focus is on the primary schools.

Lesotho Life Skills Programme

Lesotho has integrated some HIV/AIDS and STI information in such subjects as health and physical education in the primary-school curriculum and in the biology curriculum in secondary schools, although the subject is not compulsory in all schools. In an assessment conducted by Chendi[51], the life skills programme is intended to equip

the youth with life skills to enable them to deal effectively with the demands and challenges of everyday life. However, on closer examination of the content of the curriculum, it is heavily biased towards knowledge, with very little curriculum content or time during lessons on the requisite skills and attitudes for behaviour development and/or change. Moreover, headteachers have not received training on life skills and many teachers state that they lack the confidence to handle such sensitive topics. While there is some activity taking place, the coverage is unknown and the methods are ineffective, with the exception of those implemented by a few NGOs.

Malawi Life Skills Programme

In Malawi, where 15-25 per cent of urban youth are infected with HIV, and girls are three to four times more likely to be infected than boys, the Ministry of Education implemented a life skills syllabus for Standard 4 children in primary schools in 1997. Regrettably, about 2 per cent of children drop out after Standard 1 and most pupils terminate their education, and therefore remain unreached, and leave school after Standard 4. The syllabus attempts to equip learners with skills such as decision-making, problem-solving, effective communication, assertiveness and conflict resolution, among others. However, due to the design of the programme, it is unlikely that there will be any significant behavioural change since the findings indicated the lack of appropriate teaching and learning methodologies for effectively learning skills related to safe behaviour. Standard classroom modes of assessment are identified in the syllabus. Chendi's[52] assessment of the Malawi Life Skills Education Programme revealed the urgent need to train teachers, to develop additional materials for use in all classes in primary and secondary school in all districts in the country and, importantly, the need to develop participatory learning practices in schools. To date, there is scant information on the impact the life skills

51. Chendi, Helen. "HIV/AIDS Life Skills Programmes in Lesotho", unpublished, 1999.

programme is having in reducing the incidence and prevalence of STIs, unplanned pregnancies and young people's ability to engage in risk-free behaviour.

Botswana Life Skills Programme

A 1998 Sentinel Survey conducted at ante-natal clinics at nine sites in Botswana, indicated that out of 4,194 pregnant women tested over a 12-week period, 1,614 were found to be HIV positive and about 13 per cent of these were less than 20 years old.[53] This is a clear indication that young people and especially women are engaging in unsafe sex. Consequently, in 1998 the Ministry of Education developed a policy on HIV/AIDS education with the following guidelines:

- HIV/AIDS education must be integrated into the curriculum and should be made compulsory at all levels of education.
- It is the responsibility of all staff involved in education to participate in HIV/AIDS education since the disease has social, economic, scientific, demographic and moral implications.
- Schools, in co-operation with the local health authorities, should involve parent/teacher associations and the community in AIDS education. There should be links between the school and the community on this issue.

The Ministry of Education has infused life skills across the curriculum in secondary-school subjects such as development studies, biology, religious education, integrated science, and social studies, especially focusing on the Guidance and Counselling programme to work on skill development. Nevertheless, AIDS education is presented as one-off lessons, taught as biomedical facts to be learned for a test by teachers who are uncomfortable discussing the topic. Teachers lack

52. Chendi, Helen. "HIV/AIDS Life Skills Programmes in Malawi", unpublished, 1998.
53. Molobe, Ennie and Salewski, Tanya. "Education for citizenship: life skills in the Botswana classroom", paper presented at the 1999 BOLESWA Symposium, 1999.

participatory methods to ensure effective learning and there is little understanding of the important role life skills plays in the development of young people.[54]

Swaziland Life Skills Programme

The Life Skills Programme in Swaziland is still in the planning stages and has taken a different approach. There appears to be no clear-cut policy as yet regarding the infusion of HIV/AIDS in the curriculum. However, it is incorporated in several interventions including care of orphans, activities for out-of-school youth and school-based AIDS education. Despite these efforts, the impact of these interventions has been negligible.

It has been reported[55], that in the school-based HIV/AIDS and Population Education Programme (SHAPE), implemented by CARE, HIV/AIDS is handled in a rather haphazard manner and may or may not be taught, depending on the commitment of the headteacher as well as the ingenuity of the teacher who has been trained by SHAPE.

In a few schools, HIV/AIDS is taught as a separate lesson and in others it is infused into the curriculum. Yet in other schools, it is taught only if the teachers have time. Thus, there is no clear policy as yet, coverage is quite low and the intervention has been sporadic and, as a result, generally ineffective, due to the methodology used.

54. Ibid, p. 24.
55. Chendi, Helen. "HIV/AIDS Life Skills Programmes in the Kingdom of Swaziland", unpublished, 1998.

ANNEX 7. PRO-CHANGE APPROACH

In the United Kingdom, *Pro-Change* has been working on behaviour change/life skills programmes for some years, targeting smoking initially and, more recently, AIDS and reproductive health, in many health authorities in the UK. *Pro-Change and Education for Development* are in discussion with a number of agencies and organizations, to see whether the *Pro-Change* programmes can be implemented in South Africa, in Southern Africa, as well as in the wider Commonwealth.

The Pro-Change Programme

The Pro-Change approach is based on a staged model of behaviour change, the Transtheoretical Model, developed by Him Prochaska at the Cancer Research Institute in Rhode Island, USA. It is based on a review of successful behaviour change health programmes, and the implementation of programmes based on the model.

It is best implemented in a CD-ROM interactive media version, over a period of two years. During this time, each person should interact with the programme individually for 20-30 minutes, six-eight times, and attend six-eight group-support sessions. One lap-top computer per school is the minimum requirement. Possible uses of 'wind-up-radio' technology for powering the lap-tops are being explored, and have already been demonstrated on lap-tops in prototype situations.

The CD-ROM programme has to be revised and redeveloped for each country in which it is used. It cannot be *imported* from one country to another. It is based on surveys of the actual behaviour, beliefs and attitudes of the target population, previous research findings, and an analysis of how their behaviour can change using the theoretical model.

The information from these surveys is available to be used in evaluating and planning other initiatives in AIDS education. It is then fed into the development of the CD-ROM programme, using the framework and architecture of previous CD-ROM programmes. This is tested, and is then ready to pilot.

During pilot and roll-out implementation, information on individual interactions is fed into the baseline knowledge base (anonymously), to form a real-time knowledge base on ongoing behaviour change nationally.

The programme is of value as it is:

- A population-wide approach.
- Explicitly a behaviour-change programme. Information, strategies, support, suggestions and interaction are all designed and compiled to meet behaviour-change goals. Based on extensive research and analysis of 20 years of behaviour-change programmes. A staged behaviour-change approach, which assists people in moving on towards change, to make the change and then maintain it. The phase in which one takes action to one's behaviour is only phase four. Before that, there is important work to be done in communicating with people who are not yet thinking about change, who have started to think about changing, and who have started to plan how they will change. The fifth stage is maintaining the change.
- A differentiated message and communication approach. Messages, support and strategies are different for each of the five states in behaviour change.
- An individualized programme. Each user can be given customized information, and can be helped to develop and implement his own change.

- Closely correlated to researched norms of behaviour in the target community. This enables the user to compare her/his progress with her/his peers.
- Available in paper and CD-ROM version, with group-work support.
- Able to use the considerable benefits of computer interaction, which are:
  - guaranteed confidentiality and privacy, which is invaluable when discussing sexual diseases and behaviour, and
  - individualized interaction, which allows for a highly responsive programme, based on honest feedback.
- Sustainable and efficient. It is implemented over two years, but requires only about 10 sessions over that period. In the computer version it can be implemented with only one lap-top computer per school.
- Based on developing the users' own resources and strategies for change. It is a life skills programme, and can also be used in similar format for a variety of other behaviours, including smoking, drug use, eating behaviours and others. The life-skills learning is in other words transferable and generalizable.

Designed, researched and implemented in prevention and cessation programmes. Tried and tested, and subject to published research, in a variety of communities in the USA and the UK, over many years.

ANNEX 8. COST-EFFECTIVENESS OF INTERVENTIONS IN DEVELOPING COUNTRIES

The cost per HIV infection averted is available for only four interventions – one targeted to people with very high rates of partner change (sex workers) in Nairobi, and three others addressed to those with lower rates of partner change. In principle, government should have a strong interest in supporting interventions that prevent the most secondary infections per dollar spent. However, except for one study, secondary infections were not included in the benefits.

- The annual operating cost of the Nairobi, Kenya, sex worker programme came to roughly $70,000 or $140 per sex worker per year (Moses *et al.*, 1991). At the beginning of the programme, 80 per cent of the participants were infected with HIV and they had an average of four clients per day. The annual cost per case of HIV averted came to $8, under the assumption of 80 per cent condom use, or $12, under the assumption of 50 per cent condom use. The numbers of cases of HIV prevented among the clients of sex workers and among sex workers themselves were included in the calculations, but infections prevented among the partners of clients were not included. Had they been, the intervention might have been even more cost-effective. Reportedly, the largest share of the programme's costs was for STD treatment, although most of the benefits arose because of increases in condom use (Mills *et al.*, 1993). However, the availability of STD treatment may have been a major factor in obtaining the co-operation of participants.
- The Mwanza, Tanzania, STD intervention is the only one in the table for which the cost per daily saved has been calculated – $10-11 (Richard Hayes, personal communication). The cost-effectiveness of this intervention is understated because the authors did not include prevention of any secondary infections in their analysis.

The intervention might also have been more cost-effective had it been implemented in an urban area, where the number of secondary infections prevented might have been greater for each primary case. Of the total cost of $10.08 per treated case of STD, $2.11 was for drugs (Richard Hayes, personal communication). The incremental annual cost of this intervention, which served a catchment population of about 150,000 people, was $59,000, or $0.39 per capita. By comparison, the recurrent health budget of Tanzania in 1993 amounted to $2.27 per capita.

- The cost-effectiveness of safe blood programmes is strongly dependent on the level of HIV prevalence in the population and on the extent of risky behaviour among transfusion recipients. The Ugandan study included only averaged primary infections, that is infections due directly to transfusions (European Commission, 1995a,b). It assumed a prevalence rate of 16 per cent among blood donors and of 40 per cent and 9 per cent, respectively, among adult and child transfusion recipients. The calculations concerning the number of primary infections averaged are in box 4.2 of that report. The cost per HIV infection averted was obtained by dividing the total additional costs of HIV screening in 1993 ($319,894) by the total number of infections averted (1,863).
- The effectiveness of short-course zidovudine (AZT) therapy to prevent mother-to-child transmission is not known at the time of writing; clinical efficacy trials are under way in a number of countries. The cost-effectiveness numbers in the table are, therefore, hypothetical. The calculations assume that the therapy would reduce transmission from 25 per cent to 16.5 per cent, of half the effect of longer-course therapy. Programme costs were estimated from the literature and based on those in sub-Saharan Africa, where most mother-to-child transmission occurs (Marsergh et al., 1996). The authors calculated that a national programme in a country with a 12.5 per cent HIV seroprevalence rate would

lower incidence of HIV by 12 per cent. Since infants and young children are very unlikely to transmit HIV to others, there are virtually no secondary cases generated by this intervention. Preventing infection of children is one of the important external benefits of preventing infection in their mothers (see box 4.6 of that report).

The cost per case of HIV averted or per DALY has not been calculated for the other studies in the table; only the costs are available. A needle exchange and bleach programme serving injecting drug users in Kathmandu, Nepal, cost $3.21 per contact after only one year of observation and was organized with community-based outreach. A second programme in Lubljana, Slovenia (not shown), was based in a fixed facility and had been operating only five months when costed at $12.59 per contact (Mills et al., 1993). The cost per condom distributed varied from $0.10 to $0.70 for three highly targeted programmes that had peer education and condoms for sex workers. Costs were much lower for 10 condom social marketing programmes – from $0.02 to $0.30 per condom distributed, including the value of donated condoms.

International Institute for Educational Planning www.unesco.org/iiep

PART D.
BIBLIOGRAPHY

BIBLIOGRAPHY

Abidi, S. 1991. *Education for Development. African Development Series No. 4* Kampala: Foundation for African Development.

Adler, M. 1997. *A,B,C, of AIDS*. London: British Medical Journal Publishing Group.

Armour-Thomas, E.; Clay, C.; Domanico, R.; Bruno, K. and Allen, B. 1989. *An outlier study of elementary and middle schools in New York City*: Final report. NY: New York City Board of Education.

Ayieko, M.A. 1997. *From single parents to child-headed households: the case of children orphaned by AIDS in Kisumu and Siaya districts*

Barlow, J. 1996. *HIV and children*. Edinburgh: HMSO.

Barnett, T.; Blaikie, P. 1992. *AIDS in Africa – its present and future impact*. Chichester: John Wiley and Sons.

Bishop, G. 1989. *Alternative strategies for education*: MacMillan.

Black, M. 1991. *AIDS and orphans in Africa*. New York: UNICEF.

Bloom, D. 1997. *The economics of HIV and AIDS: the case of South and South*. London: Falmer Press.

Burke, A. 1999. *School effectiveness: the centrality of the teacher's role*.

Carm et al. 1999. Draft report: *Evaluation of Stromme Foundation Child Sponsorship Programme*.

Carr-Hill, R.; Oulai, D. 1993. *The impact of HIV/AIDS on education*. Paris: IIEP.

Catalan, J. (ed.) 1997. *The impact of AIDS: psychological and social aspects of HIV infection*. Amsterdam: Harwood Academic Publications.

Centre International de l'Enfance. 1994. *Lusaka Declaration: support to children and families affected by HIV/AIDS*. Paris: French Ministry of Foreign Affairs.

Chown, P.; Dube, N.; Friedman, H.; Cumbo, P.; Madonko, M.; Maskalaga, N.; Madoji, M.; Munddanafa, D. 1998. Report of Independent Evaluation of those projects funded by the Government of the Netherlands in the UNICEF/Zimbabwe Programme on AIDS Prevention comprising In-School Youth AIDS Prevention, Out-of-school Youth AIDS Prevention, and Community-Based Orphan Care, Harare.

CINDI. 1997. *Children in distress – 1997 Mid-year Review*. Durban: CINDI.

Cohen, D. 1995. *Economic impact of the HIV epidemic*. New York: UNDP.

Cohen, D.; Reid, E. 1998. *The vulnerability of women: is this a useful construct for policy and programming?* New York: UNDP.

Cohen, D. 1999a. *Poverty and HIV/AIDS in Sub-Saharan Africa*. New York: UNDP.

Cohen, D. 1999b. *Strengthening national capacity for HIV/AIDS strategic planning*. New York: UNDP

Coombe, C. 2000. *Managing the impact of HIV/AIDS on the education sector,* unpublished, July, Pretoria, South Africa.

Craig, Kraft and du Plessis, The World Bank and ABE. 1998. *Teacher development: making an impact.*

CRIN, Kent. 1988. *Care and protection of children and young people affected by HIV/AIDS.*

DANIDA. Antallet afHIV-smittede faldet makant I Uganda.

Delta Internasjonalt. 1997. *Report from Zimbabwe YWCA Peer Education Project.*

Delta Internasjonalt. 1998. *Report from Zimbabwe YWCA Peer Education Project.*

Dunn, A. 1992. *The social consequences of HIV/AIDS in Uganda*. London: SCF Publication.

Ennew, J. 1994. *Street and working children. A guide to planning (Development Manual 4)*. London: SCF Publication.

Ferenic, N. et al. 1991. *Study to review effectiveness and coverage of current sex work interventions in developing countries.*

Fielding, N. 1993. Q*ualitative interviewing and ethnography*. London: SAGE Publications Ltd.

Foster, G. 1996. *AIDS and the orphan crisis in Zimbabwe,* AIDS Analysis Africa, 7:3 October/November 1996.

Foster, G. *et al.* 1996. "Supporting children in need through a community-based orphan visiting programme", in *AIDS Care*, Vol. 8, No. 4.

Foster, G. *et al.* 1997. "Perception of children and community members concerning the circumstances of orphans in rural Zimbabwe", in *AIDS Care*, Vol. 9.

Fullan, M.G. and Miles, M.B. 1992 (June). *Getting reform right: what works and what doesn't.* Phi Delta Kappan, 73(10).

Gachuhi, D. 1999. *The impact of HIV/AIDS on education systems in Eastern and Southern Africa Region and the Response of education systems to HIV/AIDS: Life Skills Programme.* Paper prepared for UNICEF presentation at the All sub-Saharan Africa Conference on Education for All 2000, 6-10 December 1999, Johannesburg, South Africa.

Gilbert, N. 1993. *Researching social life*. London: SAGE Publications Ltd.

Government of Uganda. 1992. *Uganda National Programme of Action for Children*. (UNPAC) Kampala: Government of Uganda.

Government of Uganda and UNICEF. 1995a. *Country Programme 1995-2000. Master Plan of Operations*. Kampala: UNICEF.

Government of Uganda and UNICEF. 1995b. *Country Programme 1995-2000. Mid-term Review*. Kampala: UNICEF.

Green, C.E. 1998. Report of the situation of AIDS and the role of IEC in Uganda.

Grunseit and Kippax. 1997. *The impact of HIV and sexual health education on the sexual behaviour of young people.* UNAIDS.

Hernes, G. 2000. AIDS and education assessment; Exploring the implications of the HIV/AIDS epidemic for educational planning in selected African countries: The demographic question, AIDS Campaign Team for Africa, the World Bank.

Hogg, C. 1996. *Living positively.* London: National Children's Bureau.

Holt, C. 1997. *Orphans of the storm.* London: Guardian.

Hunter, S.; Fall, D. 1998. *Orphans and HIV/AIDS in Zambia.* An assessment of orphans in the context of children affected by HIV/AIDS, Draft Report for UNICEF, Lusaka.

Hunter, S.; Williamson, J. 1997. *Children on the brink. Strategies to support children isolated by HIV/AIDS,* United States Agency for International Development (USAID), Washington D.C.: USA.

Independent Schools Council. (undated). *Proposal: Education of children with HIV infection, South Africa.*

International Institute for Educational Planning. 1995. *Education AIDS policies and practices*, Report of an International Working Group on Education (IWGE), Nice, France: 16-18 November 1994.

Irish Aid. 1999a. *HIV/AIDS in sub-Saharan Africa: a development issue of Irish Aid.*

Irish Aid. 1999b. *A strategy to mainstream NIV/AIDS into the Irish Aid programme.*

Kagimu, M.; Marum, E.; Wabwire-Mangen; Nakyanjo, N.; Walakira, Y.; Hogle, J. 1998. *Evaluation of the effectiveness of AIDS health education interventions in the Muslim community in Uganda.*

Kamya, S.H. 1997. *A profile of school drop-outs and teenage pregnancies.*

Kanyunyuzi-Asaba, J.F.; Mwesigye, R.K. 1998. *'Audio-visual communications as an intervention in preventing HIV spread: experience from Uganda.*

Kelly, J.; St. Lawrence, S.J. 1990. *The impact of community-based groups to help persons reduce HIV infection risk behaviours*, AIDS Car, 5:35.

Kelly, M.J. 1999. *The impact of HIV/AIDS on schooling in Zambia.*

Lyons, M. 1997. *The impact of HIV and AIDS on children, families and communities: risks and realities of childhood during the HIV epidemic.* UNDP: HIV and Development Programme, Issues paper No. 30.

Marples, D. 1988. *The social impact of the Chernobyl disaster.* New York: St Martins Press.

Ministerio de Saude Dades Epidemiologies do HIV/SIDA, DTS, TB e An....., Mozambique, 1986 - Marco 1999, Programme Nacional de Controle das DTS/SIDA, Maputo.

Ministry of Education. 1997. National Curriculum Development Centre, An Impact Evaluation Report, July.

Ministry of Education. 1998. National Curriculum Development Centre, *Reproductive Health in School Curriculum, Baseline Survey*, April.

Ministry of Education. 1999a. National Curriculum Development Centre, Uganda Primary School Curriculum, May.

Ministry of Education, Zambia. 1999b. BESSIP Annual Work Plan 1999.

Ministry of Health. 1998a. *Communication and counselling skills for adolescent health and development,* January.

Ministry of Health. 1998b. *Uganda 'HIV/AIDS Surveillance Report'* March.

Minority Rights Group. 1995. *Voices from Uganda.* London: MRG.

Morton, S. et al. 1996. *Children and HIV.* London: The Stationery Office.

Mukuka and Kilikiti. 1995. *AIDS BRIEF: Education sector,* AIDS briefs.

Murray, M. 1998. *Talking child care and AIDS in Botswana.* Child and Youth Care, Vol. 16, No. 2. Claremount S.A.: NACCW.

Nabarro, D.; McConnell, C. 1989. *The impact of AIDS on socio-economic development.* AIDS Journal Supply 1.

NORAD. 1991. *AIDS. New challenges in development co-operation.*

NORAD, Sunde, Rikee. 1995. *Bruk av norske midler sorn folge av bistands virksomheten* 1994.

NORAD. The annual NORAD report for 1995, 1996, 1997 and 1998.

NORAD. 1998. *Community-based out-of-school AIDS behaviour change programme with children and adolescents.*

Nordiska Afrikainstitutet. 1998. *AIDS orphans of Africa: victims or vestiges of hope.*

Norsk Folkenhjelp. 1997. Report 1997: township AIDS project.

Norsk Folkenhjelp. 1998. Report 1998: township AIDS project.

Norton, M.; Eastwood, M. 1997. *Writing better fund-raising applications.* London: the Directory of Social Change.

ODA; Barnett; Koning; Francis. 1995. Health and HIV/AIDS education in primary and secondary schools in Africa and Asia.

Odaet, C. 1990. *Implementing educational policies in Uganda.* (World Bank Discussion Paper. Africa Technical Department Series). Washington D.C.: World Bank.

Odiwuor, Wycliffe, H. 1999. *AIDS scourge: which way forward for Africa?*

O'Donoghue, J. 1995. *Zimbabwe's AIDS action programme for schools: flashback and hindsight.* Prepared for UNICEF – Herare, November 1995.

Orr, N. 1995. *Children's rights and HIV.* London: National Children's Bureau.

Panos Institute. 1994. *The hidden cost of AIDS: the challenge of HIV to development.* London: Panos Books.

Panos. 1996a. *The orphans of AIDS: a story of neglect?*

Panos. 1996b. *AIDS, youth and education.*

Panos, Mhura. 1999. *AIDS hits African women hardest, studies show Pedhivaids.*

Reid, E. 1993. *Children in families affected by the HIV epidemic: a strategic approach.* Issue paper, #13, Geneva: UNDP.

Rice, D. 1996. *The impact of HIV/AIDS on primary education in Uganda.* Dissertation for MA in Education and International Development. Institute of Education, University of London, UK.

Rivers, K. and Aggleton, P. 1999. *Gender and the HIV epidemic: adolescent sexuality, gender and the HIV epidemic.* New York: UNDP.

Rouche, A. 1996. *Children of Chernobyl: the human cost of the world's worst nuclear disaster.* London: Fount.

SAIH. 1998. *HIV/AIDS og menneskerettigheter.*

SCF. 1996. *Country Report Uganda.* London: SCF.

Shaeffer, S. 1994. *The impact of HIV/AIDS on education. A review of literature and experiences.* Paris: UNESCO. Section for Preventive education.

Shaeffer, S. 1994. *How education systems respond, Integration:* 1994 42: pp. 10-11 (quoting from Berman and Asbrink, 1992).

Shaeffer, S. with Whiteside, A. *et al.* 1996. *AIDS brief for sectoral planners and managers: Education Sector.* Durban: Health Economics and HIV/AIDS Research Division, University of Natal

Sichone, M.; Haworth, A. 1996. *The impact of HIV/AIDS in the education sector*, National AIDS, STB, TB, leprosy Programme, Ministry of Health, Zambia.

SIDA. 1999. *AIDS problematiken integreras I bistandet.*

Swart, J. 1990. *The street children of Hillbrow.* Johannesburg: Witwatersrand University Press.

The AIDS Support Organization. 1996. *Living positively with AIDS.* London: Action Aid.

The Norwegian Ministry of Foreign Affairs. 1997. Strategi for kvinne- og likestillingsrettet utviklingssamarbeid.

The Norwegian Ministry of Foreign Affairs. 1998. Norsk bistand I focus.

The United Republic of Tanzania. 1999a. The Education Sector Development Programme: Internal Review.

The United Republic of Tanzania. 1999b. The Education Sector Reform and Development Programme: Technical annexes.

The United Republic of Tanzania: Inter-Ministerial Education Task Force. 1997. Basic Education Master Plan (BEMP): Medium-Term Strategic and Programme Framework: 1997-2002.

Thomas, E. 1992. *Primary Education Projects (SPRED) Kenya: Needs Analysis Report.* London: DICE Institute of Education.

Topouzis, D. 1998. *The implications of HIV/AIDS for rural development policy and programming: focus on Sub-Saharan Africa.* Study paper No. 6. UNDP. HIV and Development Programme.

UNAIDS. 1997a. *The orphans of AIDS: breaking the vicious circle.*

UNAIDS. 1997b. *Children orphaned by AIDS.*

UNAIDS. 1997c. *Learning and teaching about AIDS at school.*

UNAIDS. 1998a. *Children's rights: creating a culture of human rights.* New York: UNAIDS.

UNAIDS. 1998b. *Force for change: World AIDS campaign with young people.* UNAIDS with the contribution made by Panos.

UNAIDS. 1998c. *AIDS education through imams.*

UNAIDS. 1999a. *Summary booklet on best practices.*

UNAIDS. 1999b. Five years since ICPD. *Emerging issues and challenges for women, young people and infants.*

UNAIDS, Harvard School for Public Health. 1999. *Level and flow of national and international resources for the response to HIV/AIDS,* 1996-1997.

UNAIDS. 1999c. *The UNAIDS report.*

UNAIDS/WHO. 1998a. *Epidemiological fact sheet (Ethiopia).*

UNAIDS/WHO. 1998b. *Epidemiological fact sheet (Uganda).*

UNAIDS/WHO. 1998c. *Epidemiological fact sheet (Zambia).*

UNAIDS. 1997. *Guide to the strategic planning process for a national response to HIV/AIDS.*

UNAIDS. 1999. *Key issues and ideas for action.* 1999 World AIDS campaign.

UNDP. 1997. *Human Development report, 1997.*

UNDP. n.d. *Policy and programme framework.* UNDP: HIV and Development Programme.

UNESCO. 1994. *ASIAN Regional Planning Seminar on AIDS and education within the school system*, New Delhi, ED.95/WS4.

UNICEF. 1993. *What Grade 7 pupils know and think about AIDS.* Harare: UNICEF (Zimbabwe).

UNICEF. 1994a. *Action for children affected by AIDS: programme profiles and lessons learned.* New York: UNICEF.

UNICEF. 1994b. *Primary teachers' knowledge and understanding of AIDS (Uganda).* New York: UNICEF.

UNICEF. 1995. *Progress of Nations 1995.* New York: UNICEF.

UNICEF. 1997. *Strengthening programming through organizational learning.*

UNICEF. 1998. *The state of the world's children 1999: Education.*

UNICEF. 1998a. *Le VIH/sida et le corps enseignant.* Bangui (Central African Republic), Bulletin No. 5.

UNICEF. 1998b. *Le VIH/sida et le corps enseignant : Impact du VIH/sida sur le système éducatif ivoirien.* Abidjan (Côte d'Ivoire), Bulletin No. 4.

UNICEF. 1999. "The AIDS crisis in Africa". Address of Carol Bellamy, Executive Director of the United Nations Children's Fund to the

International Conference AIDS and STDs in Africa. Lusaka, September 1999.

UNICEF. 1999a. *Children and HIV/AIDS.*

UNICEF. Different short articles.

UNICEF. 1999b. *The progress of nations 1999: the AIDS emergency. The toll on women and children.*

UNICEF. 1999c. *The progress of nations 1999: the AIDS emergency. League Tale: Children orphaned by AIDS.*

UNICEF. 1996. *Progress of National 1996.* New York: UNICEF.

UNICEF. 1997. *Progress of National 1997.* New York: UNICEF.

UNICEF. 1995. *The state of the world's children.* Oxford: O.U. Press.

UNICEF. 1996. *The state of the world's children.* Oxford: O.U. Press.

UNICEF. 1997. *The state of the world's children.* Oxford: O.U. Press.

UNICEF. 1998. *The state of the world's children.* Oxford: O.U. Press.

Utenriksdep. 1997. *Evaluation of Norwegian assistance to prevent and control HIV/AIDS.* Report 1.97.

Utenriksdep. 1998. *AIDS hindrer utvikling.*

Vulliamy, G. 1990. *Doing educational research in developing countries.* London: Falmer Press.

Whelan, D. 1999. In: Marina Mahathir and Hilary Homans, *Gender and HIV/AIDS: Taking stock of research and programmes. UNAIDS.*

Whiteside, A. *et al.* 1995. *The impact of HIV/AIDS on planning issues in Kwazulu-Natal*, Town and Regional Planning Supplementary Report, Vol. 42.

Whiteside, A.; Wood, G. 1994. *Socio-economic impact of HIV/AIDS in Swaziland*, Ministry of Economic Planning and Development, Swaziland.

WHO/UNICEF. 1994. *Action for children affected by AIDS.* New York: UNICEF.

WHO. 1998. *Helping schools become health-promoting schools.*

Wood, G.; Mason, B. 1997. *The impact of HIV/AIDS on orphaned children in Kwazulu-Natal.* Durban: CINDI.

World Bank. 1991. *Tanzania AIDS assessment and planning study*, Washington D.C.: World Bank.

World Bank. 1993. *Uganda: social sectors – A World Bank case study.* Washington D.C.: World Bank.

World Bank. *Why should the Bank invest in AIDS*?

World Bank. 1998*a*. *Investing in HIV/AIDS.*

World Bank. 1998*b*. *Expending the response: HIV/AIDS and the World Bank.*

World Bank. 1998*c*. *The World Bank in Africa. An overview.*

World Bank. 1998*d*. *HIV/AIDS and education. A human capital issue.*

World Bank. World Bank *HIV/AIDS activities.*

World Bank. 1999*a*. *Report on the Norwegian-World Bank trust funds for health, nutrition and population.*

World Bank. 1999*b*. *Zimbabwe national health strategy support.*

World Bank. *Overcoming political impediments to effective AIDS policy.*

World Bank. 1999c. *AIDS education ToRs (an internal note for the World Bank*).

World Bank. 1999d. *Future Group ToRs (an internal note for the World Ba*nk).

Zewdie *et al.* 1999. *Intensifying action against HIV/AIDS in Africa.* World Bank.

IIEP publications and documents

More than 1,200 titles on all aspects of educational planning have been published by the International Institute for Educational Planning. A comprehensive catalogue is available in the following subject categories:

Educational planning and global issues
General studies – global/developmental issues

Administration and management of education
Decentralization – participation – distance education – school mapping – teachers

Economics of education
Costs and financing – employment – international co-operation

Quality of education
Evaluation – innovation – supervision

Different levels of formal education
Primary to higher education

Alternative strategies for education
Lifelong education – non-formal education – disadvantaged groups – gender education

Copies of the Catalogue may be obtained on request from:
IIEP, Dissemination of Publications
information@iiep.unesco.org.
Titles of new publications and abstracts may be consulted at the following website: *http://www.unesco.org/iiep*.

The International Institute for Educational Planning

The International Institute for Educational Planning (IIEP) is an international centre for advanced training and research in the field of educational planning. It was established by UNESCO in 1963 and is financed by UNESCO and by voluntary contributions from Member States. In recent years the following Member States have provided voluntary contributions to the Institute: Denmark, Finland, Germany, Iceland, India, Ireland, Norway, Sweden and Switzerland.

The Institute's aim is to contribute to the development of education throughout the world, by expanding both knowledge and the supply of competent professionals in the field of educational planning. In this endeavour the Institute co-operates with interested training and research organizations in Member States. The Governing Board of the IIEP, which approves the Institute's programme and budget, consists of a maximum of eight elected members and four members designated by the United Nations Organization and certain of its specialized agencies and institutes.

Chairperson:

Dato'Asiah bt. Abu Samah (Malaysia)
Director, Lang Education, Kuala Lumpur, Malaysia.

Designated Members:

Pekka Aro
Director, Skills Development Department, International Labour Office (ILO), Geneva, Switzerland.
Eduardo A. Doryan
Special Representative of the World Bank to the United Nations, New York, USA.
Carlos Fortín
Assistant Secretary-General, United Nations Conference on Trade and Development (UNCTAD), Geneva, Switzerland.
Edgar Ortegón
Director, Projects and Investment Programming, Latin American and the Caribbean Institute for Economic and Social Planning (ILPES), Santiago, Chile.

Elected Members:

José Joaquín Brunner (Chile)
Director, Education Programme, Fundación Chile, Santiago, Chile.
Klaus Hüfner (Germany)
Professor, Freie Universität Berlin, Berlin, Germany.
Zeineb Faïza Kefi (Tunisia)
Ambassador Extraordinary and Plenipotentiary of Tunisia to France and Permanent Delegate of Tunisia to UNESCO.
Philippe Mehaut
Directeur adjoint, Centre d'études et de recherches sur les qualifications, Marseille, France
Teboho Moja (South Africa)
Professor of Higher Education, New York University, New York, USA.
Teiichi Sato (Japan)
Special Adviser to the Minister of Education, Science, Sports and Culture, Tokyo, Japan.
Tuomas Takala (Finland)
Professor, University of Tampere, Tampere, Finland.

Inquiries about the Institute should be addressed to:
The Office of the Director, International Institute for Educational Planning,
7-9 rue Eugène-Delacroix, 75116 Paris, France.