

## AIDS, Governance and Quality in Tanzanian Education

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### 1. The relationship between AIDS and education

This paper will explore the relationships between HIV/AIDS and education in Tanzania, looking particularly at issues of governance. It has been produced as part of the *African Civil Society Governance and AIDS Initiative (GAIN)*, the purpose of which is to investigate the threat that HIV/AIDS poses to the maintenance of stable and democratic governance across Africa.

Governance and AIDS are intricately related and intersect in many important ways. There is an urgent need for strong and effective governance to help curb the spread and impact of the pandemic, yet at the same time the disease is itself undermining the capacity of governments to operate effectively. This is particularly true in the case of education, which plays a key role in preventative programmes, whilst also being vital for the development of a generally educated and able population, and for governance, a robust public sector. The capacity of state government to deliver essential social services, and to effectively plan and manage its economy heavily depends on the skills of its workforce. This is particularly true in the kind of global economy within which we now operate, where skills are of increased importance, and in which Tanzania itself aspires to become a “knowledge economy”<sup>1</sup>.

Because all sectors require the skilled workforce that the education sector ultimately supplies, mitigating the impact of AIDS across governance structures generally will depend heavily on the success in education. While government targets state that by 2007 all public servants should have attained Form VI or higher (age 19 or older, depending on age at first enrollment), only 6% currently have this level of education<sup>2</sup>. This clearly demonstrates the massive problems faced in maintaining and developing a robust civil service, and in doing so against the additional programming and policy requirements of AIDS, and the losses sustained in staffing<sup>3</sup>. Investments in all sector capacities therefore presuppose the necessary investment is made into education.

HIV/AIDS is an as yet unpredicted and poorly tested variable in education, and its effects have yet to be fully seen. The pandemic affects both the providers and the recipients of education both aspects need to be explored. Taking quality as a principal theme is also useful, as will be discussed, particularly when

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<sup>1</sup> Carr-Hill, R and Ndalichako, J (2005) p.79

<sup>2</sup> Carr-Hill, R and Ndalichako, J (2005) p.21

<sup>3</sup> Carr-Hill, R and Ndalichako, J (2005)

looking at governance and human resource capacity, as well as when considering the needs and rights of children. A key concern will be to question the assumption that the problems in education are necessarily as a result of HIV/AIDS. While HIV/AIDS is a crisis of unparalleled scale – medically, socially and economically – without a degree of care it easily comes to be cited in explanation of all problems. It has been widely demonstrated that the virus and its effects weaken already struggling systems, but to what extent is the current crisis in education a result of AIDS, as is often suggested in the media, and to what extent is a pre-existing under-resourced education system to blame?

This study will attempt to understand the current situation of primary and secondary education in Tanzania, and to what extent HIV/AIDS is impacting on the level and quality of this provision. The status of and effects on both the recipients – pupils – and the providers – teachers – will be considered. Principal sources of information on pupils will be enrollment levels within both tiers of education, and the potential for pupils to progress through the school system. Secondly AIDS-related morbidity and mortality amongst teachers will be investigated. This will enable an assessment of the capacity of education to deliver a good standard of schooling, looking at the relative experience and qualifications of teachers, particularly those lost to illness, and the implications for teacher training. This in turn will provide the basis for a discussion of the implications for wider education governance. Where possible district-level data will be sought, in order to investigate the variations in education provision and AIDS-impact across the country. Principal sources of data will be the Ministry of Education and Culture, international agencies, and existing studies of Tanzanian education.

## **2. The importance and experience of education**

### **Beyond the economic argument**

The value of education is often primarily perceived in terms of its contribution to economic growth and the accumulation of wealth, and this in turn is seen as a key to poverty reduction<sup>4</sup>. Such a view forces a relatively narrow perspective. The benefits of education are in reality much wider, and both practical and human rights-centered approaches offer compelling arguments here. An educated population are generally better able to enter the political process, to understand their social political and legal rights and ultimately to hold their government to account, thus making education important to broader ideals of democracy and governance. The UNDP Human Development Report 2005 notes that “deep disparities based on wealth, region, gender and ethnicity are bad for growth, bad for democracy and bad for social cohesion... Extreme inequalities also weaken political legitimacy and corrode institutions. Inequalities in income and human capabilities often reflect inequalities in political power”<sup>5</sup>. The treatment of women and girls in society is often indicated by their access to schooling, and education is therefore a key locus for attempts to ensure gender equality and empowerment. Primary education is generally perceived – and encoded – as a basic human right, while secondary education is undeniably essential for building strengths in science and technology and developing key skills and knowledge in key economic areas<sup>6</sup>. Those who have access to secondary education also enjoy a better quality of life and greater opportunities, reportedly doing better across a range of measures, including health, employment, income and life expectancy<sup>7</sup>.

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<sup>4</sup> Birdsall, N and Hamoudi, A (2004)

<sup>5</sup> UNDP (2005). The importance attached to education in the promotion of these values is not new. It is recognized for example in the Education For All framework, the Commission for Africa report, and the UK All Party Parliamentary Group’s report on HIV/AIDS .

<sup>6</sup> Free primary education is generally understood to be a basic human right, while secondary education is often mentioned as a subsidiary right which countries should aim to achieve, i.e. the *Universal Declaration of Human Rights* (1950), the *International Covenant on Economic (1966), Social and Cultural Rights* and the *United Nation Convention on the Rights of the Child* (1989). See section 4.

<sup>7</sup> Unicef and Government of Tanzania (2002) p.78

Education also plays a key role in improving health, and in the context of HIV/AIDS is often regarded as the ‘social vaccine’<sup>8</sup>. As the principal recipients of education, it is vital to consider the rights of children in this regard. As a recent Human Rights Watch report notes, children’s survival and development prospects are significantly increased by education<sup>9</sup> and where poverty and AIDS are eroding families and communities, and even hope for the future, education is vital in restoring a notion of possibility, prosperity and optimism. This will be particularly true in a generation of youth who have known only a life with HIV/AIDS and its associated impacts on their social and economic wellbeing: Tanzania’s youth, like that of all countries, are its future, essential to ensuring a stable, peaceful democracy is maintained, and social development successfully pursued.

### **The international context**

Education and HIV/AIDS both feature strongly within the Millennium Development Goals (MDGs), which aim to *achieve universal primary education and ensure that all boys and girls complete a full course of primary schooling*, and to *halt and begin to reverse the spread of HIV/AIDS*<sup>10</sup>. The fact that both HIV/AIDS and education feature so prominently in the principal expression of global development targets also means that they have become firmly embedded in the major architecture of international efforts to tackle poverty and injustice. As concerns they are also closely related, and it is clear that progress in one will have a direct effect on progress in the other. There are other major international frameworks which also articulate some of these themes, notably UNESCO’s ‘Education For All’ (EFA) campaign and the just-passed ‘3 by 5’ WHO campaign. What is the potential, then, for achieving this in Tanzania?

### **The state of education**

Despite numerous goals and frameworks, education remains a privilege and an illusive goal for many children and young people in countries across Africa. 40% of Tanzanian women and 30% of Tanzanian men have never been to school, and only 26% and 29% respectively have completed a full course of primary education. At the end of the 1990s less than half of all children had completed primary school<sup>11</sup>. Figures such as these will not allow the country to achieve the developmental improvements that it seeks. Progress in education has been undermined by weak institutional foundations, inadequate human and material resources, poor governance and insufficient funding. The Academy for Educational Development estimates for example that 1.3 million new teachers will be needed in Sub-Saharan Africa between 2000 and 2015, while at the same time the existing 2.5 million teachers will require significant professional development support to raise teaching quality<sup>12</sup>. Substantial numbers will be needed in Tanzania alone, and although this has yet to be fully calculated, current estimates are discussed in section 5. External demands such as debt servicing, and associated fiscal policies imposed by the IMF, which have capped public spending and thus possible investment, particularly in the wage bill, have also proved damagingly restrictive. Tanzania is fortunate not to have suffered the destructive and destabilizing effects of conflict and disaster, but the socio-economic situation is still poor, and there is still a considerable crisis in education.

HIV/AIDS is in many ways simply the latest threat to the establishment and maintenance of a stable and successful education system, magnifying existing problems and adding new ones. But it is a very significant threat: the World Bank has for example estimated that HIV/AIDS will add US\$450-550 million per year to the cost of ensuring the Education for All initiative in Africa can be achieved<sup>13</sup>.

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<sup>8</sup> Kelly, M (2000) p.9

<sup>9</sup> Human Rights Watch (2005) p.4

<sup>10</sup> <http://www.un.org/millenniumgoals>

<sup>11</sup> Unicef and Government of Tanzania (2002)

<sup>12</sup> Academy for Educational Development (2005)

<sup>13</sup> ILO (2004)

Despite earlier expansion initiatives, particularly under Universal Primary Education (UPE) in the 1970s, adult literacy in Tanzania has dropped by 2% each year since 1986. According to a UNICEF report authored in collaboration with the Government of Tanzania, the sector suffers from a dilapidated infrastructure, under-trained and under-motivated teachers, scarce books and other material resources, and from a pedagogy that does not promote real learning, maintaining as it does traditional rote-learning and top-down instruction<sup>14</sup>.

Yet while there are problems, there is also great potential, which personal experiences in a Tanzanian school have shown: teachers with a great sense of commitment, making great efforts to educate their students with limited means. These efforts should not be forgotten. It is the system and the opportunity it affords that should be the focus of improvement, and teachers enabled to achieve their potential as educators.

### 3. Background to the Tanzanian system

The education sector is one of the largest employers in the country with 194,172 employees<sup>15</sup>. In 2005 there were 158,918 teachers in Tanzania, and around 12,870 education officers<sup>16</sup>. Formal education includes 2 years of pre-primary, 7 years of primary, 6 years of secondary (divided into ordinary and advanced levels), and a year or more of tertiary education. It is managed by two ministries – the Ministry of Education and Culture (MOEC) responsible for education to secondary level, and the Ministry of Science, Technology and Higher Education (MSTHE) handling the tertiary level. The Ministry of Regional Administration and Local Government also has some involvement in the provision of basic education (including primary and adult education).

Fees were officially abolished for secondary education in 1964 and for primary education in 1971 as part of expansion drives, but in practice various charges were still levied. Although free education has been re-affirmed, there are the additional expenses of uniforms, books and other school-based expenses, or the cost of additional tuition, which keep children out of school.

#### School buildings and furnishings

Ensuring pupils have access to schools, and the teachers to teach them is imperative, but so too is investing in the basic infrastructure of education – the classrooms, desks, chairs and tables. Table 1 below shows the shortages of school buildings and furniture reported in 2005, compared to that in 2000. It illustrates a marked increase in equipment shortages over the five year period. Most likely this is due to the massive enrollment increases affected over the past five years, but it suggests some of the very essential investments urgently needed for a good standard of basic schooling to be provided.

**Table 1. Shortages in buildings and furniture 2000 and 2004**

<b>Buildings &amp; Furniture</b>	<b>Shortage 2000</b>	<b>Shortage 2005</b>
Classrooms	44,717	81,821
Staff houses	97,159	145,224

<sup>14</sup> Unicef and Government of Tanzania (2002)

<sup>15</sup> Government of Tanzania (2001). Note: 983 ‘unpaid family helpers’ have been subtracted from the figure for ‘Education Services’.

<sup>16</sup> Carr-Hill, R and Ndalichako, J (2005), p.21

Toilets	107,126	191,239
Staffrooms	11,580	14,264
Stores	12,396	17,971
Desks	228,272	1,271,673
Tables	131,293	207,225
Chairs	144,532	201,839
Cupboards	101,594	1,076,863

From MOEC Regional data 2005 Table 1 and Carr-Hill and Ndalichako 2005

## Spending

Education sector funding in Tanzania has steadily increased. In 2004-2005 15% of the total national budget, with over 30% of this consumed by MOEC. Primary and non-formal education accounted for 63.8% while secondary education received 18.2% of total education budgets; around 40% of the public sector budget was donor funded. While figures for the level of donor-funding reaching the education budgets were not located, but there is also likely to be a considerable level of additional funding reaching the education sector which is not directly administered by the central government. However, Carr-Hill and Ndalichako argue that spending is inefficient. In 2003, with Gross Enrollment of 91%, and primary spending accounting for 15.3% of government revenues and 2.8% of GDP, only 58% of pupils actually completed primary schooling<sup>17</sup>.

## HIV/AIDS in Tanzania

Tanzania has a serious HIV epidemic, with an average adult prevalence rate of 7%, and research has shown HIV/AIDS to be the leading cause of death among adults<sup>18</sup>. As of 2001 a total of 144,498 cases had been reported, Women, as in many countries, bear the brunt of the epidemic, and have a higher prevalence rate (8%) than men (6%). While these figures suggest that Tanzania is relatively less affected than neighbouring southern African countries with much higher prevalence rates, the epidemic shows strong regional variations – a prevalence of 14% has been recorded in Mbeya, 13% in Iringa and 11% in the capital Dar-es-Salaam, and urban prevalence is generally higher. There are also considerable variations according to age, and between rural and urban areas as the figures below show.

**Table 2. Prevalence rates by age (%) 2003-4**

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Average
Women	2.1	6.0	9.4	12.9	11.6	9.8	5.8	7.7
Men	2.1	4.2	6.8	8.6	9.8	12.3	6.7	6.3
Average	2.1	5.2	8.3	10.9	10.7	10.9	6.3	7.0

<sup>17</sup> Carr-Hill, R and Ndalichako, J, (2005) p.109 and Ministry of Education and Culture (2005)

<sup>18</sup> Based on research conducted in 6 districts by the Tanzania Adult Morbidity and Mortality Project ([http://www.ncl.ac.uk/ammp/project\\_info/major\\_findings.html](http://www.ncl.ac.uk/ammp/project_info/major_findings.html)), accessed 20/04/06

**Table 3. Urban/Rural Prevalence rates 2003-4 (%)**

	<b>Urban</b>	<b>Rural</b>
Women	12.0	5.8
Men	9.6	4.8
Total	10.9	5.3

Figures from Tanzania HIV/AIDS Indicator Survey<sup>19</sup>

### **Education Quality**

Defining quality is difficult, and measuring it also proves problematic. Although offering more detailed definitions, the EFA report broadly explains quality as encompassing the aspects of schooling which influence what students learn, how well they learn it, and the benefits that they derive from it. It therefore encompasses the study environment, available resources – both material and human – and the infrastructure and facilities provided. Quality is often defined at the national level, but it must also be locally defined if it is to have any real relevance, since it is in schools that children are educated, and with which parents and communities interact.

Tanzania has had a strong focus on widening access to education since the Universal Primary Education drives of the 1970s, reinvigorated by the 1990 Jomtien Education For All (EFA) conference. Yet despite having been largely successful in increasing enrollments, the Tanzanian system is still struggling. School places have been provided without parallel investments in infrastructure, staff and resources, and as a result access has been pursued at the expense of quality. The same is true across much of Sub-Saharan Africa: Burundi's President Pierre Nkurunziza recently abolished primary fees to encourage children into school, yet this opening of access, and stimulation of demand, was not met by a parallel investment in educational infrastructure. Many pupils were sent home as schools did not have the resources to cope, with 2,400 new teachers reportedly needed to meet the new demand<sup>20</sup>.

The MDGs commit countries to ensuring all children receive a full course of primary schooling – setting a goal of access, but omitting any mention of sustaining quality. In contrast the EFA Global Monitoring Report for 2005 identified quality as a key aspect of schooling, following a reassessment of EFA goals at Dakar in 2000. It is widely acknowledged that the pursuit of quantity has caused a decline in education quality in many countries, meaning it must now be prioritized in any efforts in improving education<sup>21</sup>.

Education is a massive investment made by children and their parents, in their own futures and those of their families. It is a commitment that is not made lightly and if the perceived value of education is seen to be lost due to poor-quality instruction or under-resourcing of schools, then parents may be less inclined to make this commitment<sup>22</sup>. Without a decent quality standard the education and investments of millions will be wasted: pupils may be unable to move up into higher grades and made to repeat classes. This may in turn force them to drop out of school altogether due to the additional financial burden, or discourage them

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<sup>19</sup> Tanzania Commission for AIDS (2005)

<sup>20</sup> BBC News <http://news.bbc.co.uk/1/hi/world/africa/4260092.stm> and Eldis <http://community.eldis.org/webx?14@@.ee9593d!discloc=.eec95b5> accessed 19/09/05

<sup>21</sup> See for example Allemanno, Eric. *HIV/AIDS: A threat to educational quality in Sub-Saharan Africa*. IIEP.

<sup>22</sup> See here the World Bank study *The Impact of Adult Mortality on Primary School Enrollment in Northwestern Tanzania*. If the perceived value of education is low, children are more likely to be withdrawn in order to complete other domestic work and household production activities.

from continuing as a result of mounting frustration with the education process. Young people will simply be unable to develop the skills, knowledge and attitudes that they need to become productive members of society, gain employment, and crucially to contribute to the general socio-economic development of their countries.

#### **4. Children's right to education**

It is through the loss or sickness of parents and other adults that children are principally affected by AIDS. When parents fall ill children must become their carers, and will often have other siblings to look after. As parents and other adults die the family support system is gradually eroded, leaving children orphaned and vulnerable. Children without adult support and care are placed in positions of greater vulnerability and may be exposed to neglect and abuse: education is an environment in which children should not only be safe and protected, but where they are given the skills and the knowledge to prepare themselves for successful futures. Yet AIDS often acts to deny children access to schooling – either through imposing other domestic duties, or through removing financial means. Even children who are able to attend are denied the support and teaching that they need, as teachers are lost or overburdened.

Children's rights are firmly encoded in the 1989 UN Convention on the Rights of the Child, with Article 19 (the right to adequate healthcare provision), Article 24 (protection from disease) and Article 28 (the right to education) of particular importance in the intersection of AIDS and education. Article 28 requires the state to provide compulsory and free primary education to all children and to commit itself to the development of secondary and higher education in order to afford all children access to these opportunities. Following a National Summit for Children in 1991, Tanzania adopted the seven major goals of the 1990 World Summit, including universal primary access, an 80% primary completion rate, and the reduction of adult illiteracy to half of 1990 levels by 2000. Children's rights in healthcare and education have more recently been expressed in the commitments of the Millennium Development Goals. Despite these commitments, Tanzania's children are still vulnerable – many are not in school, and many do not complete a full course. In order to meet these goals therefore – and those that have already passed uncompleted – and to ensure basic rights are achieved, quality must be a firm priority in education.

##### **Access to schooling**

If schooling is the 'social vaccine' and a key AIDS-learning environment, then access is imperative. 2005 figures show that 7,541,208 pupils were enrolled at primary and 524,325 at secondary level. Net and Gross Enrollment Ratios (NER, GER) in Tanzanian primary schools show that access, and gender equality is good with boys and girls enrolling in almost equal numbers, although as Table 5 (below) illustrates, in 2002/2003 (the most recent year for which directly comparable data was available) Tanzania had enrollment ratios below most of its neighbouring countries, and significantly below the regional average for Sub-Saharan Africa.

Tanzania has, however, achieved a significant increase in enrollments in recent years which shows the demonstrable commitment of the Tanzanian government to increased enrollments – in 1995 for example primary enrollments were just under 3.9 million, while they are now 7.5 million. Most importantly it shows what *can* be achieved. At secondary level enrollments are much lower with only a small proportion of children educated at this level. The disparity between the numbers attending at primary and those at secondary level is huge, and demonstrates not only the under-resourcing of the secondary school system, but also that primary education simply does not prepare or enable adequate numbers of pupils to continue

their education further. Substantial gains have been made however – in 1995 around 200,000 pupils were enrolled, whilst in 2005 this had increased to around 525,000<sup>23</sup>.

Although primary enrollments are relatively good, over 400,000 children aged 7-13 (based on the current NER) are not in school, and repetition and drop-out rates mean that not all of those enrolled will go on to receive a full primary education, and have the option to continue into secondary school. Of the 7.5 million primary pupils enrolled in 2005, around 440,000 were forced to repeat the year, and almost 42,000 dropped out altogether. While transition rates are relatively good at around 90%, this still means that almost half a million children (6%) did not progress into the next level of schooling – a massive number for whom the school system has failed. Repetition rates have also increased over the last five years and 65% of those repeating in 2005 did so at Standards I or IV, illustrating key bottlenecks for successful progression and indicating where enabling access and improving quality is imperative. Similarly, there are regional differences too – while dropout is around 0.55% nationally, it is much higher in some areas – over twice this in Kagera for example.

Secondary enrollment has more than doubled over the last five years but access and enrollment is still a big problem, with only a third of primary pupils making this transition. While the majority of pupils successfully move from Form I to II, the number making the same step to Form III is much lower, with 15% dropping out and 7% repeating, and with very few pupils enrolling in Form V and VI. The decline in enrollments is particularly true of girls, with the proportion of girls enrolled steadily decreasing from 49% in Form I, to 43% in Form IV, and 36% in Form VI.

**Table 4. Enrollments in primary and secondary education, 1995 and 2005**

	<b>Enrollments 1995</b>	<b>Enrollments 2005</b>	<b>GER 1995</b>	<b>GER 2005</b>	<b>NER 1995</b>	<b>NER 2005</b>
Primary	3,877,643	7,541,208	77.6	109.8	55.4	94.8
Secondary	196,375	524,325	-	11.7	-	10.1

**Table 5. Comparative Primary Enrollments 2002/2003– Tanzania and Neighbouring Countries**

	<b>GER</b>	<b>NER</b>
Tanzania	84	69
Kenya	92	66
Malawi	140	-
Mozambique	103	55
Uganda	141	-
Zambia	82	68
SSA	91	63

Figures from UNESCO Institute for Statistics. 2002/2003 was the most recent year for which directly comparable data was available. Comprehensive data for secondary enrollments was unavailable.

<sup>23</sup> Ministry of Education and Culture (2005)



## **Orphans and vulnerable children**

HIV/AIDS creates orphans, and pushes children into situations of vulnerability, whilst also placing already vulnerable children at further risk. Tanzania is estimated to have over 2 million orphans, 725,000 of these due to AIDS, and accounting for 12% of all children under 18<sup>24</sup>. As a result vulnerable children are often the target of particular efforts to ensure that they are not denied schooling.

Some argue that concentrating particularly on orphans and vulnerable children is not useful (e.g. Carr-Hill) since in conditions of poverty all children are vulnerable in some way. A World Bank study on the factors affecting children's enrollment into school in northern Tanzania recognized that orphan status negatively affected enrollment, or caused it to be delayed. This was particularly true if a mother had died as children were a more effective substitute for women's labour. While delayed enrollment does not in itself deny children access to school, it does significantly reduce their likelihood of continuing into secondary schooling, so their future opportunities will be severely restricted.

The report suggests, however, that household wealth is a significant differentiating factor – children suffering an adult death in poorer households are much more likely to have their enrollment in school delayed. The report further suggests that raising inputs to schooling and improving its overall quality will do more to help vulnerable children than targeting them directly, and ensuring quality will discourage or prevent subsequent dropout. Encouraging children of limited means into school without ensuring they are adequately supported and resourced when they get there will not help at all.

## **5. Education governance in Tanzania**

Understanding education governance is about understanding the operations, functions and actors involved in the sector and its constituent parts, and the dimensions in which these may be affected. It is therefore about considering the “activities necessary to influence, control and direct people who come together for the attainment of common educational goals”<sup>25</sup> and involves assessing human resource capacity to see to what extent the requirements of the system can be met by current staffing levels, what the impact on these as a result of HIV/AIDS will be, and where investments are needed. In 2004 the Joint Learning Initiative published ‘Human Resources for Health’, an assessment of the human resource needs of the health sector which are required to maintain and build strong and sustainable healthcare systems. This was considered particularly in the face of HIV/AIDS, which increases the need for healthcare workers, whilst at the same time reducing the number available through AIDS-related illness<sup>26</sup>. Similarly education requires significant investments in teachers, support staff, managers and planners in order to improve both the quality and quantity of education, yet at the same time it is through the impact on the sector's personnel that the effect of AIDS is felt. It follows that without understanding how these people may be affected by the pandemic, it will be impossible to assess the extent to which HIV/AIDS is affecting the system as a whole.

Different sources give different staffing figures for the education sector, but it is a major area of state-employment. Of the 286,000 public servants in Tanzania, 43% are teachers and 4.5% education officers – a total of 136,136 people – emphasizing the attention it merits<sup>27</sup>. Through their own infection or illness, through the additional burdens of carrying for family, or increased workloads, it is likely that a significant proportion of these personnel will be affected by HIV/AIDS.

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<sup>24</sup> Carr-Hill, R and Ndalichako, J (2005) pp.14-15

<sup>25</sup> Amone, J and Bukuluki, P (2004)

<sup>26</sup> Joint Learning Initiative (2004)

<sup>27</sup> Carr-Hill, R and Ndalichako, J (2005) p.21

## The impact on teachers

In resource-poor settings, the quality of teachers is of paramount importance, and it is well-documented that improved teaching quality is the most successful way of raising achievement. Tanzania has responded well to the need for more teachers to meet the increase in demand, and in 2005 there were a total of 158,918 teachers – 135,013 primary and 23,905 secondary teachers. Primary teachers have increased by almost 28,000 since 2000, and significant increases have been made in secondary education where the number of teachers has almost doubled since 2000<sup>28</sup>. An Education International report in 2003 estimated that 63% more primary teachers would be needed in Tanzania between 2000 and 2015 to meet demand, and that this would mean almost 60,000 new teachers to achieve the required levels<sup>29</sup>. Such is the level of expansion needed at secondary level – only 6% of eligible pupils attend lower secondary, and only 1% attends upper secondary in Tanzania<sup>30</sup> – that teachers here will be in even shorter supply.

**Table 6. Enrollments, Teaching staff and Teacher:Pupil ratios in Tanzania, 2000 and 2005**

	Enrollments 2000	Enrollments 2005	Increase	Percentage Increase	Teachers 2000	Teachers 2005	Teacher/pupil ratio 2000	Teacher/pupil ratio 2005
<b>Primary</b>	4,382,410	7,541,208	3,158,798	72.1%	107,111	135,013	1:41	1:56
<b>Secondary</b>	261,896	524,325	262,429	100.2%	13,094	23,905	1:20	1:22
<b>Total</b>	4,644,306	8,065,533	3,421,227	73.7%	120,206	158,918	1:39	1:51

Figures from MOEC 2005 national data – 2000 secondary figures from Nilsson (2003). Figures from different sources often do not agree but are generally of a similar order. Secondary school teacher figures calculated from Teacher:Pupil ratios which are from MOEC (2005), national data Table 3.5

## Losing teachers

Teachers tend to be much more visible than other education employees, not least because there are proportionally many more of them, but also because they are the more directly observable group. This means that more data is generally available for teachers than other sector personnel. We know that teachers are being lost to AIDS, at the same time that more teachers are required to meet its various education targets. The existing data, and the projections derived from it are imperfect at best, and as a result human resource need cannot be perfectly calculated. The number of new teachers may be keeping pace with the increase in school enrollments – for example primary teachers have increased by almost 28,000 in five years, at pace with the 60,000 projected to be needed by 2015. But attrition rates may require much greater teacher increases to meet demand, particularly when education is still in need of massive expansion and quality improvements, both of which require more teachers. Teachers are likely to be lost from active service in several ways: through retirement (both normally and through ill-health) – 13% of teachers are aged between 51 and 60 so are due to retire in the next 10 years or so; through death in service; through absenteeism (as a result of illness or due to other care burdens); through migration to fill gaps in other sectors created by HIV/AIDS (and which may be better paid); and through inter-school transfers. While in the latter case teachers will still remain in the system, this may have a significant impact in particular areas and some may be especially vulnerable to this, i.e. rural areas may lose out to urban schools which have better access to local healthcare. Unfortunately a lack of good personnel records

<sup>28</sup> Nilsson, P (2003)

<sup>29</sup> Nilsson, P (2003) p.12

<sup>30</sup> Unicef and Government of Tanzania (2002)

mean it is hard, if not impossible, to measure many of these, and often reports rely on anecdotal accounts rather than hard data, and it is often only possible to comment on deaths and absences.

It is important to understand the extent to which the loss of teachers is specifically AIDS-related, rather than the result of normal attrition. Teachers will be lost each year, but HIV/AIDS is likely to change the demographic of this loss, particularly as teachers are in the age group where most deaths occur. While previously older teachers would have gradually retired or died, and been replaced by younger teachers, the cohorts of younger teachers are now themselves at risk. This is particularly important, since it prevents the development of a solid body of experience in the profession, as older professionals are lost, and younger teachers die before their experience can be 'banked'. The higher the qualifications and experience of the teacher, the greater the impact if that teacher is lost, and the harder they will be to replace. But if AIDS acts to prevent the accumulation of experience then this will be a recurrent problem. It will also have implications for senior teaching or managerial positions: if a young teacher is infected it will be around 8 years later, as he or she is in a position to take on senior roles, that full blown AIDS will develop and remove them from service. Impact is thus magnified, and may be felt for many years to come.

### **Teacher mortality**

The UK's Guardian newspaper writing about the effects of AIDS on teachers across Africa recently reported that 2,000 teachers died in Zambia (more than its total training output), 1,200 primary teachers in Tanzania and 4,000 in South Africa each year<sup>31</sup>. The number of teachers dying as a result of AIDS-related illness is widely disputed, the data is often incomplete and conflicting, and the problem is often in separating AIDS-related mortality from other causes of death. Oft-cited statistics from the World Bank – although now widely discounted – claimed that teacher mortality in Zambia was 70% higher than the national average<sup>32</sup>, which suggested that massive numbers of teachers were being lost to AIDS. Information on AIDS-related mortality in Tanzania is difficult to obtain, but data is available from reports by the Economic and Social Research Foundation (ESRF)<sup>33</sup>, Paul Bennell<sup>34</sup>, the Tanzania Teachers Union, reported by the ILO, and discussions in various other reports (e.g. Carr-Hill and Ndalichako 2005). Available data are presented in Table 7 below.

The HIV/AIDS risk status of teachers is also hotly debated. Some argue that teachers are at particular risk due to a greater relative wealth and mobility, while others suggest that conversely their higher levels of education will cause them to adopt less risky behaviours and be comparatively safer. A study by the London School of Hygiene and Tropical Medicine linked higher HIV prevalence to higher educational attainment<sup>35</sup>, while Carr-Hill and Ndalichako, analyzing UNAIDS data suggest that teachers are conversely less-vulnerable than had been supposed<sup>36</sup>. While some argue that teacher mortality is not as high as had previously been suggested, Kinghorn and Kelly make the point that the incidence of AIDS-related ill-health may be proportionally more serious amongst teachers due to their otherwise good health status.

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<sup>31</sup> 'Young teachers are dying' Education Guardian, 20/12/05

<sup>32</sup> World Bank (2002) p.29

<sup>33</sup> Economic and Social Research Foundation (2003)

<sup>34</sup> Bennell, P (2005). Figures are also given for Uganda, Botswana, Lesotho, Swaziland and South Africa of under 1%, and under 2% in Zambia and Malawi

<sup>35</sup> Hargreaves, J and Glynn, J (2000)

<sup>36</sup> Carr-Hill, R and Ndalichako, J (2005) p.xiii

**Table 7. HIV prevalence and mortality amongst Tanzanian teachers**

Source and year of report	ESRF 2000 <sup>37</sup>	Bennell 2005	Carr-Hill & Ndalichako 2005 <sup>38</sup>	ILO / TTU 2004
Prevalence among teachers	-	-	8% (est)	-
Mortality rate	1.16%	0.75%	0.80%	-
% of total mortality which is estimated AIDS related	70%	-	-	42%
AIDS-related mortality	0.80%	-	Under 1%	-
Teachers lost – all causes (Based on 2005 teaching figures)	1,843	1,192	1,271	-
Teachers lost – AIDS-related	1,271	-	< 1,589	-

The figures show that in many cases AIDS-related mortality, where it can be deduced from overall mortality figures, is relatively low in percentage terms. Using these to estimate the number of teachers lost each year suggests between 1,200 and 1,800 teachers will die, with around 70% of these deaths AIDS-related. National mortality figures for 2003 estimate that between 110,000 and 230,000 people died of AIDS, a crude mortality rate of 0.29 – 0.61%<sup>39</sup>. The data is insufficient to draw firm conclusions, but the emerging picture suggests that teachers are no more at risk than the adult population generally.

Losing up to 1,800 teachers a year is still a major loss and great cause for concern, not least because each teacher is responsible for the education of so many children. At current Teacher:Pupil ratios (see Table 6) this would mean almost 92,000 pupils lost a teacher in 2005. District level figures from the Tanzania Teachers Union (ILO report) lend an important regional perspective, showing for example that a small number of districts bear the greatest burden of deaths – four of Tanzania’s major urban zones, Dar, Mbeya, Iringa and Mwanza, represent over 30% of all deaths (see Table 8). Looking more closely at teacher:pupil ratios also shows significant regional difference. For example, while the average secondary ratio was 1:22 in 2005, there were as many as 74 pupils to every teacher in Shinyanga secondary schools, and 40 pupils per teacher in Tanga and Ruvumu<sup>40</sup>. These ratios represent significant increases over 5 years – with ratios getting worse not better – as teacher numbers do not keep pace with enrollments.

<sup>37</sup> Based on figures for 4 districts in 2002 – Dodoma Urban, Kahana, Mbeya Urban, Mbeya Rural. Total teachers 4760. Deaths 55, AIDS-related 38.

<sup>38</sup> Based on 4015 deaths, 2000-2004

<sup>39</sup> WHO (2005). AIDS deaths are from figures for 2003; population figures of 37,700,000 are from 2004.

<sup>40</sup> Carr-Hill, R and Ndalichako, J, (2005) p.111

**Table 8. Deaths by region, in descending order. 2000-2002**  
 Figures from Tanzania Teachers Union (ILO 2004<sup>41</sup>)

Iringa	Mwanza	Dar es Salaam	Mbeya	Shinyanga	Lindi	Kagera	Singida	Dodoma	Mara
101	87	84	80	61	60	59	53	50	44
Tabora	Kilimanjaro	Ruvumu	Rukwa	Morogoro	Mtwara	Pwani	Tanga	Arusha	Kigoma
42	41	41	39	38	38	38	34	31	24

### Teacher Absenteeism

Loss of teachers through absence, and not death, is likely to present the greatest burden of HIV/AIDS, and to take a higher toll. Teachers may themselves be ill, or be caring for sick relatives and other AIDS-associated factors may necessitate absence, such as funeral attendance, or taking the place of sick relatives in domestic or agricultural work. The number of teachers dying does not explain the true burden of teacher-illness of schools either. Kelly suggests that every AIDS-related death is likely to be preceded by a period of around 18 months of absence due to illness, with 6 months of infrequent absence as a result of occasional sickness, and a further 12 months of prolonged sickness and absence, in which time a teacher may not be able to teach at all<sup>42</sup>. If every teacher lost to AIDS accounts for 18 months of illness, and around 1,800 teachers died in 2005, then in total 2,700 teaching years may have been lost either fully or partially last year alone. Even this barely captures the burden of ill-health and related absence owing to HIV/AIDS, since the virus generally leads to increasing periods of sickness before full-blown AIDS develops<sup>43</sup>. Precise data on this period of ill-health is not collected at all, but it may extend for up to 10 years. While a teacher continues to teach it is probable that illness will cause standards to slip, and a sick teacher is likely to suffer emotionally as well as physically. The despondency and lack of motivation that this may cause will surely detract from adequate lesson planning, assessment and enthusiasm for the job.

The problem of absence is demonstrated in World Bank study in Zambia which revealed a strong correlation between the 'shocks' induced on a classroom by teacher absenteeism and the performance of students. A study by HakiElimu in Tanzania revealed that 32% of teachers had been absent for at least 1 day in the preceding 3 months. While not necessarily as a result of AIDS, the AIDS burden within these figures is likely to be significant, and AIDS a cause of growing absence. Furthermore, multiplying these figures across a whole year and across the teaching population could mean over a million teaching days lost each year. Not only do pupils suffer, but also other teachers who are forced to share the extra burden of teaching. Quality is therefore affected not just through loss of teachers, but through the over-burdening of those who remain. Even when the progression of illness forces a teacher to be fully absent, he or she may still officially be counted as an active teacher and a replacement not sought. Funding is likely to prevent the replacement of absent teachers in many cases, since sickness benefits will still be paid to them, and no money will therefore be 'freed up' to recruit new staff. Even where it is possible to replace an absent teacher, the time lag in achieving this is likely to cause massive inefficiencies and continued problems as already noted.

<sup>41</sup> ILO (2004)

<sup>42</sup> Kelly (2000) p.67

<sup>43</sup> i.e. when an ARC (AIDS Related Complex) develops, or the CD4 count falls below 1200.

## **Teachers' conditions**

It is obvious that the loss, either fully or partially, of teachers, and the conditions within which remaining teachers continue to work, will affect the overall quality of education that can be delivered. Even without the impact of illness and death due to AIDS, teachers in Tanzania often work under strained and difficult conditions, as a report by the Tanzania Teachers Union and HakiElimu has shown<sup>44</sup>. In many instances teaching was seen to have lost its professional status and instead regarded as a fall-back option if no other employment was available. Low salaries relative to other professions not only mean that teachers are unable to support themselves and their families at an adequate standard – 76% of those surveyed reported salaries as inadequate – but in addition the perceived respectability of the profession has also deteriorated as teachers' relative status – reflected in salaries – has declined. Not only does low salary and status have implications for current teachers' morale, but it will also deter the best students from becoming teachers in the future. When teachers are lost, those that remain frequently must take on the extra workload, as replacements are either not found quickly enough, or cannot be employed if a sick teacher remains on the payroll.

## **4. The implications of loss and absence for governance and quality**

### **Qualifications and experience**

The higher a teacher's qualifications, and the longer their experience, the greater the impact of their loss, and the harder they will be to replace. Although teacher training colleges are not specifically considered here, it is worth noting that these represent some of the most highly qualified teachers in the country so replacements are particularly hard to find, and the gap in teaching often even longer<sup>45</sup>.

In Tanzania there are two acceptable levels for qualified teachers: Grade A and Diploma. Some teachers are university graduates, but this is neither a prerequisite, nor common. Despite these criteria, currently over a third of Tanzanian teachers have Grade B qualifications, which were introduced as a means of expanding the profession in the 1970s. Such a significant number of under-qualified teachers is a concern for the quality of education, although HakiElimu's report notes that the average age of Grade B and C teachers was 50, while that of Grade A teachers was 36. The cohort of teachers with lower qualifications can be expected to retire soon, and as new teachers are trained the relative stock of Grade B teachers should begin to decline. Working on the basis of such replacement is also a problem though, since while these teachers may hold lower formal qualifications, their retirement will constitute a significant loss of practical experience and institutional knowledge. Considering the regional dimension of these figures is also important, since in some areas the proportion of Grade B teachers may be much higher – for example there are twice as many Grade A teachers in urban than in rural schools and while only 16% of teachers in Dar were Grade B qualified in 2005, this was true of 50% in Lindi and 45% in Mtwara. Even other urban centres such as Arusha, Iringa and Dodoma have between 30 and 50% Grade B teachers<sup>46</sup>.

These figures demonstrate that it is not practical to simply wait until lower-qualified teachers are replaced by the newer waves of better qualified staff, and this is particularly so given the burden that falls on rural districts. Upgrading the qualifications of existing teachers is vital, through a process of professional development and training. Not only does this recognize the need to ensure high qualification standards, but also serves to acknowledge the value of the experience that these teachers hold. To its credit, Tanzania has begun an upgrading programme, but given the numbers of teachers who will require this additional training, more resources will be needed – 135,318 were in need of upgrading in 2005<sup>47</sup>. While the proportion of Grade B teachers in schools has decreased significantly, this is less as a result of upgrading

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<sup>44</sup> Sumra (undated)

<sup>45</sup> Nilsson, P. (2003) p.16

<sup>46</sup> Carr-Hill, R and Ndalichako, J, (2005) p 121

<sup>47</sup> Carr-Hill, R and Ndalichako, J, (2005) table 42, p.107

and more as a result of new higher-level teachers entering in greater numbers, distorting the figures. Upgrading will also be difficult without further investments in the institutions of professional and educational development in Tanzania – at present the Faculty of Education at the University of Dar-es-Salaam is the only educational development institution in the country.

Salary and pay scales also offer a proxy of experience, and although higher pay does not necessarily denote a good teacher, it is still a useful indicator. According to the ESRF, a significant proportion of teachers who died in the survey period occupied the higher pay brackets: 82% of teachers were paid above salary scale four in the years 1999-2002, with scale four taken to be a good level of remuneration. In addition they also had substantial experience: 74% had taught for more than 10 years, and over half of these had taught for over 20 years.

As well as instituting professional training to ensure existing teachers are not simply replaced, it is also vital to find ways of catering for their broader welfare, providing them with the conditions in which they are able to continue teaching – ensuring they are adequately remunerated, and therefore can support their families and provide adequate healthcare. This may for example involve providing access to antiretroviral therapy (ART) to teachers – as of October 2005, 13,640 people in Tanzania were estimated to be receiving treatment in Tanzania – 5% of the estimated 260,000 people living with HIV/AIDS (although the figures also estimate current needs to treat 10,520 to have been reached) and way below the 44,000 target for the end of 2005<sup>48</sup>. The majority of these received treatment from public-sector programmes, with a small proportion (7.5%) receiving drugs from NGO programmes. For a proper consideration of the health status of teachers, data on the number of teachers receiving ART medication are essential. Unfortunately such figures could not be identified, meaning any conclusions are speculative at best.

### **Training new teachers**

Some reports have argued that such will be the drain on teachers, teaching colleges will be unable to train new teachers as fast as they are needed. Kelly has suggested that in-service deaths in Zambia would consume two thirds of its college output<sup>49</sup>. While this level of attrition seems unlikely in Tanzania, it is difficult to calculate what the percentage loss of newly trained teachers will be, particularly since young teachers represent a high risk age group. 20-24 year olds have a prevalence rate of 5.2% but in the 25-29 age group this jumps to 8.3% and then to as high as 10.9% amongst 30-34 year olds (see Table 2).

While loss of new teachers may be less of a concern given that current mortality rates are lower than has previously been feared, what will be a concern is the pool of potential trainees that the system can draw on, and this will be determined by the number of good Form IV and VI graduates going on to teach at primary and secondary level respectively. 54,000 Form IV students graduated in 2004, although less than half in the top three (of four) grades. Only 17,000 graduated from Form VI, just over 14,000 of whom were in the top three grades<sup>50</sup>. Ensuring there are enough of these potential recruits will ultimately rest on an improved secondary school system, with wider access and higher quality standards, and the incentives for graduates to enter teaching rather than other professions. With 50,000 Grade B/C teachers to replace, Carr-Hill and Ndalichako suggest that a further 90,000 Form IV level and 13,000 Form VI and Diploma level recruits will be needed, in addition to the increases needed to expand schooling and reduce the poor Teacher:Pupil ratios in some areas, and these will need to be from current graduates, or those finishing in the next year or so<sup>51</sup>.

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<sup>48</sup> PlusNews Treatment Map (<http://www.plusnews.org/aids/treatment.asp> accessed 27/03/06). WHO figures for June 2005 placed treatment at 8,300 ([http://www.who.int/3by5/support/june2005\\_tza.pdf](http://www.who.int/3by5/support/june2005_tza.pdf))

<sup>49</sup> Kelly (2000) p.65

<sup>50</sup> Ministry of Education and Culture (2005) Tables 3.7 and 3.8

<sup>51</sup> Carr-Hill, R and Ndalichako, J, (2005) Table 42 p.16

## Implications for management

While it has not been possible to directly assess the impact of HIV/AIDS on the management levels within education, their function is vital and should not be overlooked. Teachers' greater visibility, and the greater number of them within the system, means that it is on teachers that studies of human resource capacity tend to focus, and where the basic data is more readily available. Yet teacher loss also impacts heavily on management functions, and the ability of ministry and district level staff to perform their respective duties. A study of the Ugandan education ministry observed that the administrative tasks associated with the illness or death of a teacher, and with the recruitment and training of new teachers, as well as sorting out such things as family death benefits constituted a significant extra workload, taking time from other vital planning and management tasks and compromising education goals<sup>52</sup>.

In the Ugandan case study, efficiency was further compromised by sickness and death within the ministry departments, with staff forced to share out colleagues workloads, and thus achieve less of their own duties. The extra workloads of staff, and the short-term but frequent absences of staff due to their own or family illness, or to attend colleagues' funerals, often resulted in slow work times, with tasks or projects often not completed at all. In addition communication of important messages often stalled or failed as a result of key absences, meaning policy changes weren't communicated at all, or not to all staff concerned.

## 5. Conclusions

This study has attempted to explore the Tanzanian education sector from the perspectives of HIV/AIDS impact, and quality, and to investigate how and where these aspects intersect. Understanding AIDS impact has required a broader exploration of education in order to see the underlying problems and weaknesses within the system and the ways these may be further compromised. A key concern was not to automatically assume the worst when it came to the impact of AIDS, and this optimism is validated in the Tanzanian experience. Stories of the effects of HIV/AIDS on education commonly suggest that teachers are dying in great swathes across Africa, and that the system is crumbling beneath the tide of the epidemic. Such sensationalism is not warranted. Tanzania is losing teachers to AIDS, but both prevalence rates, and mortality figures do not suggest this is at a greater rate than the overall adult population, and while teachers are being lost, the numbers are not as alarming as people have speculated previously.

Teachers *are* dying from AIDS however, and it certainly represents a problem. The fact that numbers may be less severe demonstrates the feasibility of turning the situation around, providing better care and conditions for teachers, including ARVs, and reversing the losses. Because AIDS-related losses are not as great as some have previously speculated, it also shows the great potential for significantly improving the human resource base of education, training many more teachers without substantial numbers being lost, and without a need to massively over-train simply to keep pace with attrition. Expansion to increase access, and to vastly improve quality is therefore very achievable given good investments.

What this study has highlighted however, is that while AIDS-specific impacts may be substantially better than the worse-case scenarios often delivered, the under-resourcing and weaknesses of the existing education system offer the greatest threat, and means that even smaller AIDS effects are likely to be magnified in their ultimate impact and still represent a significant challenge. It has also shown briefly the extent to which national data may obscure regional and local epidemics and responses. While HIV prevalence is higher in urban areas generally, so too is education better – although prevalence is lower in rural areas the often poorer educational situation may make the impact of the epidemic more heavily felt.

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<sup>52</sup> Amone, J and Bukuluki, P (2004)



Much needs to be done to raise educational standards and quality to the levels agreed upon in the various goals and frameworks, and HIV/AIDS will only make these targets harder to achieve. Achieving the Millennium Development Goal targets, and those of Education For All in Tanzania – providing a full course of primary education – may well be possible if quality can be improved and dropout and repetition rates reduced. Education is also a prime locus for efforts to achieve the MDG of halving and reversing the spread of AIDS. Tackling HIV/AIDS in Tanzanian education will therefore need to focus more about strengthening existing structures and improved resourcing – improving the overall quality of schooling is perhaps the most important means to address the impact, rather than looking exclusively for specifically AIDS-related interventions. This will necessarily involve increasing the numbers of teachers, ensuring they are adequately supported, financially and professionally, and ensuring extra resources are available to cope in the case of illness and absence. Investments made in this way, and also in the material and physical resourcing of schools – better buildings, equipment, books and teaching materials – will work to increase the success, and thus retention and progress rates, of pupils, and ensuring that the value of education is well recognized and well supported by families and communities. Raising quality will make the sector both stronger and better able to withstand the effects of the pandemic, but also better able to serve its vital purpose of educating youth – a generation who will inherit the legacies of AIDS and need the skills and opportunities to ensure Tanzania’s continued development.

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