

Leadership support for school-based professional development for primary school teachers: the use of TESSA OERs in schools in Kenya

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Four million extra teachers are needed across Sub-Saharan Africa by 2015 if the Millennium Development Goal of universal access to primary education (UPE) is to be met (COMED/ADEA 2011). In addition there continues to be urgent need to improve the quality of teaching of existing teachers in primary classrooms. There is not sufficient capacity to meet those demands through teacher training or continuous professional development (CPD) courses at Higher Education Institutions (HEI)s and teacher training colleges. In many countries in Africa, particularly but not exclusively in the rural areas, in-service training or CPD outside the school is difficult for teachers to access or to finance. In any case, the school itself has increasing importance as the locus of professional development for teachers. School-based CPD can focus directly on teaching practices and the practicalities of improving the quality of teaching. There is a substantial literature on the benefits to sustainability and long-term change of professional development which arises directly out of classroom practice. The Open Educational Resources (OERs) created by the Teacher Education in Sub-Saharan Africa (TESSA) community have been developed to help teachers improve practice, and they lend themselves to this type of school-based professional development. However, leadership is critically important for this kind of school-based teacher education. Without the direct and strategic support of school leaders, it is difficult to organise and sustain this kind of CPD. This paper explores the ways in which Egerton University, Kenya, is working directly with headteachers, deputy headteachers, subject panel heads and teachers in collaborating schools to encourage them in their use of school-based professional development using the TESSA OERs. This paper conceptualises and discusses the kinds of leadership practices which are in evidence and which are helpful to increasing and sustaining this kind of school-led teacher education.

Introduction

In primary schools across Sub-Saharan Africa, teachers need support to develop their own skills and to improve the quality of teaching in the classroom. With the rise in numbers of children attending primary school across the region as a result of UPE and EFA, countries have struggled to cope with the extra numbers of teachers needed to accommodate them. A shortage of teachers, and large classes, particularly in the early years of primary school combine with lack of classroom resources for teaching and learning (e.g. Glennerster et al 2011). Estimates of the proportion of unqualified primary schoolteachers vary, (where 'unqualified' is defined as 'not holding the certification required in the country to be considered a qualified teacher' e.g. Mulkeen 2010), but between one third and one half of the region's primary schoolteachers may be unqualified on that basis (Anamuah-Mensah et al 2009). Shortages of qualified teachers leads to the widespread use of unqualified teachers (e.g. Mulkeen 2010), particularly at primary school level, as shortages at secondary level are often filled by qualified primary teachers. Further,

in some countries, increases in the proportion of qualified teachers have been as a result of the lowering of the standard of qualification (UNESCO 2007b). Pupil-teacher ratio (PTR) at primary level averages 45:1 across SSA, the highest of all regions in the world, and this figure increased by 8.2% 1999-2005 (UNESCO 2007a). The challenge is to improve the quality of teaching in classrooms which are overcrowded and under-resourced.

Current forms of teacher education cannot cope with the demand and the attrition rate of those leaving the profession. Current programmes are skewed towards initial teacher education (ITE) to the neglect of the needs of underqualified or less-qualified teachers already working in schools. Such ITE programmes, lengthy and campus-based are supplying only a 'modest inflow' of highly qualified teachers. To exacerbate this, part-time in-service programmes mimic the organisation of initial teacher-training, so that teachers are in general not given credit for their existing experience but are expected to start training as if from the beginning (Wolfenden 2011). Furthermore, despite there being, in many countries, lower entry qualifications for the in-service 'upgrading' of qualifications, it is suggested that 10% of current teachers would not have the required entry qualifications, and additionally that the modest scale of in-service programmes means that it could take between 10 years and 50 years to upgrade the qualifications of all untrained teachers (Mulkeen 2010).

In-service programmes often are either officially or de facto distance education, so that teachers can obtain teacher certification while working in school. However assessment of teaching practice from the teaching provider can be the weakest parts of the programme with, in some programmes, no observation or assessment of practice at all (Mattson 2006). In Kenya for example, a significant number of P1 teachers, who in many areas make up the majority of teachers in a primary school, have taken the 2 year Primary Teachers Certificate through a programme of distance learning and residentials during school holidays. Such an approach to acquiring qualifications in-service can at best combine the advantages of acquiring an academic underpinning to their practical experience of teaching; at worst there can be a disjuncture between the two, with the theory of subject knowledge and pedagogy bearing little if any resemblance to the practicalities of the classroom. Mattson (2006) distinguishes between distance education programmes and what she calls 'field-based' models of teacher education, with the potential for local support for school-based training – which might include for example, support from a local HEI or teacher training college, school-based mentors, Teacher Resource Centre tutors, visiting tutors, and/or the leadership of teacher education by headteachers.

The typical primary school

A typical primary school in Africa may have a shortage of teachers. For example Wachira et al (2012) suggest that 40,000 extra primary teachers were needed in Kenya in 2009. Such a school may include a significant proportion of unqualified or underqualified teachers whose opportunities of improving their teaching skills and

the quality of their classroom pedagogy can really only come from professional development within the school itself. In this scenario a teacher who has had full-time initial teacher education (ITE) will be a minority figure deployed to the school, perhaps when new to the profession. Such a teacher will have been trained in subject knowledge and theoretical pedagogy but is less likely to have had extensive training in the practicalities of classroom practice, of working with large classes, or of teaching in schools with very low levels of resources.

Primary school headteachers will also often be unqualified – in the sense of lacking either a professional qualification in headship or a degree (Bush and Oduro 2006). In some national contexts primary headteachers face the conundrum that because they do not have a first degree, they are not eligible for postgraduate educational administration courses (Onguko et al 2012). For example, in a recent study which involved 328 headteachers across schools in Kenya 38.7% of headteachers were qualified with P1 and only 7% were degree holders (Wasanga et al 2010). Headteachers in Africa may have substantial teaching experience, as this is often the background to promotion to headship (Oduro and MacBeath 2003, Mulkeen 2010) but they may also be political appointments or appointed without having applied (Onguko et al 2012). Headteachers thus may lack what, for example Bush and Oduro (2006) refer to as 'instructional leadership': leadership in/of teaching, curriculum, pedagogy.

For primary schools there is typically strong centralised bureaucratic control in the deployment/employment of headteachers and teachers and a prescribed national curriculum (Glennerster et al 2011), with the rationale that this assures standards and provides a framework for teaching and learning which is adhered to and understood. Such top-down control is also exercised within schools which operate within tight hierarchical structures and with headteachers and other leadership figures (e.g. deputy headteachers, senior teachers subject panel heads) involved in day to day administrative and managerial matters. Pressure exerted from above constrains the time for the longer-term supervision, mentoring and leading the professional development of their teachers. A 2009 study of headteacher skills in secondary schools in Uganda for example (DeJaehgere et al 2009) found that school size affected the extent to which headteachers were directly involved in leading on learning, with headteachers in smaller schools likelier to have time to discuss lesson plans and classroom strategies. There is pressure on primary schools to improve the quality of teaching and learning in ways measured by examination results or numbers of their children moving onto particular kinds of schools. For example, in Kenya results in the Kenya Certificate of Primary Education (KCPE) determine whether children can enter national, county or district secondary schools and this largely determines their subsequent chances of entry to tertiary education (Oketch and Somerset 2010).

Concurrent with this centralization however, there can also be significant decentralisation in matters such as the monitoring and evaluation of teaching and professional development of school staff, which are often organised and evaluated at district or local level. This may mean very unequal provision and standards across a country. Mulkeen in her 2010 study for example, reports that on average schools in the 8 countries included in the study were inspected less than once a

year. Bush and Oduro (2006, p, 370) refer to headteachers “enjoy[ing] little support from local or regional bureaucracy”. Mattson (2006) reports regional and district office mainly involved in regulation and administration, with district officials “playing a mostly supervisory role in relation to teachers” (Mattson 2006, p, 10). Oduro and MacBeath (2003) report that headteachers in Ghana, especially in the rural areas, find themselves stretched by both teaching and supervising teaching, with little external support. Onderi and Croll (2008) report on in-service training in Kenya being funded by the school and the individual teacher rather than by local or national government. The school is pressured to respond to district and national guidelines in terms of teaching to the curriculum and examination performance, but with limited resources to improve the quality of teaching among its own staff.

CPD in schools

Continuous professional development (CPD) is increasingly accepted as key to developing the skills of teachers, keeping them abreast of new curricula and refreshing knowledge (e.g. Mulkeen 2010). Definitions of CPD vary: in some cases it is used interchangeably with ‘in-service training’ where teachers take short courses or attend workshops outside the school (e.g. Onderi and Croll 2008); or the definition includes the much longer term upgrading of qualifications by teachers. For some (e.g. Hardman et al 2011) there is a worrying conflation between CPD and upgrading, as upgrading involves a focus on improving academic qualification rather than pedagogic skills.

In this paper our interest is on CPD within the school and we use the term CPD to focus on that more informal, more frequent and more regular ‘on the job’ professional development *in school* which can occur as part of the everyday working lives of teachers. A key premise in this paper is that it is a long-term, coordinated and sustained focus on CPD which is key to improving the quality of classroom pedagogy. A further premise is that improvement in quality entails new teaching practices becoming *embedded* in teachers’ approaches to their pedagogy: that they become an everyday part of what a teacher does.

The need for the CPD for teachers is clear.

Kenya may need to adopt specific pedagogical techniques to address problems common in their schools such as large class sizes, varied educational levels and family backgrounds, irregular student attendance and weaker motivated, poorly trained teachers. Current teaching methods are failing very large numbers of children who attend school regularly but learn very little. The curricula may not be adapted to local challenges and needs. Too often it presumes competencies that many of the first generation learners do not have ... The central questions therefore are how to devise pedagogies adapted to students’ needs and how to get teachers to implement them. (Glennister et al 2011 p, 40-41).

The headteachers' role

In this paper we are arguing that the headteacher is key to the success of school-based CPD, in organising and supporting it. It may not be that in every case the headteacher leads on the professional development of the staff - though this would have obvious benefits for both the teachers and the headteacher - but the support of the headteacher is needed for the success of any initiative. This support might include the practicalities of setting aside time for staff meetings which focus on CPD, approving the use of rooms, providing funding for resources, and so on: altogether making CPD an important part of 'what the school does'. In a study of secondary school headteachers in Kenya 7 out of 10 saw the development of teaching methods and subject knowledge as key in-service training needs for their teachers and overwhelmingly the study found that there are major financial constraints on this when such in-service training involves teachers going out of school (Onderi and Croll 2008),

A typical challenge is that headteachers may not feel confident in organising and arranging in-school professional development (Onderi and Croll 2008). Onguko et al (2012) in a study in Tanzania report on the general lack of leadership preparation for headteachers. with no specific training given, and the informal experience in previous posts of working with a headteacher the best preparation offered.

The reports of the seven school leaders suggest the dominance of an informal apprenticeship style of professional learning. It seems that it is up to the headteacher and teachers in school to determine how to learn from each other and how to support one another (Onguko et al 2012 p, 99)

To enquire in detail what helps headteachers in their own professional development is something outside the scope of this paper and is worthy of separate consideration. However we would want to suggest here in general terms that there are benefits in school leaders leading on learning and that there is not always professional development in place for this.

We wish to take up the idea of headteachers supporting the continuous professional development of teachers in their schools in relation to an informal network which has developed between Egerton University, Kenya and local schools. We do this in the context of the Teacher Education in Sub-Saharan Africa (TESSA), programme drawing in particular on insights gained from a Hewlett Foundation-funded TESSA research project in which we are investigating the use of OERs in teaching and teacher education in terms of the complex relationships of their use in classroom, school and HEI. We are also in this paper drawing on research material and general insight from other projects within the TESSA programme

TESSA OERs are a toolkit of pedagogical resources for teachers, designed collaboratively by universities and teacher education colleges across Africa, to develop practical teaching skills in the classroom. They have been created to map onto national primary curricula, to provide innovative and active teaching and learning, and to deal with the challenges of teaching in schools with large classes and few resources. They are made available on the TESSA website

(<http://www.tessafrica.net/>) for download, on CDs, and on university intranets. However they are mostly used in Africa in paper copies.

CPD development in schools: Egerton University

Egerton University is one of seven public universities in Kenya and runs its Faculty of Education from the Njoro campus in the Rift Valley. Egerton has been a member of the TESSA community since its inception in 2005, helped to develop the TESSA OERs for use with student teachers on its courses, and to version them specifically for Kenya. The Faculty of Education uses the OERs in several of its programmes. Egerton draws many of its Education students from the local area, particularly those who are engaged in in-service programmes to upgrade teaching qualifications. It has also developed strong relationships with a wide network of local primary schools, (where 'local' is roughly defined as 'within 300 kilometres'), for example in situations with schools which host student-teachers each year for their teaching practice on pre-service teacher education programmes. Members of the Faculty visit the schools regularly to observe teaching practice as part of the assessment of the teaching qualification. As well, the districts around the Egerton campus have formal headteacher committees which meet regularly. Strong relationships between Egerton and the local District Education Offices are also important. Graduates of Egerton's primary B.Ed primary programme (which uses the TESSA OERs) have in one or two cases become Teacher Advisory Centre (TAC) Tutors who lead on professional development in schools in a district. And of course Egerton graduates working in local schools are in a position not only to use TESSA OERs in their own classrooms but to help influence fellow teachers in the school to do likewise.

At some point a critical mass of interest has been reached, and Egerton University and the local districts have over the past two or three years begun to lead workshops for local headteachers, deputy headteachers and subject panel heads in the use of TESSA OERs for CPD in the schools. For example in February 2011, Egerton and the Molo district ran a workshop on TESSA OERs for 50 Science subject panel heads; in October 2011, Njoro district organized a workshop for 90 primary school headteachers on the use of TESSA OERs. In August 2011 a more wide-ranging workshop was held, involving District Education Officers and TAC tutors from 5 districts as well as the Director of Education from the Rift Valley and representative of the Ministry of Education. The interest of all involved is to find workable methods of supporting teachers in the classroom and improving the quality of teaching and learning: that is to provide practical and inexpensive CPD for those working in their schools.

The reach of OERs for CPD in schools

We illustrate the potential for in-school CPD using TESSA OERs with the results of some small-scale data gathering carried out recently by Egerton University as part

of the Hewlett-funded TESSA research project. The surveys have been undertaken in local schools which are using TESSA OERs, and the purpose of using this data here is principally to demonstrate how many teachers could be reached, how the use of these OERs could spread, and what the wider potential might be, given an appropriate catalyst.

In one sample survey of headteachers carried out by Egerton in 2012, of 11 local primary schools where the headteachers are actively supporting the use of TESSA OERs, there is an indication in the following table of how many teachers in their schools are using this form of CPD.

(N.B. The information in the table just below is not intended to imply that any particular proportion of teachers in a school are using TESSA OERs, nor is it intended to suggest that, say, a teacher in School 1 using the TESSA Literacy OERs is a different teacher to the one in School 1 using the TESSA numeracy OERs.)

No of teachers using TESSA OERs across 11 primary schools sampled by Egerton University 2012

Schools \ Modules	1	2	3	4	5	6	7	8	9	10	11	Total
Numeracy	19	6	5	-	37	4	8	15	8	20	5	127
Literacy	38	6	8	-	37	3	10	16	12	20	8	158
Science	19	5	5	6	37	6	7	15	8	20	7	135
Social Studies/ Arts	19	5	6	-	37	6	11	14	7	20	6	134
Life skills	19	17	10	6	37	5	19	17	10	20	6	166

One reading of the data in the table above is of the significant number of teachers in any one school who are benefiting from this kind of CPD, for example in School 1: 19 teachers, 38 teachers, 19 teachers, 19 teachers, 19 teachers using the Numeracy, Literacy, Science, Social Studies/Arts and Life Skills respectively. It would seem important with the schools in this survey that a certain enthusiasm for using the TESSA OERs has developed within the school: their use by significant numbers of teachers depends on their being seen within the school to address needs, to work, to make a difference in the classroom. We could speculate that such enthusiasm might be generated by Egerton graduates, by the headteachers seeing effects on classroom practice, by subject panel heads seeing how the OERs can assist teachers within a department and so on. Many factors of course will affect how strong that enthusiasm is and how long it lasts, and significant

improvement in the quality of teaching will only come about if changes in practice last and becomes embedded. But it is interesting to consider how many teachers this kind of CPD could benefit if the level of use suggested in the table above could be replicated across many more primary schools.

The 11 headteachers in this same survey were also asked the open question 'how do you rate effectiveness/usefulness of TESSA materials'?

Headteachers' rating of effects of TESSA OERs on teachers and students

For teachers	Responses (Frequency)
• Teaching has become enjoyable and pupil oriented	05
• Good and able to improve performance	06
General	
• Improved pedagogy (delivery of curriculum)	11
• Very involving programme	01
• Many learning displayed (create good learning environment)	11
• Helped to improve mean score in all subjects	08
Pupils	
• Motivating and involving them in active learning	11

Their responses are grouped in the table above and as can be seen, the headteachers are very positive, and particularly value the improving pedagogy, the motivation of the students and the creation of a good learning environment. While it might perhaps be expected that headteachers who have actively involved their schools in using TESSA OERs would respond positively to questions about their use, it is interesting, given the heavy pressures on headteachers to focus on finance, administration and on student performance that their responses focus significantly on teaching and learning.

Teachers' responses to the use of TESSA OERs

In another sample survey conducted by Egerton University in 2012, of 35 teachers in schools where TESSA OERs are used, the teachers were asked about their use. In the first table below, teachers were asked about the dissemination of TESSA OERs (N.B. teachers could tick more than one box)

How TESSA OERs are shared

Sharing of TESSA Materials with Other Teachers : within School	
Responses	Frequency
• Staff meeting/seminars	23
• Subject panel	15
• Class conferences	07
• Common preparation of learning materials	12

As can be seen from the table above, dissemination at staff meetings and departmental meetings were the most frequent ways the OERs were being shared. If these findings were replicated on a wider scale, this would reinforce judgements on the extent to which in-school CPD and the development of pedagogy need to take account of the structures and hierarchies which exist in schools and work with school and subject leaders. (That is not to say that there is no potential for more egalitarian professional development: the numbers shown here, for example, who are involved in the 'common preparation of learning materials' might suggest that there are interesting avenues in peer-led professional development to pursue).

In the same survey, the 35 teachers were asked whether and how their headteachers create a positive and supportive school culture and if so what would be some examples of this.

Headteachers and a supportive school culture

Headteachers Creates Positive and Supportive School Culture	
Responses	Frequency
• Yes	35
• No	0

How?	
Responses	Frequency
• Being a role model (leads by example) by using TESSA materials	26
• Provided needed materials	19
• Motivating teachers to use TESSA materials	15
• Understanding and assisting teachers with problem(s)	03
• Encourage participatory culture	17

It is interesting here that 26 out of the 35 teachers describe their headteachers as what might be termed 'lead learners', role modeling the use of the TESSA OERs. Also significant is combination of practical and motivational support given by the headteachers in this sample; generating enthusiasm for improving pedagogy and providing financial and material resources for teachers to actually engage in this

development. And the culture of the school – the school’s own accepted ways of doing and being - affects teachers’ own attitudes to changing their practices

Leadership support for the embedding of in-school CPD

What has been described above of course is a small and selective snapshot. And this is not to overlook the challenges of embedding new practices in schools. In other responses in the Egerton surveys of headteachers and teachers already discussed above, the majority of teachers (30/35) remain concerned about finding the time to incorporate new/different approaches into their lessons. Almost half of them would like more training in the use of TESSA OERs and 24/35 would simply like more copies of the TESSA materials. For the headteachers, financial support for CPD is an overwhelming concern. And both teachers and headteachers point to lack of computers and/or electricity as a significant challenge.

The challenges just mentioned will be familiar. But it is a measure of resilience and of a professional enthusiasm among teachers, headteachers and across schools that those involved in education in challenging circumstances nevertheless are engaged in change and development. To summarise the discussion of the data which Egerton have collected, there is interest and enthusiasm among headteachers and other school leaders in the widespread take-up among their staff of materials and ideas which will improve the quality of teaching. Interest can be generated for example by one or two teachers using new materials, but the explicit support of the headteacher creates the conditions in the school for new approaches to gain widespread purchase. Our purpose in examining this small amount of data is to begin to explore what would be needed to embed within any one school a sustainable form of in-school CPD, and how, with leadership support, an enthusiasm for improving pedagogy becomes ‘what the school does’, so that new teaching practices become embedded in all teachers’ own pedagogy.

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