

Curriculum planning and reform in sub-Saharan Africa

Anil Kanjee, Yusuf Sayed and Diana Rodriguez

Tshwane University of Technology, University of Sussex, and Ministry of Education, Colombia

Abstract

Using exemplars from selected countries in sub-Saharan Africa, this article considers trends in curriculum reform and the related policy challenges. Particular attention is paid to aspects of the curriculum that affect quality. These include aims and objectives, moves towards outcomes-based education, new areas of concentration in response to social changes, the balance between subject-disciplinary- and learning-area-based approaches, the challenges of effective pedagogy, the move towards assessment for learning, curricular interventions that affect inclusion and equity positively, and the centrality of teachers in improving learning.

Introduction

This article relates debates on the curriculum, learning and educational quality to current realities in sub-Saharan African educational systems. How can quality education be assured in stringent African conditions? In particular, how can basic education, which extends mass education beyond primary level, be made a worthwhile experience in conditions of economic austerity and skills shortage? Of what should the school curriculum be composed in such circumstances? How should discipline-based subjects and learning areas relate to one other? How can new areas of knowledge be integrated without overloading and unbalancing the curriculum and perhaps menacing fundamental requirements for literacy and numeracy? How can assessment at different levels be used formatively as well as summatively? These questions all point to the issue of pedagogy and teachers and the article concludes by arguing for a focus on teachers as the lynchpin of any educational system.

Kanjee, A, Sayed Y and Rodriguez, D. Curriculum planning and reform in sub Saharan Africa. *Southern African Review of Education*, 16(1): 83 96.

Curriculum, learning and educational quality

Good quality is arguably the most important aspect of any education system. However, with its meaning being relative to educational aims, defining good quality education is difficult. Alexander (2008) points to the need to clarify the confusion around the meaning of 'quality'. He distinguishes between the usage of the term as a noun and as an adjective and argues that certain discourses on quality focus on it being prescriptive (a desirable level of quality) rather than descriptive (what constitutes quality). In the descriptive sense, quality implies characteristics or attributes. The question, however, is which characteristics or qualities? Sayed (2008) reviews different discourses of quality, including the human capital, the right and the social justice approaches.

Given the various debates about quality, this article uses the definition agreed upon at the World Education Forum (WEF) in Dakar in 2000: that quality in education refers to excellence in teaching and learning so that recognised and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills (Dakar Framework for Action 2000). The notion of quality education, therefore, requires an understanding of learning, which is the fundamental aim of any effort towards educational reform. Learning is an active process in which self-monitoring and self-regulation are central; prior learning can help or hinder new learning and the context in which it takes place is important. It is both an individual and a social process and is assisted, or hindered, by others, notably peers and teachers. In this context, formative feedback, defined as information communicated to the student that is intended to modify the student's thinking or behaviour for the purpose of improving learning, is important in enabling students to improve their work, motivation and sense of self (Schute 2007).

Building on the WEF definition of quality, this paper identifies three important conditions for quality education. The first is that physical access to education for all should be promoted and enhanced. Not only is this a human right and a matter of equity, but from an instrumental perspective society requires the development of the broadest possible pool of talent. Physical access does not guarantee quality education, but it is a precondition for it. Secondly, physical access must extend beyond primary to secondary and higher education. Thirdly, physical access to education must be accompanied by improvement in the quality of the learning experience. In addition to these three conditions, equity should also be a consideration.

Curriculum, in the context of this article, is not limited to textbooks alone. It includes what people are expected to learn, how and how much they learn, how learning is measured, what students bring to learning, how the school day is organised, what occurs between lessons and during breaks, and what takes place outside the school.

As UNESCO's 2005 Global Monitoring Report (GMR), *The Quality Imperative*, shows, the starting point for good quality is to place students at the centre of the educational process. The reality is that many students leave formal schooling without basic

minimum skills. In South Africa, for example, according to international assessment tests, approximately 65% of school leavers are functionally illiterate. According to the TIMSS 2003 study (quoted in Hanushek & Wößmann 2007), only 29% of South African Grade 8 students were able to answer a basic subtraction question correctly; random guessing would have yielded 25% correct answers. The quality of education is critical to the skills with which people leave school and what they are able to do when they enter the formal or informal labour market. For the poor, quality matters even more than the number of years of schooling. The relatively wealthy have access to social and cultural capital, which gives them advantages and can compensate for poor quality schooling.

Improving quality involves six interrelated factors:

- 1. Creating inclusive and responsive learning environments so that schools are safe and healthy learning spaces free from discrimination
- 2. Ensuring effective teaching and learning. This includes ensuring instruction in the home language and the teaching of 'values', a critical curriculum component which provides a broad-based understanding of living and working as critical and active citizens (Sayed 2008). However, it is important to ask whose values are being affirmed and whose voices are being heard and whose not.
- 3. Effective learning resources. These are vital to quality learning. However, for many students in developing countries the reality is an acute shortage of good quality textbooks, adequate classrooms and other resources.
- 4. Qualified, motivated and committed teachers. As the GMR (UNESCO 2005) shows, research consistently points to teachers as the most important determinant of effective learning. However, the characteristics of good teachers and the incentives needed for them to perform effectively are less clear.
- 5. Robust systems to monitor and assess student performance. Such systems deepen understanding of which policies work and which do not, and of where change is most needed.
- 6. Improving institutional capacity. This includes accountability. The more schools are held accountable, the more effective they can be. The degree of support for schools and the types of incentive needed to ensure that they focus on and promote effective learning are also crucial. Incentives focusing on learning are generally the most effective.

In the context of this broad agenda on quality, we now turn to some specific issues of curriculum reform in sub-Saharan Africa.

Trends in curriculum reform

In this section, we relate the critical issues of quality in education, identified above, to policy and practice in various parts of Africa.

Extended primary education: Towards basic education

There is a trend in a number of countries towards locating lower secondary schooling

in the basic educational cycle. Kenya, for example, has a basic eight-year education cycle followed by a four-year secondary cycle, while in South Africa and Zambia a nine-year basic cycle is followed by three years of secondary schooling, referred to as further education. In Zambia the basic education cycle is divided into lower basic (Grades 1 to 4), middle basic (Grades 5 to 7) and upper basic (Grades 8 to 9).

Modifying the duration of the basic education cycle brings with it a number of challenges. Firstly, policymakers and other education stakeholders must choose between expanding existing learning areas for an additional two years or implementing subject disciplines at primary level. They must also decide which subjects are to stay in terms of the new curriculum aims. Secondly, the state must evaluate its capacity to provide new entrants with good quality infrastructure and updated learning materials, including textbooks and teachers' classroom materials. Thirdly, if two additional years are added to the basic education cycle, teachers will have to be (re)trained to teach subject areas or disciplines and, where necessary, relocated to make the system efficient and sustainable. Finally, change will have an effect on the timing of national assessments.

Core and optional subjects

What is to be taught in this expanding educational world? Choosing core subjects or areas that will constitute the curriculum poses a number of challenges: coherence with goals previously set; balancing the development of cognition, skills and values; realism about material constraints to implementation; and responding to the human and economic needs of local and national communities.

In order to select core curriculum subjects or areas, a distinction between 'what is basic and absolutely necessary and what is basic and desirable' (International Bureau of Education 2006: 2) must be made. What is 'absolutely necessary' involves core learning 'essential to fostering the personal and social development of the student allowing them to carry out their life projects and facilitating social inclusion' (ibid.: 2). The GMR defines core subjects as those directly contributing to literacy and numeracy (UNESCO 2005).

In Zambia core subjects and areas vary across levels in the country's current basic education cycle, with mathematics, English, environmental science and Zambian languages remaining central until upper primary level. In contrast with Zambia's language policy, in Ghana indigenous languages are not used in the curriculum and English, mathematics, citizenship education and natural science are the core subjects (Ministry of Education, Science and Sports 2007).

These instances indicate that there is no single blueprint for deciding which subjects or areas should be core or optional. However, in shaping well-rounded citizens and promoting good quality education, curricula must guarantee all students solid skills

and content in mathematics, language, environmental sciences, social sciences and life skills. Within such broad objectives defining the curriculum and with attention to the principles of relevance, accessibility and equity, educational reformers in Africa, as elsewhere, must set their own priorities.

From subjects to learning areas

A further question is how subjects should be configured within the classroom. The tension between disciplines and areas of learning is a key issue in curricular change. A discipline generally focuses on long-established bodies of knowledge such as history, chemistry or geography, whereas areas such as social studies or natural sciences break the boundaries between disciplines to explain particular phenomena. Accordingly, South Africa's new curriculum defined a learning area as a 'field of knowledge, skills and values which has unique features as well as connections with others fields of knowledge' (Department of Education 2002: 15). Eight learning areas were identified: languages, mathematics, natural sciences, technology, social sciences, arts and culture, life orientation and economic and management sciences (Department of Education 2005: 7). In Namibia six areas were defined: language, mathematics, social and natural environment, arts, games and sports, religion and values (National Institute for Education Development, Namibia, (nd); in Botswana, five: creative and performing arts, environmental sciences, cultural studies, Setswana and English (Ministry of Education and Skills Development, Republic of Botswana 2010). In all of these countries, the aim was to cross traditional limits and emphasise human rights, a healthy environment, social inclusion and social justice. Ghana's curriculum aims to integrate 'environment, governance, politics and stability and social and economic development' into social studies (Barrett et al 2007: 29), and topics such as health, agriculture and industry into integrated science in junior high school. Tanzania and Senegal are also 'moving towards an integrated and balanced approach to the science curriculum' (ibid.).

New areas of concentration

Given that the school day is finite, a further question is how to incorporate pressing new issues that seem to force themselves on the attention of educationists. Globally, there is increasing awareness of the relevance to quality education of topics such as human rights, HIV/AIDS, civics and citizenship, sustainable development, peace education and information and communications technology (ICT). However, in working towards an excellent system new areas must not overload the curriculum.

Uganda represents good practice in developing HIV/AIDS prevention programmes. In 1986 Uganda's Ministry of Education introduced such a programme as a part of a broader national policy, starting with a public campaign and the design of new cur-

ricula for primary and secondary schools to create awareness about the risks of HIV/AIDS. The programme included seminars, newsletters aimed at primary and secondary students, education programmes for teachers and information by means of radio programmes and plays (Dembele & Ndoye 2003: 148). The success of the programme rested on concurrently mobilising mass media, classes, seminars and plays towards combating the pandemic.

Designing a subject area that only addresses HIV/AIDS, environmental development, peace education or intercultural issues may be less efficient, however, than grouping these topics. Civics and citizenship education can include a wide range of topics that can contribute to consolidating the required attitudes, skills and content and can result in benefits such as helping to prevent conflict through political, peace, environmental and gender education and through addressing national identity and the pluricultural and multilingual character of many contemporary countries (Nkamba & Kanyika 1998; Barrett et al 2007).

According to the GMR, environmental education and education for sustainable development incorporate 'concerns over population and food supplies, depletion of natural resources and the ozone layer, the greenhouse effect and possible solutions for such environmental concerns' (UNESCO 2005: 150). These issues are vital for countries where natural resources are envisaged as the means to achieve economic growth. Zambia, for instance, '[w]ith its abundant natural resources in the form of minerals, land, forestry, natural attractions and water ... stands a better chance of achieving her vision with proper investments in human capital development' (Ministry of Education 2008: 4).

Kenya's Programme for Training and Information for the Environment (PFIE) is an example of how environmental education can be implemented. This programme took a holistic approach,

through the official introduction of Environmental Education into school programmes, the training of teachers, production of pedagogical material for teachers and pupils, the implementation of Environmental Action Projects designed by the pedagogical teams, and the organisation of pedagogical days; a communication approach aimed at raising awareness of parents, local authorities, teachers, etc. concerning environmental issues and obtaining their participation through environmental protection initiatives; and a partnership approach by developing the links between the school, technical depart ments, projects and other players committed to actions to fight desertification. (Dembele 2003: 118)

According to Dembele the project led to the internalisation of an environmental approach by students and to teamwork between head and subordinate teachers. The success of the programme rested on its capacity to establish links between the classroom and external bodies.

However, including a programme devoted only to environmental education in the school timetable involves substantial costs and may marginalise other topics of equal

relevance. A module within civics and citizenship education could address this major need. In 2003 Zambia's Ministry of Education, with Irish Aid support, introduced civics and citizenship education in high schools. The programme was designed to encourage, among other things, human rights awareness, democratic capacity, employment orientation, personal health, HIV/AIDS prevention, gender equity and development of leadership (ZAMCIVIC 2008). According to ZAMCIVIC, an organisation involved in the programme from the beginning, civics and citizenship education is popular among students because it combines the personal, the local and the national. Teaching is context-based, with learning mostly 'action-oriented' and founded on students' life experiences (ZAMCIVIC 2008). Civics and citizenship education can help address and reinforce the attitudes, skills and content that countries like Zambia need, balancing economic growth goals with human development. It can also prevent the development of an overloaded curriculum. However, though countries like Costa Rica, Northern Ireland and Morocco have integrated this learning area into their national curricula, final results may not necessarily justify the expense involved in such programmes (Barrett et al 2007: 8). Table 1 lists a number of new curriculum areas in different countries.

Table 1: New areas of curricular concentration

Areas of concentration	Kenya	Botswana	South Africa	Namibia	Rwanda	Malawi
Life skills and HIV/AIDS	✓	✓	✓	✓	✓	✓
Peace education	×	×	×	×	✓	×
Environmental education	✓	✓	*	×	×	×
Citizenship and human rights education	×	×	*	×	×	✓
ICT	✓	×	*	✓	Under develop ment	Secondary schools

Sources: Barret et al: 2007; MoE (Kenya) www.education.go.ke/Downloads.php (accessed 21/05/09); Farrel 2007 Survey of ICT and Education in Africa: Rwanda Country Report: www.infodev.org/en/Publication.423.html (accessed 21/05/09); Fountain 1999 Rwanda: Peace Education in UNICEF Working Paper: www.unicef.org/girlseducation/files/Peace Education.pdf (accessed 21/05/09); MoE (Botswana) 2004 Environmental Education: www.moe.gov.bw/environmental edu/entry.html (accessed 21/05/09); OHCHR National Action Plans/Strategies for Human Rights Education: www2.ohchr.org/english/issues/education/training/national-actions-plans.htm (accessed 21/05/09); Isaacs 2007 Survey of ICT and Education in Africa: Malawi Country Report: www.infodev.org/en/Document.414.pdf (accessed 21/05/09); MESTSR-Rwanda 2003 School Curriculum Revision Plan 2003 to 2008: http://planipolis.iiep.unesco.org/upload/Rwanda/Rwanda%20Curriculum%20Reform%20Plan%20March%202003.pdf (accessed 21/05/09)

ICT deals with computer literacy, an increasingly relevant issue in the modern world. Ideally, it should be integrated as far as possible with other subjects or areas of the curriculum. However, it is imperative to analyse the state's capacity to provide computers and well-trained teachers to all its students, as well as the required infra-

structure, and in many African countries this is currently not possible. ICT must enable equity, not prevent a country from achieving it.

There is also the difficult question of the relationship of vocational education to the curriculum. Vocational education can make the curriculum more relevant and prepare young people to enter the labour market and in some instances become entrepreneurs. This should reduce levels of unemployment and promote inclusion and sustainable development. However, before deciding on the vocational educational model, a number of key questions have to be considered: at what point should vocational training begin; how integrated should it be with the overall secondary curriculum; and does general secondary education have a role beyond preparing students for tertiary education (World Bank 2008: 15). Depending on the answers to these questions, policymakers must decide if secondary education is to be academic, vocational or a combination of these.

Whatever model is chosen, there is a need for well-trained teachers and sufficient materials. Experience from Ghana shows how poor equipment and inadequate resources prevented students from acquiring the practical skills required in the world of work and distracted them 'from valuable study-time that should have been devoted to the basic requirements of literacy, numeracy and writing' (Atchoarena & Delluc 2002: 230).

Pedagogies for learning

The potential for more years in school, more learning time, new configurations of learning material and new study areas to enhance good quality education depends critically on what happens inside the classroom. The 'black box' of pedagogy needs to be opened in order to understand how quality can be promoted.

There are two pedagogical approaches: the teacher-centred approach, with students in a passive role, and the child-centred approach, with students as the core of the class. Child-centred pedagogy involves active participation and interaction by students, cooperative learning and open-ended instruction (UNESCO 2005). A balanced and structured pedagogy, a 'combination of direct instruction, guided practice and independent learning', which avoids extremes, is widely considered a good method for learning 'reading, mathematics, grammar, mother tongue, sciences, history and, to some extent, foreign languages' (UNESCO 2005: 153).

Insofar as 'pedagogical renewal and teacher development are two sides of the same coin' (Dembele & Lefoka 2007: 531), adopting this model of structured pedagogy implies teacher education and training programmes and the need to align teacher trainers and instructional materials with the new pedagogy. It also demands 'changes in the practices of people, who run, supervise and support schools, namely school heads, pedagogical advisors and school inspectors' (Dembele & Lefoka 2007: 534).

Because it requires more teacher attention to individual students, it calls for smaller class sizes, relevant and sufficient teaching and learning materials and physically adequate classrooms ready for all activities appropriate to this pedagogy. Additional issues that risk the success of such pedagogical reform are the fact that education stakeholders are likely to interpret structured pedagogy in different ways and the wide gap between theory and practice in teachers' pedagogical preferences and practices (Dembele & Lefoka 2007).

The GMR (UNESCO 2005) recommends structured pedagogy as a good option in contexts where lack of resources, high student-teacher ratios and underqualified teachers prevent schools from implementing alternative methods of teaching and learning. Success rests on the capacity of the implementing authorities to establish system coherence between all education stakeholders. For instance, in order to achieve access, equity, quality and democratic participation, in 1990 Namibia shifted from a content-based to a student-centred approach. As the *National Report on the Development of Education in Namibia* states, it was realised that teacher education, and the recognition of teachers as active agents of change, would have to play a central role in the reform (Ministry of Basic Education, Sport and Culture 2004). This approach obliged Namibia to begin a staff development programme for teacher educators, administrators and support teachers. This case indicates that in adopting any pedagogical approach a clear link between schools and the teacher-training curriculum is important.

The question of language of instruction is vital to pedagogy. Today, there is consensus that 'children learn better in the medium of their mother tongue' (McNab & Stoye 1999: 143; see annexure 1). Mother-tongue instruction during the first years of primary school gives all children the same opportunity to build knowledge. In 1993 a comparison of reading levels in Malawi and Zambia showed that pupils in Malawi, where Chichewa was the language of instruction from Grades 1 to 4, obtained higher results than Zambian children in the same grades taught in English (Linehan 2004: 3). In order to improve reading and writing skills, in 1999 Zambia implemented the Primary Reading Programme, with external assistance from the British Department for International Development (DFID). This programme uses the seven major Zambian indigenous languages as languages of instruction in Grade 1 and introduces literacy in English in the second primary year, using the *Step into English* programme. The pedagogical strategy is to transfer literacy skills from the seven languages to English (Linehan 2004: 7).

However, from a planning point of view it has to be recognised that if mother tongue is given priority in the early grades 'the arrangements for teacher training and teacher appointment/transfer, educational materials development, and the production of educational materials are likely to be more complex and expensive' (McNab & Stoye 1999: 143).

National, regional and international moves towards assessment for learning

Unless measurement of some kind occurs, it is impossible to know whether teaching has been successful and whether the curriculum is achieving its aims. Assessment is fundamental to teaching and learning. In the context of this paper it has two dimensions. Firstly, it is a means to diagnose, monitor and guarantee the quality of education delivered and, secondly, it is an instrument leading to reforms within the educational system (Marsh 2009). Assessment can be defined as an instrument 'to describe the activities undertaken by a teacher to obtain information about the knowledge, skills and attitudes of students' (Marsh 2009: 71) in relation to curriculum goals. Assuming that sooner or later formative assessment is summative (Taras 2005; Marsh 2009), it can be described as a means of monitoring students' performance against objectives, as an instrument to inform the next steps in teaching, and as a tool for giving feedback to students about their learning (Marsh 2009). Good assessment must take into account, value and respect the differences between students and understand how these affect education results (Akyeampong & Murphy 1997).

Three issues surrounding national assessments are significant: how the assessment system is aligned to the national curriculum and standards; when and how often it should take place; and how data is used to support improvements in the education system. National assessment must assess student learning against national standards. According to the GMR, between 2000 and 2006 around half of the world's countries conducted this type of assessment (UNESCO 2009: 17). Botswana, the Gambia, Kenya, Malawi, Mozambique, Nigeria, the Seychelles, South Africa and Zambia conduct assessments of student learning 'against nationally defined standards in selected school subjects' (UNESCO 2006: 7). The use of national assessments is gaining in importance in sub-Saharan Africa both as a means of measuring, monitoring and evaluating education quality, and as providing criteria for access to higher education (Barrett et al 2007: 30).

Countries can assess at different stages: at the micro-level in classrooms, at national level and at regional and international levels, with the last three normally being used to inform policymaking and to compare results between countries (see Table 2). For instance, Kenya used the regional assessment results of the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) to set standards for minimum classroom facilities (UNESCO 2009: 17). In Senegal data from the *Programme d'Analyse des Systèmes Educatifs de la CONFEMEN* (PASEC) assessment proved that grade repetition did not lead to major student learning benefits, resulting in the prohibition of repetition for some primary grades (UNESCO 2009: 17).

Implementing sustainable, effective national education assessment systems requires significant resources, as well as relevant high-level technical expertise. Many countries in Africa, as well as other developing areas, struggle to obtain valid and reliable data on a regular basis. This issue can be addressed through participation in regional

and international studies. The greater challenge, however, is the effective use of information emanating from national, regional and international studies. To this end a number of countries have begun the process of reviewing and restructuring their national education assessment systems. For example, with the support of the World Bank, the Zambian Examinations Council has recently embarked on a process to enhance capacity and skills within the country as well as to improve current systems and structures with the aim of (i) improving the national examinations system, (ii) developing national standards aligned to the national curriculum against which to measure and report on student performance, and (iii) improving the technical capacity of staff to analyse and report assessment data to support decision-making within the Ministry of Education (World Bank 2010). Similar efforts have been undertaken in Angola, Ethiopia, Eritrea, Mozambique and South Africa.

Table 2: Range of assessments conducted within selected countries

Country	Continuous assessment	National assessment	Regional assessment	International assessment
Botswana	✓	✓	✓ (SACMEQ)	✓ (TIMSS)
Ghana	✓	✓	✓ (WAEC)	✓ (TIMSS)
Kenya	?	✓	✓ (SACMEQ)	×
Malawi	✓	✓	✓ (SACMEQ)	×
Nigeria	✓	✓	✓ (WAEC)	×
South Africa	✓	✓	✓ (SACMEQ)	✓ (PIRLS)

Sources: Botswana Curriculum Development and Evaluation: www.moe.gov.bw/cde/curriculum programmes/curriculum framework.html (accessed 20/05/09); UNESCO (2008) EFA Global Monitoring Report Overcoming Inequality: Why Governance Matters. Oxford: Oxford University Press; DoE: RSA National Policy on Assessment and Qualification for Schools in the General Education and Training Band; National Report of Malawi by Ministry of Education, Science and Technology and Malawi National Commission for UNESCO, October 2008, www.ibe.unesco.org/National Reports/ICE 2008/malawi NR08.pdf (accessed 20/05/09); Abioudun Faleye, B. (2003) Continuous Assessment Practices in Osun State (Nigeria) Secondary Schools: From Policy to Practice. Proceedings of the Twelfth International Conference on Learning in the Faculty of Education, 11-14 July 2005, Granada, Spain: http://l05.cgpublisher.com/proposals/651/index html (accessed 20/05/09); TIMMS 2007 Countries Participating: http://timss.bc.edu/TIMSS2007/countries.html (accessed 20/05/09); West African Examinations Council 2009: www.cedol.org/cgi-bin/items.cgi? item=static& article=200611201747123301 (accessed 20/05/09); PIRLS 2009: http://timss.bc.edu/pirls2006/countries.html (accessed 20/05/09)

Role of teachers

The lynchpins of any educational system are its teachers, and none of the curricular or pedagogical initiatives and proposals discussed here can proceed without them. Without a sufficient number of well-trained and motivated teachers, reform cannot be implemented effectively. Williams (2008) reports that in the United States a student with a high-performing teacher starting in the 50th percentile of achievement at age 8 will end up in the 90th three years later. With a low-performing teacher for three consecutive years he or she will end up in the 37th percentile. This suggests that

over only three years there is a 53-point difference between outcomes for students taught by the most and least effective teachers. Evidence suggests that this is more the case for some students than others. Hammer and Pehansen (cited in Williams 2009) examined student progress in relation to teacher skills, and found that if the teacher was able to provide high levels of instructional support then no achievement gaps arose. If the teacher was average at providing such support, there still was no achievement gap. However, if the teacher was below average in providing instructional support, significant achievement gaps appeared. In short, this suggests that teacher quality makes a critical difference. This is why teacher professional development is central to education reform.

In sub-Saharan Africa the challenges of teacher quality and numbers are particularly significant. In 2006 the UNESCO Institute of Statistics (UIS) reported that sub-Saharan countries needed to increase teacher output several-fold, yet at current rates of delivery none of them produces enough teachers to meet projected demand. It is estimated that to achieve education for all (EFA) by 2015, 3.8 million additional teachers would be required, although obviously the need will differ between and within countries (UNESCO 2009). Clearly, the supply challenge has to be addressed by training and supporting teachers and it is encouraging to note that in recent years some countries have increased teacher trainee enrolments.

Conclusion

Drawing on educational literature and experience from various parts of Africa this article has argued for the centrality of educational quality to educational policy-making and practice. Curriculum reform must be measured against its contribution to the development of educational quality. These are not theoretical issues, but relate closely to other pressing matters, such as health and social cohesion.

The article has examined a number of instances of curriculum reform. The extension of the number of years of education in many African countries presents its own challenges, persistently raising the question of what is to be taught and how this is to be done. The attempt must be made to open the under-examined 'black box' of pedagogy and to see what actually happens inside. Assessment plays an important role in this and, crucially, without a well-prepared, well-resourced and motivated teaching force, attempts at curriculum reform cannot succeed.

References

African Union. (2007) Strategy to revitalize technical and vocational education and training (TVET) in Africa. Final draft prepared for the Meeting of the Bureau of the Conference of Ministers of Education of the African Union (COMEDAF II+), Addis Ababa.

Akyeampong, K and Murphy, RJL. (1997) Introducing Continuous Assessment: Challenges and Changes. *Mauritius Examinations Bulletin*, 7.

Alexander, R. (2008) Education For All, The Quality Imperative and the Problem of Pedagogy

- [online]. Available at www.create rpc.org/pdf documents/PTA20.pdf [accessed 15 March 2009].
- Atchoarena, D and Delluc, A. (2002) Revisiting Technical and Vocational Education in Sub Saharan Africa: An Update on Trends, Innovations and Challenges [online]. Available at http://unesdoc.unesco.org/images/0012/001293/129354e.pdf [accessed 10 May 2009].
- Barrett, A, Ali, S, Clegg, J, Hinostroza, E, Lowe, J, Nikel, J, Novelli, M, Oduro, G, Pillay, M, Tikly, L and Yu, G. (2007) Initiatives to improve the quality of teaching and learning: What really matters? Background paper for EFA Global Monitoring Report 2008.
- Dakar Framework for Action. (2000) Education for All: Meeting our Collective Commitments. Adopted by the World Education Forum, Dakar, Senegal, 26 28 April 2000
- Dembele, M. (2003) Breaking the Mold: Teacher Development for Pedagogical Renewal [online]. Available at www.adeanet.org/adeaPortal/adea/biennial2003/papers/4A synthesemartial e final.pdf [accessed 29 March 2009].
- Dembele, M and Ndoye, M. (2003) A Relevant Curriculum [online]. Available at www.adeanet. org/adeaPortal/adea/biennial2003/papers/4A synthesemartial e final.pdf [accessed 29 March 2009].
- Dembele, M and Lefoka, P. (2007) Pedagogical renewal for quality universal primary education: Overview of trends in sub Saharan Africa. *International Review of Education*, 53: 531-553.
- Department of Education, South Africa. (2002) Revised National Curriculum Statement Grades R 9. Pretoria: Tirisano.
- Hanushek, EA and Wößmann, L. (2007) The Role of Education Quality in Economic Growth. Policy Research Working Paper 4122. Washington, DC: World Bank, Human Development Network, Education Team.
- International Bureau of Education. (2006) Education Innovation and Information No. 122 [online]. Available at www.ibe.unesco.org/fileadmin/user upload/archive/publications/Innovation/Inno122e.pdf [accessed 21 March 2009].
- Linehan, S. (2004) Language of instruction and the Quality of Basic Education in Zambia [online]. Available at http://unesdoc.unesco.org/images/0014/001466/146659e.pdf [accessed 15 March 2009].
- McNab, C and Stoye, P. (1999) Language policy in Ethiopian education: Implications for the costs of textbook production. In Leach, F and Little, A (eds). *Education, Cultures and Economics Dilemmas for Development*. New York: Falmer Press.
- Marsh, C. (2009) Key Concepts for Understanding Curriculum. Oxford: Routledge.
- Ministry of Basic Education, Sport and Culture, Republic of Namibia. (2004) National Report on the Development of Education in Namibia [online]. Available at www.ibe.unesco.org/International/ICE47/English/Natreps/reports/namibia fin.pdf [accessed 10 May 2009].
- Ministry of Education and Skills Development, Republic of Botswana. (2010) Syllabi. [Online]. Available at www.moe.gov.bw/index.php?id 171 [accessed 20/08/2010].
- Ministry of Education, Science and Sports, Republic of Ghana. (2007) Teaching Syllabus for Primary and Junior High School. Accra: Government Printers.
- Ministry of Education, Zambia. (2008) Concept Paper on the National Symposium for Curriculum Review in Zambia: Towards the Attainment of Vision 2030. Lusaka: Govern ment Printers.
- National Institute for Education Development, Namibia. (nd) Syllabuses and Specimen Papers [online]. Available at /www.nied.edu.na/publications/syllabusses/syllabusses.html [acces sed 20 May 2009].
- Nkamba, M and Kanyika, J. (1998) The Quality of Primary Education: Some policy suggestions based on a survey of schools. Zambia: An interim Report. Paris: UNESCO International Institute for Education Planning.
- Sayed, Y. (2008) Education and poverty reduction: Omission, fashions, and promises. In Maile, S (ed). Education and Poverty Reduction: Towards Policy Coherence. Cape Town: HSRC Press.

- Shute, VJ. (2007) Focus on formative feedback. Research report 07 11. Princeton: ETS.
- Taras, M. (2005) Assessment Summative and Formative Some Theoretical Reflections. *British Journal of Educational Studies*, 53(4): 466-478.
- UNESCO. (2005) EFA Global Monitoring Report Education for All: The Quality Imperative, Oxford: Oxford University Press.
- UNESCO. (2006) Regional Overview: Sub Saharan Africa 2006 Report [online]. Available at http://unesdoc.unesco.org/images/0014/001485/148550E.pdf [accessed 7 March 2009].
- UNESCO. (2009) EFA Global Monitoring Report Overcoming Inequality: Why Governance Matters. Oxford: Oxford University Press
- UIS. (2006) Global Education Digest 2006. Comparing Education Statistics Across the World [online]. Available at www.uis.unesco.org/TEMPLATE/pdf/ged/2006/GED2006.pdf [acces sed 2 May 2010].
- Williams, D. (2008) Improving education outcomes at scale: The role of classroom assessment. Paper presented at the national policy dialogue forum on developing effective assessment systems, 19 21 November 2008, Pretoria.
- World Bank. (2010) Country self diagnosis: Zambia. Unpublished report, Russian Education Aid for Development Project.
- World Bank. (2008) Governance, Management, and Accountability in Secondary Education in Sub Saharan Africa. World Bank Working Paper No. 127. Washington DC: World Bank
- ZAMCIVIC. (2008) Civic Education in High Schools Support Project [online]. Available at www.zamcivic.com.zm/civiceducation.php [accessed 2 May 2010].

Notes on the authors

Anil Kanjee is a Professor of Educational Studies and the co director of the Graduate Programme for Improving Education Quality at Tshwane University of Technology. He also heads the Education Quality and Access for Learning Network (EQUAL Network), which was established to support national ministries in implementing sustainable systems and developing relevant capacity at the different levels of the education system to improve learning. Previously, Kanjee was head of the Centre for Education Quality Improvement at the Human Sciences Research Council in South Africa.

Yusuf Sayed is a Reader in International Education at the University of Sussex. Yusuf is an education policy specialist with a career in international education and development research. He was previously senior policy analyst for the EFA Global Monitoring Report (UNESCO), team leader for Education and Skills (Department for International Development UK) and head of the Department of Comparative Education at the University of the Western Cape. His research focuses on education policy formulation and implementation as it relates to concerns of equity, social justice and transformation, and he is currently investigating the effects of fee charging in education and education quality as it relates to issues of equity, rights and justice.

Diana Rodríguez is advisor to the Early Childhood Department at the National Ministry of Education in Colombia. She works with a team that focuses on developing good quality pro tection, nutrition and education programmes for children under the age of five from marginal ised and vulnerable populations. Diana has done research on violence and racism in classroom settings. She is currently working on the impact of armed conflict on refugee populations.

Address for correspondence

kanjeea@tut.ac.za