'OER's in Sub-Saharan Africa – an appropriate response to the challenge of Education for All? The TESSA experience in Zambia.'

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Abstract

The initiatives of Education For All (EFA) and the Millennium Development Goals (MDG's) have helped put the debate surrounding basic education firmly in the educational, developmental and economic spotlight. They have led to an expansion of education at primary level in many countries in Sub-Saharan Africa. This expansion brings with it its own set of challenges, not least of all the need for an increase in teacher numbers and in the quality of teaching in schools. Without reference to such challenges EFA is likely to become limited in its achievement. This paper describes and critically analyses an example of a response to these needs through the Teacher Education in Sub-Saharan Africa (TESSA) initiative. TESSA seeks to bring together teachers and teacher educators from across 9 African countries in a consortium including the Open University UK. It has developed a range of Open Educational Resources in four languages to support school based teacher education and training. Materials are versioned to suit the needs of individual countries and institutions. This paper analyses the underlying principles and progress to date of TESSA, using, amongst other things, the experiences of the author in TESSA activities.

A young teenager herds his father's cattle on the edge of his village at the end of the 20th century, 25km up the road from the headquarters of one of the richest parastatal organisations in Africa. Each day he watches his friends go to school and one day, against his father's wishes, he joins a class of 6 and 7 year olds in the local primary school. A decade later, having leapfrogged his way through the various Standards and levels of school he studies as a student teacher in a college of education and points out to me the fields where his father's cattle still graze as I give him a lift into town. He burns with a quiet enthusiasm to get into schools as a teacher so that he can listen to the stories of pupils like himself and inspire them to get on in their education.

His story is interesting because it is both typical and atypical of the stories and opportunities attached to so many children in many parts of sub-Saharan Africa (SSA) and so serves as a thought provoking introduction to this brief paper. His story is not unusual in that he finds himself outside of formal education. In 2006 according to the Regional Overview sub-Saharan Africa of the Education for All (EFA) Global Monitoring Report (UNESCO 2009), SSA accounted for 47% of all children who were out of school – one third (35 million) of the school aged population were not enrolled at school. Nigeria alone accounts for 1 in 9 of the World's out of school

children. Neither is it unusual in that he finds himself involved in labour on behalf of his family and this labour keeps him away from school. To quote from the report above (p 5);

> *Around one-quarter of 5- to 14-year-olds in sub-Saharan Africa were engaged in child labour in 2004. Because population growth has increased faster than child labour rates have fallen, there were about 1 million more child labourers in 2004 than in 2000. School attendance figures provide stark evidence of the trade-off between child labour and UPE. Working children face an attendance disadvantage of about 30% to 67%.*

The trade off usually makes perfect sense economically and socially to individual families, although this student's case is atypical in that it probably didn't! Botswana is 'atypical' in that there is a very high enrolment in Primary School and it is free. It is also atypical in that historically in Botswana it was more common to send girls to school than boys (mainly for the reason that this student's father was interested in – to look after the chief source of wealth for the family, the cattle).

It is also becomes a typical story in that he eventually finds himself enrolled in school. The drive for EFA has had significant impact on enrolment rates in SSA. Total primary enrolment rose by 42% between 1999 – 2006; 23 million children entering school for the first time in 2006 alone (UNESCO ibid). These are huge numbers and the implications on various levels are obvious.

Pedagogically perhaps he is atypical in the role that he envisages playing as a teacher; that of the listener. Generalisations are dangerous but in Botswana at least the small amount of research into teacher practice and identity seems to indicate the sense that teachers have of being 'deliverers', both of curriculum and moral values, a role in which listening, though certainly not absent, is probably subsidiary to other practices (e.g. Prophet, 1995, Tabluwa 1997, Tafa 2001).

The large numbers that reports such as the one quoted above bandy about conceal more subtle issues three of which I shall highlight, the first two in passing, as time constrains. Firstly, at primary level parity with regard to gender in enrolment is

slowly improving across the region but is still less than .90 (and sometimes much less) to the detriment of girls. Secondly there are greater differences within countries in regard to schooling than there are between.

Barrett (2005; 48) describes schools in Tanzania;

> *There are still a considerable number of lessons taught in wattle and daub buildings and a shortage of desks means that in most schools visited some of the pupils are obliged to sit on the floor. In 2001, Universal Primary Education was phased in with the abolition of school fees and the compulsory enrolment of all seven-year-olds in Year One. Consequently, class size was the most immediate concern of teachers of the first two years and in town schools, where already enrolment is very close to universal, class sizes of between 80 and 100 pupils were common.*

On the other hand a search on 'Google Image' for Tanzanian Schools made in the preparation for this paper turned up the odd school (though probably not Government) with computers, tiled floors and desks a plenty.

Finally, the issue that this paper will concentrate on is that of teacher education. Meeting the Education for All goals presents tremendous challenges. Latest figures show over 72 million children across the world out of school and for all children to be attending primary school by 2015 will require an additional 10.3 million additional teachers (UNESCO 2010). Across Africa the need is for 4 million additional teachers. Obviously many more teachers are needed (average primary class size in SSA is roughly 1:40 and this conceals enormous differences between schools - note the quote above). Somewhat surprisingly the role of the teacher and the education of teachers to support EFA in SSA seemed to have slipped policy makers by for a number of years. According to Moon (2007) this was only redressed in 2005 when the Commission for Africa (2005; 186)) highlighted the necessity for 'substantial investment in teacher recruitment… and professional development.' Subsequently teachers have been a focus in the yearly EFA reports.

According to UNESCO (op cit) the number of teachers working in primary schools has increased by 2.5 million since 1999 (29%) but a further 1.6 at least will be needed if EFA is to become a reality (and probably a lot more taking into account teacher wastage through retirement, career switching and death – HIV AIDS playing a major

contributory role). In many countries the numbers of trained primary school teachers are less than 50% (e.g. Nigeria, Chad, Madagascar). Furthermore, as Moon (op cit) has identified this need to rapidly expand the teacher body has led to a situation where the great majority of the teacher education budget is spent on a small percentage of the new teachers pursuing a traditional 3 or 4 year pre service programme. The much larger percentage of untrained or trained-in-post teachers receive a disproportionately smaller part of the training budget. Class sizes are increasing and teacher quality (as measured by training) is decreasing. He goes on to specify three areas of reform that need to be considered if teachers are to be better equipped to meet the challenges of EFA.

The first is the need to reform the curriculum for teacher education so that it focuses on core classroom skills and pedagogies that are more effective in raising achievement. Secondly the time frame needed for teacher education needs rethinking. As described above, a model where a few teachers spend four years in relatively expensive pre service training is not viable in the light of the current crisis. Development of teachers needs to become much more school based. The third is the need to exploit technologies. Life for many in Africa has already been revolutionised by cellular phones (Gray 2006). The digital divide is being bridged. At a TESSA workshop that I attended in Lusaka I felt a little fraudulent trying to persuade a polite audience of this in a hotel with no computers, no phone line and intermittent electricity. Fortunately the following session was run by an NGO who have already set up 30 schools across Zambia with broad band access and were looking to expand to a 100 (http://www.ischool.zm/). It is into this triple gap that the Teacher Education in sub-Saharan Africa (TESSA) consortium is taking a step.

I will briefly describe the TESSA model and the work that it has been involved in to date including some personal experiences of working for the consortium. I suggest that the reader / listener considers the model in the light of a framework developed by Stephens (2007; 61) for improving the quality of educational research in developing countries. It might be a useful model to use in a deeper evaluation but

time does not allow this to any extent in this paper. I slightly amend his wording (indicated in italics - with apologies!) to reflect teacher education:

1. the identification of a *teacher education* methodology which is culture-appropriate and suitable for the task;
2. the development of existing methods and techniques which come out of or are sensitive to the cultural arena;
3. a better understating of the role of the *teacher – taught* relationship in the cultural setting;
4. the generation of practical solutions to a number of subsidiary problems concerned with such things as the training of counterparts, the support of grass roots *educational initiatives* and the promotion of indigenous *teacher education research.*

The consortium describes itself (TESSA 2007) as a programme involved in research and development to create open education resources (OER's) and course design guidance for teachers and teacher educators in SSA. It aims to do this by producing a flexible resource that is aimed at local school based training (though it should be noted that there is currently a lot of use of various parts of the package in initial teacher education programmes at universities and colleges) and that this production is done by a mixture of African and international expertise alongside the ultimate users. The content is open and free, it is versioned to suit each country and can be further versioned to suit more local needs. It can be used as a stand alone package or parts can be incorporated into existing programmes. It can be used as a paper based resource or through various ICT modes.

This is organised in a website http://www.tessafrica.net that allows easy access to versions for different countries (there are currently 9 involved in SSA with versions in English, Arabic, French and KiSwahili) as well as a pan African version. There are 5 curriculum areas (literacy, numeracy, social studies and arts, life skills, and science). Each is sub-divided into three modules each of which has 5 sections which are further subdivided into suggestions for activities around particular themes. In all, 750 study units. All material has been deliberately 'versioned' to suit the local context through a thorough process of research, writing and editing. This has not been

without its own problems. Whilst doing a final edit of the Rwanda materials I noticed that in the Life Skills area in section exploring the negotiation of tribal conflict there was not a single mention of the 1994 genocide (to my chagrin an example of from Botswana – one of the most peaceful countries on the continent was used!). The issue of keeping to strict deadlines imposed by external funders was also an ongoing cause for consideration. These are difficult issues to negotiate.

The website also offers; a Teacher Educator Guidance pack to support the integration and use of the materials, audio clips, and a set of key resources giving further support for such themes as 'organising group work' and 'working with large classes'. Throughout, users are prompted and given guidance to reflect on their own practice and experiences and to work collaboratively with others and the wider community.

Materials and experiences can easily be shared. Wolfenden (undated; 4) describes the development of the website as creating a series of creative tensions;

> • *global v local:* The creation of an online environment that has relevance across the region but is also locally appropriate.
> • *web v print:* Ensuring that materials were attractive and appropriate in online and printed formats.
> • *immediate use v adaptation:* Supporting the immediate use of the materials in classrooms and the adapt and share philosophy of OERs.

Connolly, Wilson and Wolfenden (2007) provide a detailed explanation of the material structure and localisation process. The TESSA consortium is currently based at the Open University, UK but the long term aim is to move its base to one of the 10 African partner countries.

TESSA materials are used in a variety of ways both within and between countries. A few examples: In Nigeria, the National Teachers' Institute plan to use TESSA approaches and materials in their certificate programme with over 100,000 student teachers as well as in continuous professional development programmes with over 145,000 teachers; Ghana is similarly using the materials on large scale courses though conversely there are examples of teachers who have had no direct input from TESSA adopting the materials as part of a 'TESSA club' to work on improving

their own practice; In the case of Zambia the University of Zambia is adapting the materials to use with existing courses and as a basis for new courses (TESSA 2009 op cit), colleges of education are integrating parts of the materials into new distance learning modules and a large NGO (Zambian Open Community Schools – ZOCS) involved in training community based teachers uses the materials extensively.

TESSA in Zambia

The empirical basis for this paper is admittedly slight and is based solely on initial responses via questionnaires from lecturers and others to the materials (February 2009) as well as follow up interviews with some of those personnel after intervals of 9 months and a year. My own personal experience of working in SSA (Botswana) convinces me that at the very minimum TESSA provides an excellent set of locally and culturally relevant resources, the nature of which have been sorely lacking for African teachers. (Delegates at this conference from the North might consider using them on courses regarding pedagogy, global citizenship, ICT in education, comparative studies etc.)

In the case of UNZA lecturers being introduced to the materials (February 2009);

	Not at all useful	Just a little useful	Useful	Very useful
From your knowledge so far of TESSSA materials, potentially how useful do you think they might be to you as a professional?	-	1	9	9
From your knowledge so far of TESSSA materials, potentially how useful do you think they might be to your students?	-	1	7	11

And the comments below typify the qualitative response to the materials;

> *To our coordinators these (TESSA materials) are very useful as they would enrich our modules very much.*

> *Might help them (students) take more responsibility for their own learning*

TESSA showed... varieties of materials that one can use to arouse interest in the learners.

A summary of the interviews carried out with 10 of the UNZA lecturers nine months after the initial introduction revealed the following main themes;

- Lecturers are impressed by the TESSA materials and the potential benefits of using them as well as an appreciation of the fact that materials reflect the local context, and some expressed a similar reaction from their students.
- There is some evidence of some materials being introduced into the content of new modules. According to the staff a lot of this is in the Teaching Methods sections of the course and uses ideas from the Key Resources; role plays, discussion groups, brainstorming activities all seemed to be popular and were recognised as valid means of engaging a wider range of student participation than has previously existed.
- A number of lecturers are using ideas from TESSA materials in their existing courses. There was little 'concrete' evidence as the modules have not been re written so material does not appear in print, but a number of lecturers talked about the use of the sort of activities discussed above and were able to give clear examples of such (role playing HIV AIDS stigmitisation / group work to produce lesson plans where students are asked to incorporate TESSA style activities / debates / games to support PE and mathematics / the production of Art resources to support cross-curricula themes / imaginative use of the materials for student assessment purposes on teaching practice).
- It is difficult to get precise figures but from the feedback given in these interviews at least 117 students were exposed to the TESSA materials in one form or another over the year, and a small number of those were also observed using some of the activities / methods whilst on teaching practice.
- The majority of staff expressed frustration at not being able to access the materials. Some seemed vague when asked whether they still had CDs of the Zambian materials that they had been given. A number expressed the desire for more of the materials in paper form. In a discussion with the TESSA coordinator a couple of factors that influence this perception of lack of access were identified: 1) there is a need for staff to have had more time to simply explore the materials and 2) the sheer amount of initiatives that staff have to deal with as well as their normal teaching workload puts a great strain on time.

The clearest account of the uptake and use of TESSA materials came from the NGO Zambian Open Community Schools, a community based schools programme. Within a few weeks of

being introduced to the materials the training coordinator had applied for a small grant from TESSA to support the reproduction of TESSA materials and then used them to support staff development in trainings at Eastern, Western and Lusaka Districts where the materials were positively received by the trainers and teachers. The feedback of these participants – and the training coordinator who works at both a national and an international level - indicated a strong appreciation of the localised nature of the resources, the recognition of the types of contexts that the materials seek to support teachers in, and the flexibility of use. They had even spotted the potential to customise the materials yet further.

So to revisit Stephens' (adapted) framework there at least appears to be encouraging evidence for the fulfilment of the first two principles

1. the identification of a *teacher education* methodology which is culture- appropriate and suitable for the task;
2. the development of existing methods and techniques which come out of or are sensitive to the cultural arena;

The third, at least in the Zambian context, remains under-investigated,

3. a better understating of the role of the *teacher – taught* relationship in the cultural setting;

but TESSA activities might be a way of engaging the teacher to actively consider this.

With regard to the fourth;

4. the generation of practical solutions to a number of subsidiary problems concerned with such things as the training of counterparts, the support of grass roots *educational initiatives* and the promotion of indigenous *teacher education research*

maybe the ZOCS experience offers the best opportunities for its fulfilment. And to return to our point of departure, the herd of cattle and their attendant herdboys, perhaps it is organisations like ZOCS that offer them the best route into education and materials such as TESSA can provide some good grazing along the way.

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