

**Every child needs a teacher: the primary teacher supply
and training crisis in Sub-Saharan Africa**

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List of Acronyms

DEEP	Digital Education Enhancement Project
DFID	UK Department for International Development
EFA	Education for All
ICT	Information and Communication Technologies
IGNOU	Indira Gandhi National Open University (New Dehli)
ILO	International Labour Organisation
IMF	International Monetary Fund
IRC	International Rescue Committee
MDGs	Millennium Development Goals
MUSTER	Multi-Site Teacher Education Research Project
TESSA	Teacher Education in Sub-Saharan Africa Programme
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children’s Fund
UPE	Universal Primary Education
USAID	United States Agency for International Development

Preface

There is a global commitment to provide schooling for all children. In many countries this aim is some way from being fulfilled. This is particularly true in Sub-Saharan Africa, where tens of millions of children remain outside the school system. Crucial to any EFA success is the number and quality of teachers. The situation regarding supply, retention and training of teachers across Sub-Saharan Africa is clearly in crisis. This pamphlet, which seeks to be accessible to a wide audience, explains the context of this crisis, considers the responses of UNESCO and others, and briefly outlines the commitment of a number of UK universities to the challenge this crisis provokes.

The primary child context

In the small teachers' room of a primary school just outside Maseru, Lesotho, the evidence of the global challenge to provide universal primary education is clearly visible. The school roll, neatly printed by hand, gives the names of the teachers and the numbers of children in each grade.

NAME OF TEACHER	CLASS	ROLL
Mrs Mokoteli	1	
Mrs Ramokejane		210
Mrs Molotsi	2	
Mrs Mpalami		205
Mrs Thamae	3	
Mrs Liketso		98
Miss Molaoa	4	

Mrs Molotsi and Mrs Mpalami were among the first teachers to take the weight of the government of Lesotho's decision to introduce free primary education. Enrolment doubled. But the 205 children in grade 2, as in grade 1, cram into a space that would hardly take 40 in many parts of the world.

Abolishing school fees has become a popular policy for new governments in Africa, creating a massive overnight surge in pupil numbers: in Uganda, they shot up by 2.9 million; in Kenya, they jumped by 2.5 million. But without careful planning and financing, this can send standards plummeting because there are not enough classrooms and trained teachers.

Mrs Molotsi's and Mrs Mpalami's pupils, however, can count themselves lucky. Across large parts of Sub-Saharan Africa, millions of children still have no access to schooling. Although estimates of the numbers vary, all the major agencies suggest that more than 40 million children of primary age do not attend school. And the majority, over 60%, are girls. (UNESCO, 2000)

On any scale the inequality of opportunity for African children must rank as one of the world's most significant educational problems. The drive for EFA lies at the heart of worldwide efforts to eradicate poverty because a growing body of evidence links education attainment to virtually all development indicators of significance. Mothers with a few years of schooling are more likely to provide the care and stimulation that will improve their children's early formative years than mothers with no education – one study found that a single year of a mother's education correlated with a two-year rise in life expectancy for her child. In fact, according to the World Bank, the single most effective intervention in development is to educate girls.

Higher adult literacy rates bring higher returns on investments in social infrastructure such as health, water, sanitation and family planning. Formal education is a key driver of economic productivity. Individuals who have completed primary school tend to have higher earnings, more modern attitudes, better spacing of births in the family, better health and more nutritious diets than illiterate peers. They save more of their incomes, adopt new technologies more easily and are more likely to get involved in community affairs and hold politicians to account.

While economic systems wrestle with the problems of world trade, and the health sector seeks resolutions to the triple killers of malaria, tuberculosis and HIV/AIDS, in education, the failure to provide schools for so many children is an issue of global importance. National governments and international organisations are addressing the problem with some urgency and, as the Lesotho example indicates, progress is being made. The Education for All Global Monitoring Report for 2005 showed a decline in the numbers of out-of-school children from 96 million in 1999 to 72 million in 2005 (UNESCO, 2008). Although some of the drop is accounted for by changes in the way some countries report their figures, the overall progress offers grounds for hope, given that it has been achieved against a background of rising child-age populations in poor countries.

But the rate of decline, particularly in Sub-Saharan Africa, is still too slow to achieve universal primary education by the target year of 2015. Some predictions indicate that a century, rather than a decade, will be necessary to achieve this goal.

The United Nations Millennium Development Goals (MDGs) provide an important indicator of progress to achieving universal primary education. Goal 2 is to ‘ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling’. However, while enrolment and completion indicators are important, the UN task force has recently observed that they are not necessarily good or consistent predictors of outcomes.

India, for example, had achieved more than 93% enrolment in primary school among 6–14 year olds by 2005, yet a study of more than 330,000 children in 9,500 villages revealed that 35% could not read a small paragraph with short sentences at standard I level and 40% of children at standard V could not read a standard II level text (a simple story). In mathematics, 50% of standard II–V children in government primaries could not solve a two-digit subtraction problem and in standard VI–VIII of government schools 40% could not solve a simple division problem (three digits by one digit) (Gandhi Kingdon, 2007).

Conversely, the UN task force report quotes the example of Kenya, which, in one study of six African nations, had the lowest primary school completion rate (63%). However, in terms of achieving minimum literacy skills, Kenya came out the best (UN, 2005).

It is no surprise, therefore, that the emphasis of debate around achieving universal primary education has moved significantly to the question of quality. The MDGs thus go beyond education provision to ensuring that schooling works effectively. The 2005 UNESCO Global Monitoring Report has a subtitle ‘The Quality Imperative’ with a number of headline messages around teaching and learning. The training, recruitment, retention and quality of teachers, it follows, have to be of central concern.

The primary teacher context

One might think it inevitable that the issue of teachers should feature prominently in the evaluations of progress to UPE that appeared in 2005. But this was belated recognition. Few of the declarations, including that of the World Forum in Dakar in 1990, or the MDGs explicitly recognise the importance of teachers to achieving UPE. 2005 was, however, a critical year for this. The 2005 Report of the Commission for Africa made investment in teacher training a major recommendation and in doing so said:

... the push to achieve EFA will certainly never succeed without substantial investment in teacher recruitment, training, retention and professional development.

(p. 186)

The scale of need, however, is daunting. Successive reports have pointed to the large numbers of unqualified teachers in schools and the difficulty of attracting new recruits. By some estimates, more than half of all primary teachers in the region are unqualified or under qualified. Teacher supply is also in crisis. Ghana has only a quarter of the teachers it needs and Lesotho only a fifth.

The UNESCO Monitoring Report for 2005 also gave prominence to teachers and emphasised the issues above:

Achieving UPE alone calls for more and better trained teachers. Countries that have achieved high learning standards have invested heavily in the teaching profession. But in many countries teachers' salaries relative to those of other professions have declined over the last two decades and are often too low to provide a reasonable standard of living. Training models for teachers should be reconsidered in many countries to strengthen the school-based pre- and in-service training rather than rely on lengthy traditional, institutional pre-service training.

(Report summary document, p. 3)

Two factors in particular appear to be impacting on the teaching profession in most Sub-Saharan African countries. First, the decline in salaries relative to other comparable professions has been well documented. Emergent knowledge economies offer alternative employment opportunities for those who provided the traditional pool of primary teachers. Second, HIV and AIDS are impacting on the existing and potential teaching force. UNICEF has estimated that nearly a million children a year lose their teacher to HIV/AIDS. A recent South African report drew attention to its finding with the sobering headline 'A teacher dies every two hours'. In Kenya, more teachers are dying of AIDS annually than the output of the teacher training institutions. In Zambia, HIV/AIDS claims the lives of 2,000 teachers a year, again more than the output of the teacher training colleges. A study in Namibia has shown that where the supply of new teachers remains constant, at 1,000, the shortfall of teachers with the impact of HIV/AIDS taken into account will be 7,161 by 2010. And this statistic does not demonstrate significant regional disparities. In Namibia, for example, particularly high infection rates exist in the northern regions of Odangwa East and Odangwa West. Predictably, these are areas with the largest class sizes.

In this context of large numbers of unqualified teachers and the need for yet more teachers as provision expands, the word 'crisis' is beginning to be used. In Burkina Faso, the teacher shortage has been declared a national emergency and people are being recruited from across the public sectors to fill the immediate gaps. In some countries, spending a period teaching is now an alternative to undertaking military service.

While the Global Campaign for Education, working from UNESCO data, estimates that 14–22.5 million extra teachers will be needed globally to achieve education for all (Global Campaign for Education, 2005), the number of additional teachers needed in Sub-Saharan Africa by 2015 is difficult to establish. The number also depends on target pupil-teacher ratios, which vary markedly across the region. In countries such as Mali, Ethiopia and Mozambique, pupil-teacher ratios exceed 55:1. Botswana, Ghana and Namibia are in the range of 25–34:1. In the Republic of Congo it is 83:1 (UNESCO, 2008). Actual class sizes, however, may be much larger, as in most countries rural schools can be very small, with a consequent impact on the overall ratio. Similarly, the total number of unqualified teachers is problematic to estimate (not least because countries use different definitions of what constitutes a 'qualified' teacher).

With this in mind, it is crucial to remember the diversity of contexts found in Sub-Saharan Africa. The nature of the challenges facing teacher supply, retention and training varies between countries, but also significantly within countries. Uganda, for example, has overall a surplus of teachers but shortages in some of the remote rural areas. Nigeria, with its vast territory and population, is in a similar situation. While acknowledging the varied forms in which the teacher challenge is manifest, we do feel, as do all the major development agencies, that the Sub-Saharan African region provides an important frame of reference for discussion and debate.

Sub-Saharan Africa suffers additionally from two problems that occur elsewhere in the world, but not on the same scale. The first is teacher migration. Europe and North America are actively recruiting graduate-level teachers from a range of African countries. The best and most experienced teachers are often the first to go, and the benefits of the investment in training are reaped often by wealthier countries elsewhere. Little robust data exists on teacher migration, but as mobility costs drop it appears to be an increasing problem. One positive step has been the development of a protocol on teacher recruitment that addresses the instability that organised skills raiding can cause to education systems. This was agreed by Commonwealth Education Ministers, UNESCO, the ILO and the Organisation of American States. But the training drain remains.

The second problem relates to the millions of teachers being recruited who are effectively para-professionals. The Global Campaign for Education (2005) sees this as, in part, a consequence of financial restrictions:

The education system in West Africa is increasingly the domain of 'para-teachers', with pre-service training of only a few months or even weeks. This is a direct attack on the quality education which all aspire and are entitled to. With the teacher crisis, quality has often been a hostage of quantity. The trend is to recruit as many teachers as possible, even if they do not have the necessary qualifications in order to respond to expanding enrolment.

Para-teacher schemes are large expansion programmes where pre-service training is compressed or abandoned completely, wages are lowered, working

conditions are poorer and career paths are limited. They are being used by many governments to cut the costs associated with expanding educational access to all children. The price such governments are forced to pay is the quality of training. This massive recruitment is often accompanied by the mandatory early retirement of more experienced, and often more expensive, teachers in order to cut costs even further.

(p. 27)

Data is difficult to pin down. In Nigeria, the proportion of trained primary teachers fell from 97% to 72% between 1999 and 2002 as a direct consequence of government policy to increase teacher provision and keep costs low through the recruitment of volunteer teachers. The majority of these are women.

The forces driving this move to para-professionals are complex. Some argue the importance of World Bank and IMF macro-economic policies, a theme that has been pursued in a 2007 publication by ActionAid called *Confronting the Contradictions: the IMF, wage bill caps and the case for teachers*. This enormous number of para-professionals receives little formal training, is often unlinked to any labour or union support, and constitutes in many developing countries a form of teacher underclass. How such workers are treated constitutes a major global problem.

On the other hand, in conflict-ridden countries where the education sector, including teacher training programmes, has been starved of investment for years, para-professionals operating from home-based or voluntary village schools can provide access to education in areas that the government's education system cannot yet reach because the resource gap will take years to fill. Both the International Rescue Committee (IRC) and UNICEF for instance have been training community members in Afghanistan – where 30% of school buildings were destroyed during two decades of war, many schools have no buildings at all and only 16% of state teachers are qualified – to teach the primary curriculum. In many cases they are given ten-day bursts of training each year, with a view to providing the equivalent of full training over ten years.

USAID research found that 90% of students in IRC-supported home-based schools passed end-of-year exams, that completion rate was double that of government schools and the cost per pupil was \$18 per year compared to \$31 in government schools, making them more cost-effective. However, this surprising relative effectiveness needs to be put in context. Nationally the Afghanistan government has developed a four-week intensive in-service teacher training curriculum for the country's 100,000 teachers, but has not yet been able to roll it out (Spink, 2006).

Para-teachers have their place in emergency situations, too. Under a UNESCO, UNICEF and UNHCR emergency programme, 11,000 teachers and para-teachers were brought rapidly into service in Rwanda in the aftermath of the genocide in 1994–5.

Two final points, in looking at the pressures faced by teachers. The first is corruption. Data on this is difficult to find. Transparency International, however, has recently published a report on Kenya that shows bribery in relation to teaching placements and transfers is rampant (Transparency International, 2006). There is anecdotal evidence to suggest this is also true in other countries. The second issue is teacher housing. Little work has been done on this, but the importance of housing in attracting teachers to work in rural locations is significant.

The UNESCO 1960s agenda for teachers

Just over forty years ago, UNESCO held an intergovernmental conference on the status of teachers. The conference recognised

... the essential role of teachers in educational advancement and the importance of this contribution to the development of ... modern society

and, in a far-reaching communiqué, which stands the test of time, set out a range of ambitious proposals about the characteristics of the teaching profession globally. Paras. 11–16 exemplify the aims set out:

11. Policy governing entry into preparation for teaching should rest on the need to provide society with an adequate supply of teachers who possess the necessary moral, intellectual and physical qualities and who have the required professional knowledge and skills.

12. To meet this need, educational authorities should provide adequate inducements to prepare for teaching and sufficient places in appropriate institutions.

13. Completion of an approved course in an appropriate teacher-preparation institution should be required of all persons entering the profession.

14. Admission to teacher preparation should be based on the completion of appropriate secondary education, and the evidence of the possession of personal qualities likely to help the persons concerned to become worthy members of the profession.

15. While the general standards for admission to teacher preparation should be maintained, persons who may lack some of the formal academic requirements for admission, but who possess valuable experience, particularly in technical and vocational fields, may be admitted.

16. Adequate grants or financial assistance should be available to students preparing for teaching to enable them to follow the courses provided and to live decently; as far as possible, the competence authorities should seek to establish a system of free teacher-preparation institutions.

The situation of millions of teachers in Sub-Saharan Africa today shows, after 40 years, the failure of governments, international organisations and the world community to meet even these basic standards. Later in the document, the issues of teacher shortages are addressed:

142. In developing countries, where supply considerations may necessitate short-term intensive emergency preparation programmes for teachers, a fully professional, extensive programme should be available in order to produce corps of professionally prepared teachers competent to guide and direct the educational enterprise.

Such programmes barely exist today.

The problems of teacher education and training today

The crisis in teacher supply and teacher education requires urgent responses. This is happening in some countries. In Nigeria, the National Teachers' Institute has introduced an emergency 18-month preparation programme combining distance education and intensive periods of school placement. These sorts of responses attract opposition from the established teacher education community. The ambition to produce an all-graduate teaching profession, common in many parts of the world, has been as energetically pursued in African countries. The need to raise the status of primary teachers by linking their training to higher education and university standards has been an important part of this movement. And yet the stark reality in many countries is that holding on to expensive three- or four-year full-time preparation courses means larger numbers of wholly unqualified teachers entering the classrooms.

In the coming decade, the bulk of teacher education and training will inevitably be school based. How long this training will take is a key issue. The 'bricks and mortar' campus institution, built to provide training in the 20th century, will be inadequate to meet the needs of the 21st. That is not to say that the role of such institutions will diminish. It could grow. But it is to suggest that the way that role is conceived needs to be rethought.

One of the major challenges facing teacher education in many countries is to provide a stable policy basis for development. A number of studies have suggested that policy on teacher education is fragmented, incomplete and, more often than not, simply underdeveloped. The analyses point to a series of endemic problems.

The first, as we have already indicated, is the way resources are directed to long, three- or four-year courses that produce only a minority of the teachers required. In some contexts, therefore, while such a minority receives considerable support, a parallel process is taking place to recruit significantly more unqualified teachers into the school system.

The second is the way in which primary teachers use qualification as a means to either enter other forms of employment or graduate to secondary teaching. Significant resources are being devoted to 'primary teacher upgrading' without any hope of a return in terms of an improved quality of teaching in schools. This is an issue that touches more widely on policy around teacher salaries and incentives, but the impact on the effectiveness of education and training can be huge.

Third, and following from the above point, teacher status – particularly at the primary level – is increasingly problematic. Salaries are clearly important, but there are subtler issues associated with community standing and respect that are more difficult to define. A recent report on education in South African rural communities, published by the Nelson Mandela Foundation under the title *Emerging Voices*, highlighted the concerns of parents, pupils and others about the commitment and status of teachers.

In many communities there is a deep rift between teachers and the guardians in their care ... Criticisms of teachers encompass a complex set of issues related to their lack of qualification, subject knowledge and sense of vocation.

(Nelson Mandela Foundation, 2004, p. 107)

The research team from the Foundation interviewed a wide range of participants in the educational process and identified a strong lay concern about teacher qualifications. In

particular, this reflects the way in which better-educated parents are now looking at their children's schooling more critically. The report quoted one community leader as saying:

Some teachers are not well qualified and they are a problem to learners who are willing to learn. Due to the lack of knowledge on the part of teachers, learners are forced to study what they don't like or want and in which they are not interested.

(p. 107)

The report goes on to identify a fourth area of concern; the form and nature of the teacher education curriculum for those who can gain access to it. The authors perceive a legacy of:

... colleges that proliferated across the homelands and purveyed little more than a repetition of the high school syllabus wrapped in an authoritarian pedagogy.

(p. 108)

It was in part as a response to this sort of critique that South Africa has integrated teacher colleges into the higher education sector generally and moved to an 'outcomes'-based approach to curriculum design with classroom effectiveness at the core of requirements.

This has been less true in other countries. Many curricula, whether regulated by government agencies or by university authorities, remain organised around the traditional idea of 'disciplines' of education and subject knowledge. Frequently these are taught separately and without reference to the pedagogy through which the teacher's task has to be carried out.

There may be some lessons to be drawn from the well-known Escuela Nueva programme in Colombia, particularly for sparsely populated rural areas of Sub-Saharan Africa (see, for example, Kline, 2002). The programme was designed in the 1970s for multigrade rural schools with one or two teachers – which accounted for 80% of schools in Colombia. Previously, children were learning so little and the system of evaluation was so rigid that many pupils who had to take time off, for instance to help with the harvest, would repeat and repeat and eventually drop out.

In the new system, teachers were trained in demonstration schools to perform a different role, enabling children to study independently or in groups using self-learning and cooperative group learning guides. These combined a core curriculum with local and regional adaptations made by the teachers. After training at a demonstration school, teachers built on their techniques on the job by attending practical workshops and sharing ideas with peers at monthly meetings where they collected their pay. In tests, after the model was extended to more than 8,000 schools, Escuela Nueva pupils outperformed control group pupils in Spanish, the official national language at grades 3 and 5 by 19% and 8.5% respectively. The Escuela Nueva's creator, Vicky Colbert, was made an education vice-minister and the model was extended to 20,000 schools. In recent years, partnerships have been made between the government and businesses such as coffee grower associations to fund innovations, including using information technology. The World Bank selected Escuela Nueva as one of three education reforms globally that had demonstrated success on a large scale.

The fifth concern is that qualification upgrading courses – where they exist – are often focused wholly on the 'individual teacher qualification needs' without any reference to the impact such an upgrading process could have on immediate colleagues or the school as a

whole. In some schools, neither a teacher's colleagues nor the head teacher may be aware that the teacher is following an upgrading course. In some contexts, the content of the upgrading course require no practice or experimentation to be carried out in the school in which the teacher teaches. Carried to its conclusion, the separation of training from schools in this way can lead to serving teachers being asked to leave their classes and go through a 'pre-service' type teaching practice close to the college or university provider. In such programmes very little attention is given to accrediting or acknowledging prior experience, and unqualified teachers who may have been teaching for ten or more years are treated as if they are new, young trainees.

The sixth and final policy concern is the inability to develop programmes at scale. While the prime mode of thinking remains pre-service, campus-based provision, the possibilities of moving to scale are limited. It is for this reason that many countries have come to revisit ideas of open and distance learning. Distance education and teacher education have strong links that, in some countries, have a long lineage, but distance education has traditionally had an image problem and has often been seen as a threat to existing providers. But distance education has the positive characteristic of potentially being able to work to scale and, despite the poor quality of certain programmes, some evaluations point to effectiveness where certain key programme structure variables are built in. Examples would include the large-scale courses (in excess of 100,000 teacher participants) of the National Teachers' Institute in Nigeria and the Open University of Sudan.

What is clear, having looked at the context and need, and having explored some of the problems of provision, is that new models of teacher education and training need developing. It is important at this juncture to say that the need for change is not just an African issue. Recent research by the UNESCO European region and by the UNESCO Asia-Pacific region has shown general concerns and trends around the education of teachers.

Despite the significant differences across the countries studied and their systems of teacher education, there was a similarity in the nature of the issues and dilemmas being faced. Those that were identified related to the resolution of the balance between theory and practice; the attempts to match the demand for and supply of teachers; the degree of central control of teacher education; the status, recruitment, and output of teachers.

*(Morris & Williamson (eds.),
p. 281)*

In the Sub-Saharan African context, however, two issues do stand out – and they are linked.

The first, as the Mandela Foundation report illustrates, is the increasingly negative perception of teacher status on the part of parents and local communities. It is problematic that just as the crisis in teacher supply and teacher professionalism becomes acute, so the expectations of teacher quality are significantly rising. Parents and others are aware of changing economic structures. Growth, although hesitant and unevenly distributed, is offering up the possibilities of employment provided certain educational levels are achieved. Whatever the educational problems that exist in Africa, the enthusiasm of parents to achieve good schooling for their children cannot be doubted. Few can fail to be moved by the ways in which neatly dressed children appear from the most impoverished homes to embark on the often lengthy trip to school. This mismatch between quality and expectation is likely to engender increasing social tensions in the coming decade.

The second issue is the sheer scale of response that is needed. Existing institutional and policy systems are often inexperienced at providing forms of education and training that need to extend to tens, even hundreds of thousands. A few institutions are doing this (the National Teachers' Institute based in Kaduna, Nigeria, is one, the Open University of Sudan is another). Open and distance education institutions have the experience of dealing with large numbers, but this is not the only response needed. Governments and regional authorities will need to establish models and structures that embrace the teaching force as a whole and, as we have seen, this means thinking at a scale hitherto not imagined.

Looking to the future

The school crisis in Sub-Saharan Africa and the associated teacher crisis is arguably the world's biggest educational problem. It certainly puts in perspective some of the issues that European and North American educational researchers worry about, although the resources available to address the African challenge are tiny in comparison. Some important current work is, however, taking place.

The MUSTER project at the University of Sussex has produced a series of interlinked publications focused on generating new understandings of teacher education before, during and after the point of initial qualification as a teacher. Its concerns included how new teachers are identified and selected for training programmes, how they acquire the skills they need to teach effectively, and how they experience training and induction into the teaching profession. The research included analytical concerns with the structure and organisation of teacher education, the form and substance of teacher education curricula, the identity, roles and cultural experience of trainee teachers, and the costs and probable benefits of different types of initial teacher training.

MUSTER was also designed to provide opportunities to build research and evaluation capacity in teacher education in developing countries through active engagement with the research process from design, through data collection, to analysis and joint publication. Principal researchers led teams in each country and were supported by a team of Sussex faculty and graduate researchers.

Two related initiatives have come from the Open University (OU). Few people realise that one of the three major roles envisaged for the OU by the Labour governments of the 1960s was supporting and promoting educational opportunities in developing countries. Work of this sort has been a feature of OU international activities and, a few years ago, the university took the decision to concentrate its international strategy on Africa.

One example of this is the Teacher Education in Sub-Saharan Africa (TESSA) programme. This is a programme that centrally addresses the issues of working to scale. Few institutions, particularly those that are residential and campus based, have the infrastructure to support programmes working to scale. The TESSA project is a consortium involving international and national institutions (nine Sub-Saharan African countries are involved) that will provide resources and systems to support the development of school-based teacher education programmes across the continent.

TESSA is an 'open educational resources' project providing web- and text-based resources for use initially with primary teachers, but extending eventually to all the secondary subjects.

It is not a training programme per se, but rather it provides the tools and content that will allow local developers to create school-based programmes. While providing text resources, TESSA is premised on the assumption that online modes of working will become increasingly important. The foundations for effective exploitation, therefore, need putting in place now. TESSA will, for example, be piloting the use of a number of web-based tools, allowing local developers to take content frameworks and version them to local contexts. TESSA is a research-and-design project that will contribute to an understanding of the factors and variables that facilitate the successful building of new models of provision.

TESSA is paralleled by the Digital Education Enhancement Programme (DEEP). This DFID-funded research programme is exploring the way in which new, mobile forms of communication can be used to provide education, training and support to teachers, particularly those working in remote rural locations.

The advent of new communication technologies offers an important opportunity for extending provision and support for teachers. Just as the need for such communication becomes most pressing, society is creating new models of connectivity that offer, it appears, limitless opportunities for creating new modes of learning communities.

The Indira Gandhi National Open University (IGNOU), New Delhi, demonstrated in the 1990s how developing countries can bypass stages in the development of communications technology and use new systems to suit their own context. IGNOU, for instance, developed a system of distance teacher training in isolated rural villages based on combining one-way video with two-way satellite phone links. This enabled teachers to talk live to education experts in the capital, who they could see on their TV screens, discuss their problems in the classroom and keep abreast of the latest teaching methods. The system tackled the urban/rural technological divide by bypassing the need for telephone landlines, which the villages did not have, and the videos were installed in village resource centres that teachers could reach on foot or by local transport. Since then, the use of computers and the Internet has spread to millions, at least in the cities: 24% of India's tertiary students are now distance learners – IGNOU enrolls 1.5 million students – and government policy aims for 40%.

Digital communication technologies are spreading rapidly across Sub-Saharan Africa, too. Africa now has the fastest growing telecommunication sector in the world. And the mobile sector, in particular, is growing at an exponential rate.

Of particular significance is the release from reliance on cables and heavy equipment that has come with the wireless and mobile revolution. In part, this is driven by commercial imperatives. Fishermen off Zanzibar can now telephone to find which landing market is offering the best price! But the growth in the use of mobile/cell phones reflects a deeper human need for being 'in communication' (a recent report has described how teachers in Ghana are now very resistant to teaching in rural areas where a mobile phone signal cannot be received) and it is this potential that education in general, and teacher education in particular, can draw on. As a leader in *The Economist* recently expressed it:

The idea that a digital divide separates rich countries from poor, as usually understood is a myth ... Poor countries don't need a PC in every home. What they need is more mobile phones.

Technological change offers the opportunity to enrich the pedagogic toolkit of teacher educators and teachers in hitherto undreamed-of ways. Information and communication tools

are becoming increasingly portable, flexible and powerful, and numerous studies point to the potential of these new technologies as learning tools. The trend to incorporate these new forms of ICT into policy and practice is gathering pace in many countries. In Rwanda, for example, an ambitious plan to ensure nationwide connectivity is being put into practice, and most countries have policies in place that seek to achieve similar outcomes. In looking to ICTs from a developmental perspective, experience such as the DEEP project suggests that policymakers and practitioners need to think of technology in the broader conceptual mode set out at the beginning of this section. New forms of technological communication require more than just a mere 'roll out' of infrastructure and equipment. It is clear that, within less than a decade, widespread connectivity will become commonplace in even the most remote parts of Sub-Saharan Africa. To realise the potential of this development, conceptualisation of and experimentation in use needs to be urgently addressed.

New communication technologies have potential for the continuing professional development of teachers. Looking at provision for career-long support for teachers, however, the overall picture is unclear. The overall trends and organisation that provide many common features to pre-service education do not exist in the in-service field. A myriad of different provisions exists among and within countries. Numerous studies have pointed to the perceived inadequacy of many existing structures to meet the needs of teachers working in modernised education systems. It is clear that investment in teacher education remains heavily skewed towards pre-service provision.

Studies into teacher effectiveness have revealed the impact of the teacher on pupil attainment. Yet experience does not always ensure effectiveness.

In most countries, continuing professional development appears to be offered by a variety of providers, including, increasingly, private organisations. From the perspective of the teacher, what is offered is not always coherent and related to need, and access to such provision can be difficult, particularly in some rural communities. Very little attempt is made to record the involvement of teachers in the upgrading of their knowledge and skills.

Some examples of systemic national attempts to address the coherence of professional development can be found. Uganda, for example, in 2004 published an ambitious document, *The Professional Profile of a Ugandan Primary School Teacher* (Kinyera San, 1994), which sought to specify:

... the key knowledge and skills, the tasks, and the levels of competence of the teacher in performing key tasks. Each of these tasks ... described in terms of applicability in the classroom or the school or the community.

(p. 1)

In the debates about policy and practice, it is easy to lose the sense of enjoyment that involving teachers in decision making can provide.

A UNESCO analysis of teacher reform in Tanzania makes the point:

A key lesson from the Tanzanian experience is that formal communication channels, while important, are not enough to incorporate teachers' voices in educational decision making. Extra steps are needed to overcome misunderstandings and bring in the views of local and district union leaders.

The issue of teacher involvement (directly or through professional associations and unions) relates directly to the issue of centralised/decentralised structures of control in education systems. The Global Campaign for Education (2005) has argued that:

... unions and ministries should work together to ensure mechanisms such as participatory active research, opinion polls, surveys, questionnaires and radio and television phone discussions ...

The MUSTER project, for example, went to great lengths – incorporating, in part, action research methodologies – to secure the active involvement of those who were the focal point of the research activities.

In the UK, other universities have taken a lead in addressing the challenges set out in this pamphlet. Bristol and Cambridge, for example, along with Sussex, are leading ongoing DFID-funded programmes. The University of Wolverhampton has established a growing reputation in the role of mobile technologies for teacher development and has carried out some joint projects with the OU.

UNESCO UK, through publishing this pamphlet and related activities, is helping address the challenges facing teachers in Sub-Saharan African countries. In conclusion, it might be useful to return to the task that UNESCO in Paris has set itself, in looking to reshape teacher education policies across the continent. The Teacher Training in Sub-Saharan Africa (TTISA) initiative is an ambitious project planned to extend over more than a decade (a timescale that some feel is too relaxed given the urgency of the issues to be addressed). National governments and key stakeholders in the teacher education and training communities are closely involved.

Such involvement is important, although we worry that vested interests and the conservative nature of established thinking may deny a place for new and innovative thinking (about the role of new communication technologies, for example, or the need to reorder resource priorities between pre-service and in-service training).

Our analysis suggests the need for UNESCO to think creatively around a number of themes, including:

- the need for a renewal of the curriculum of teacher education, including a stronger focus on improved classroom effectiveness and pupil achievement, and the need for mechanisms for sharing knowledge about teacher education within and between countries;
- the importance of developing school-based programmes, using new communication technologies as these become available, that promote locally relevant teacher and school development strategies;
- linked to (ii), the need to reconceptualise the time and resources allocated to pre-service and in-service continuing professional development;
- the forms of national and international research needed to inform the ongoing response to the crisis in teacher supply and teacher education and training;

- the models of government intervention that should be considered in combating some of the problems associated with teaching (for example status, impact of HIV/AIDS);
- the ways in which the growing numbers of para-professional teachers are supported in their parent role and in reaching full teacher status;
- the potential for voluntary links between teacher training institutions in developed and developing countries to share expertise and provide in-service training workshops for para-professionals and full-status teachers, particularly where there is an emergency need or a large-scale training shortfall;
- whether, 40 years after the 1966 Paris UNESCO declaration, there is any way in which a sense of ‘teacher entitlement’ to training and support can be conceptualised.

There are big issues that need to be grasped. Teachers are a cornerstone of any attempts to eradicate not just illiteracy but many aspects of poverty, since education has an important enabling effect towards tackling HIV/AIDS, improving nutrition and family health, increasing incomes, withstanding exploitation and banishing corruption.

The fight against poverty is above all a fight against ignorance. The tens of millions of children out of school and the tens of millions failing to complete their primary education represent a threat to economic and social stability. Few, if any, communities can escape the reach and impact of global forces on everyday life. Everyone needs a good teacher if they are to be equipped to grow and prosper in the conditions of this new century. The challenge of training, retaining and improving teachers throughout their careers must be made the highest priority if the quest for universal schooling, at an internationally acceptable quality level, is to be achieved.

References

- ActionAid (2007) *Confronting the Contradictions: the IMF, wage bill caps and the case for teachers*
- ADEA (2003) *Open and Distance Learning in Sub-Saharan Africa – A Literature Survey on Policy and Practice*, ADEA Working Group on Distance Education and Open Learning
- Annual Status of Education Report (2005) facilitated by Pratham, India
- Colclough, C, Al-Samarrai, S, Rose, P & Tembon, M (2003) *Achieving Schooling for All in Africa*, Ashgate, Aldershot
- Croft, A (2000) *Gender Gaps in Schools and Colleges: Can Teacher Education Policy Improve Gender Equity in Malawi?* University of Sussex Institute of Education
- Economist (2005) 'The real digital divide', *The Economist*, March 10th, 2005.
- Edelenbosh, G (2000) *UNICEF's Response to Emergencies in Four African Countries*, Consultancy Report for UNICEF ESARO, p. 36
- Education in Labour Relations Council (2005) *The Health of Our Educators: A Focus on HIV/AIDS in South African Public Schools*, Cape Town
- Gandhi Kingdon, G. (2007) 'The progress of school education in India', *Oxford Review of Economic Policy*, **23(2)**, pp. 168–95.
- Global Campaign for Education/ActionAid (2005) *Teachers for All: What governments and donors should do*
- Halliday, I (1999) *Developing a Professional Teaching Service*, Teachers' World Series, ADEA Working Group on the Teaching Profession, Commonwealth Secretariat
- Kinyera San, O. (1994) *The Professional Profile of a Ugandan Primary School Teacher*, APS International.
- Kline, R. (2002) 'A Model for Improving Rural Schools: Escuela Nueva in Colombia and Guotamala', *Current Issues in Comparative Education*, **2(2)**, pp. 170–81.
- Levinger, B (1996) *Nutrition, Health and Education for All*, Education Development Center, Newton, MA, United States, Chapter II
- Lewin, K M (2002) 'The costs of supply and demand for teacher education dilemmas for development', *International Journal of Educational Development*, **22(3–4)**, pp. 221–42
- McGreal, C (2005) 'Young teachers are dying', *The Guardian*, 20 December, p. 5
- Melaney, P (2000) 'The impact of HIV/AIDS on the education sector in Southern Africa', CAER II Discussion Paper no. 81, Cambridge, MA, Harvard Institute for International Development

Moon, B (2003) 'A retrospective review of the national case studies on institutional approaches to teacher education', in Moon, B, Vlasceau, L & Barrows, L C (eds.) *Institutional Approaches to Teacher Education within Higher Education in Europe: Current Models and New Developments*, Bucharest, UNESCO

Moon, B, Brown, S & Ben Peretz, M (2000) *The Routledge International Companion of Education*, London, Routledge

Morris, P & Williamson, J (eds.) (2000) *Teacher Education in the Asia-Pacific Region: a comparative study*, New York and London, Falmer Press

Nelson Mandela Foundation (2004) *Emerging Voices*, Cape Town, HSRC Press

O'Malley, B (1997) 'Satellites answer training needs', *Times Educational Supplement*, 29 August

O'Malley, B (2003) 'The pleasure factor', *The New Courier*, UNESCO, April

O'Malley, B (2006) 'Experienced teachers not always the most effective', *South China Morning Post*, 28 October

O'Malley, B (2007) 'Every child a schooled child', *The Tablet*, 3 February, p. 23

Remy, J P (2002) 'Des présevatifs de tres mauvaises qualité modes L'Afrique de L'Est', *Le Monde*, 15 Juin, p. 1

Spink, J (2006) 'Education, reconstruction and state building in Afghanistan', in Couldrey, M & Morris, T (eds.) *Forced Migration Review*, Refugee Studies Centre, Department for International Development, Oxford, pp. 15–16

The Report of the Commission for Africa (2005) *Our Common Interest*, London, Commission for Africa

Transparency International (2006) *Global Corruption Reports* (available at www.transparency.org).

UN (2005) *Toward Universal Primary Education: investments, incentives and institutions*, London, Earthscan

UNESCO UIS (2006) *Teachers and Educational Quality: monitoring global needs for 2015*, Montreal

UNESCO (2000) *Statistical Document: Education for All 2000 Assessment*, Paris

UNESCO (2005) *Education for All: the quality imperative*, Paris

UNESCO (2008) 'Education for All: will we make it?', *EFA Global Monitoring Report*.

UNICEF (2000) *The Progress of Nations*

Winthrop, R (2006) 'Emergencies, education and innovation', in Couldrey, M & Morris, T (eds.) *Forced Migration Review*, Refugee Studies Centre, Department for International Development, Oxford, p. 12

Web resources for teacher education

Action Aid International (Education Page)

<http://www.actionaid.org/main.aspx?PageID=22>

ADEA (Association for the Development of Education in Africa)

<http://www.adeanet.org/>

All Africa Global Media (All Africa)

<http://allafrica.com>

Commonwealth of Learning (COL)

<http://www.col.org/colweb/site/pid/1>

DEEP (Digital Education Enhancement Project)

<http://www.open.ac.uk/deep>

DETA (Distance Education and Teacher's Training in Africa)

<http://www.deta.up.ac.za/>

Education International (EI)

<http://www.ei-ie.org/en/index.php> (*general homepage*)

<http://www.ei-ie.org/africa/en/index.php> (*Africa homepage*)

Global Learning Portal (GLP)

<http://www.glp.net>

MUSTER (Multi-Site Teacher Education Research project)

<http://www.sussex.ac.uk/usie/muster/>

SAIDE (South African Institute for Distance Education)

<http://www.saide.org.za>

Teacher Education in Developing Countries

http://www-unix.oit.umass.edu/~educ870/teacher_education/links.htm#documents

TESSA (Teacher Education in Sub Saharan Africa) Programme

<http://www.tessafrica.net>

UNESCO TEN (Teacher Education Network)

<http://www.ten-iicba.org/>

UNESCO TTISSA (Teacher Training in Sub Saharan Africa) Initiative

http://portal.unesco.org/education/en/ev.php-URL_ID=44238&URL_DO=DO_TOPIC&URL_SECTION=201.html

World Bank

<http://web.worldbank.org/education>