

International Perspective: ICT in Teacher Education – Global Trends



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Introduction

I am delighted to welcome you for this event, which we have organised back to back with the recent conference of the Association of Commonwealth Universities on the theme *Universities and the Millennium Development Goals*.

I welcome you on behalf of the Commonwealth of Learning and we are delighted be holding this seminar in cooperation with UNESCO, represented here by my good former colleagues Stamenka Uvalic-Trumbic and Zeynep Varoglu.

I start with an apology. Our little COL/UNESCO group will leave at the break. I discovered at the ACU conference that there was another important university in South Africa’s history, Robben Island. We shall make our pilgrimage there today.

My title today is *International Perspective: ICT in Teacher Education – Global Trends* and part of what I have to say today is a summary of a book I have just published in English and Chinese.

My purpose is to set the stage and suggest why ICTs will play a much larger role in teacher education in future, rather than go into detail about how that should be done.

The book’s title is *Mega-Schools, Technology and Teachers: Achieving Education for All*. It argues that the report card on the 20-year global campaign to achieve Universal Primary Education (UPE), which is the keystone of the overall goal of providing Education for All, is a blend of success and failure. Both have consequences and implications.

The success is that we are now making rapid progress towards UPE and many countries have achieved it. The consequence is that there is now a massive surge of children towards secondary school for which many countries are unprepared.

The failure is that there are still some big gaps in the achievement of UPE. Estimates suggest that by 2015, the target date for achievement of the MDGs, there will still be 50 million children, give or take, still not in primary school. The exact figure will depend on how badly the current economic downturn impacts school budgets and parental attitudes. The particular consequence on which I shall focus is that the millions of new teacher need to be recruited and trained to complete the drive to UPE.

I shall comment briefly on the success and then focus on the failure.

The Secondary Surge

After a period when universities complained that the World Bank and other development agencies were only interested in primary education it is good news that post-basic education is attracting more attention. Tertiary education is already expanding at a dizzy rate in many countries and that will continue.

However, I believe that the secondary surge poses a bigger headache for governments and policy makers for two reasons.

First, this is a challenge of scale. There are 400 million children between the ages of 12 and 17 not receiving secondary education (Binder, 2006).

Second, giving girls a secondary education may well be the most effective action we can take against devastating climate change.

Obstacles to expanding secondary education

However, the expansion of secondary education faces two related challenges in the developing world. The first is that conventional approaches cost too much and the second is that even if their cost could be brought down it is hard to see where the money would come from. Let's start with the cost.

After devoting much of his career to research on the costs of education, Professor Keith Lewin has concluded that a country will never achieve universal secondary education if the unit costs of secondary education are more than double those of primary education (Lewin, 2008). The problem is that in countries facing the challenge of expanding secondary education the spread of costs is far greater than two, ranging from factors of 3 to 6 and beyond in most African countries compared to between 1.5 and 2 in the OECD countries.

Open schooling: part of the solution

This means that we need radically new approaches to providing secondary education. All credible avenues must be explored. In my new book I review three of them: private schooling for the very poor, which is far more extensive than we tend to think (Tooley, 2009); computers for children; and open schooling.

Open schooling is by far the most promising of these options at present.

It already exists in some countries and enrolls millions of secondary pupils worldwide. The National Institute of Open Schooling in India alone has over a million pupils. Even small countries like your

neighbour, Namibia, have open schools that are large both in absolute terms and in the proportion of secondary pupils that they enrol.

Very importantly, open schooling cuts costs drastically. No one has yet demonstrated a cheaper schooling system based on computers, which tend simply to add costs.

Recruiting and Training Teachers

So much for the success of the campaign for Universal Primary Education and the secondary surge that accompanies it. Let me now turn to the failure: the projection that by 2015 50 million children will still not get into primary school.

To address that problem will require action on various fronts. We shall focus on the requirement for recruiting and training teachers. UNESCO calculated in 2008 that the world needs to recruit and train some 10 million teachers by 2015 to meet the goals of Education for All and replace large numbers of retiring teachers. China, India, Indonesia, Nigeria and Pakistan need to recruit, between them, some 5.7 million primary teachers by 2015 and fifteen other countries will each need at least 100,000 new teachers (UNESCO, 2006; 2008).

The supply of trained teachers is increasing, but not fast enough to meet these requirements. One of the consequences is that countries are now recruiting people and sending them into the classroom within minimal training. This is not just a developing country phenomenon. California, for example, employs thousands of untrained teachers to staff its schools.

Switch from pre-service to in-service teacher education

I argue that we can make a virtue of necessity by standing the conventional approach to teacher education on its head. By moving the emphasis from long pre-service training programmes to regular in-service programmes we could achieve several desirable goals.

First, people keen to enter the teaching profession would be able to do so quickly, while their enthusiasm was high. There are two projects, Teach for America in the US and Teach First in the UK, that send top graduates into tough secondary schools with little training as teachers. These people are keen to undertake a challenge. Moreover, they consider the standard pre-service teacher education programmes boring and would not have gone into teaching if that were the only route in. Once they have gained experience however, they do appreciate learning more of educational theory through continuing professional development courses.

Many developing countries also send large numbers of untrained people into the schools as teachers. However, they do not benefit from a structured professional development framework like those in the Teach for America or Teach First programmes but are left to fend for themselves, sometimes labelled as para-teachers.

Second, switching most of the human and financial resources now devoted to pre-service training to in-service training would not only allow these untrained teachers to make their way into the profession with much greater motivation. It would also provide the opportunity to use teacher education to improve the quality of education provided – a vital proviso – that it is conducted with a focus on the classroom.

Teachers' comments on the value of their pre-service training are often unflattering. However, the problem of relevance to classroom practice is not solved simply by providing that training in service.

Lewin (2002) has argued that since much continuing professional development is carried out without reference to school needs – often without the knowledge of the school principal – it encourages teachers to move to other jobs rather than improving their effectiveness in their schools. Furthermore, another study (DFID, 1999) found that even providing teachers with in-service training in local teacher resource centres did not have much impact on their subsequent classroom teaching.

It appears that to be effective in-service teacher education must take place in the schools and be resolutely focused on the classroom. This principle has guided programmes like the UK Open University Post-Graduate Certificate of Education Programme. In the words of Leach and Moon (2000, p. 114): 'No activity, reading or observation could be set that did not relate directly to experience in schools' and 'the link had to be explicit'.

Conducting in-service training in the schools with a focus on the classroom requires the use of open and distance learning and can benefit from incorporating ICTs.

These principles underpin the programme for Teacher Education in Sub-Saharan Africa known as TESSA, which operates in nine African countries and is run by a consortium of 13 universities and five international organisations. A short profile of TESSA is one of eight profiles of teacher education at a distance included in my book *Mega-Schools*.

TESSA is a consortium of 13 African universities, the UK Open University and five international organisations. It works across nine African countries – with more participating informally – by creating teacher education materials in Arabic, English, French and Kiswahili. Devereux and Amos (2005) have given a moving account of how TESSA materials have enabled the University of Fort Hare to run a very successful classroom-focused in-service programme in the Eastern Cape Province.

Last year nearly half a million African teachers worked with materials and resources produced through the TESSA community. Since these are classroom-based in-service materials they have a direct impact on millions of children through their use in the classroom.

Putting it all together

Now let me pull all this together. Governments and international agencies often talk about adopting 'a whole-sector and multisectoral approach to achieving education goals', to quote a concept note for the World Bank's 2020 education strategy (World Bank, 2010). Too often, however, education systems are tightly compartmentalised by level and function.

I suggest that large open schools and school-based in-service teacher education programmes could act as integrating factors in making the whole-sector approach a reality. In the educational ecosystem fit for the 21st century shown here there is a national school system, including public and private schools and a network of local learning hubs, under the authority of the ministry of education. The ministry is also linked to the open schooling sub-system, particularly through its curriculum and examinations function, and this sub-system also relates to the schools, notably as a source of learning materials, and to the learning hubs where it locates its study centres.

Also linked to the ministry, through its teacher education unit in particular, is the teacher-education institution sub-system. All teacher education institutions have links with the schools and these are particularly strong for school-based teacher education. They will also relate to a national higher education system and to international groupings such as TESSA.

The learning hubs act as resource centres for teachers, giving them access to a richer ICT infrastructure than they have in their schools. Finally, intersecting with all these systems and subsystems is the community system, which has a highly complex set of sub-systems of its own.

Such an ecosystem would exploit the synergies of open schooling and teacher education with the wider school system, governments and communities.

It could expand learning opportunities and make possible reductions in the cost of schooling and training.

By analogy we can also see the teacher at the centre of an interlinked and enriched system.

It would enable teachers to combine ICT skills with emergent views in pedagogy, curriculum and school organisation. This would enable them to use different ICT skills and resources to improve their teaching, collaborate with colleagues and become innovative leaders in their classroom and institutions

I conclude where I started. The long campaign to achieve universal primary education has both succeeded and failed. Its success creates a huge task for post-basic education. Its failure challenges universities to train teachers in new ways.

We have a considerable agenda in front of us.

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