Senegal team

A Strategic Paper

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This strategic document submits recommendations for innovating educational programmes, pedagogy, teaching methods, teaching tools and technology in Sub-Saharan Africa. The recommendations of major international conferences on education held in various parts of the world, and in Africa in particular, have been taken into consideration for this purpose.

On the whole, from the International Education Conference of Addis Ababa in 1961 until the World Education Forum of Dakar in 2000, countries in Sub-Saharan Africa undertook many reforms of their education systems. They also signed many sub-regional, regional and international framework agreements to reform their education systems. While these reforms have generally led to positive results, in terms of enrolment and retention, efforts still need to be made in some countries that have not yet attained the goals of universal primary education.

Since the International Education Conference of Jomtien in 1990 and the Dakar Forum in 2000, new challenges (relating mainly to quality) have emerged. The overall quality of education systems can be viewed from three major perspectives: (1) access for all individuals to lifelong quality education, (2) the relevance and values of education, and (3) personal fulfilment as well as the social, economic and cultural development of communities.

Like elsewhere in the world, globalization — especially of the economy — and the rapid expansion of information and communication technologies are creating new challenges (and new opportunities) for education systems in Sub-Saharan Africa. The challenges of improving the standard of learning, achieving the general goals of quality and facing the international competition that currently prevails in the education sector all call for significant reforms. These reforms involve every aspect of education: educational policies, education financing, the recruitment and training of teachers, major innovations to adapt educational programmes and teaching methods, better use of material resources and technologies, and wider access to textbooks and teaching manuals.

Considered as a whole, and through a global and strategic approach, the required reforms must aim mainly at improving the results and impact of education systems on the harmonious fulfilment of individuals as well as on the development of communities. The realities of the job market, and of professional integration, also must be taken in to account.

These innovations may consist of strengthening the actions and programmes already under way in some countries, or adopting new orientations.

I. EDUCATIONAL PROGRAMMES OR CURRICULA

I-1. From programmes (or broad fields of education) to curricula

Current research on education places strong emphasis on adopting an approach focused on curricula rather than on standard school programmes. In general, in the practices observed, school programmes traditionally are composed of lists of the contents to be taught. A curriculum, on the other hand, is a structured set of knowledge, know-how, inter-personal skills, values and orientations specific to a given environment and level of education, with the whole being defined and constructed methodically to achieve a set of fixed goals.

In view of the above, countries in Sub-Saharan Africa are invited to adopt the curriculum approach and explore the possibilities offered by the competency-based approach

I-2. Indigenous programmes

Whatever the political and philosophical foundations may be, the primary purpose of education is to prepare individuals to live in society. Education forms them by inculcating the fundamental values of their living environment (local society) and of humanity in general. In this respect, African education systems should mould Africans, root them firmly in their values and encourage them to take an open outlook on the rest of the world.

Learners, therefore, should acquire inter-cultural skills from early childhood. They must be taught to understand their own world as well as the interacting environments

and populations. They must gradually acquire a solid knowledge of all the broad groups and fields of education that serve as the cultural foundation for societies and human groups in Sub-Saharan Africa, and of the large natural regions of the continent.

The countries of Sub-Saharan Africa must explicitly incorporate into their education systems programmes on social and environmental studies that are founded on African cultures, while also being open to the outside world. Emphasis should be placed on acquiring inter-cultural skills.

I-3. Requirements for lifelong quality education

Education not only prepares individuals to live harmoniously in society; it also equips them to solve problems arising in the milieu in which they live (or will live). In learning how to solve the problems (of development) currently affecting Sub-Saharan Africa, or those that will emerge in the medium term, education systems will be confronted by a double constraint. The first constraint is related to the rapid evolution of knowledge, while the second has to do with globalization. African education systems will have to adopt flexible curricula that can be adjusted, as necessary, to future needs in order to respond to this dual constraint.

Sub-Saharan African countries must adopt and widely disseminate flexible educational programmes of a scientific nature — programmes that are designed to cope with the major disasters suffered by the continent, such as desertification, famine, pandemics, lack of drinking water and hygiene. The preponderance of literary studies over scientific studies, which can still be observed in many countries, will have to be reversed gradually. Priority must be given to ensuring that the largest number of learners possible will acquire a good knowledge of scientific disciplines and methods.

I-4. Skills indispensable for personal fulfilment

Education should lead to personal fulfilment and prepare individuals to integrate into the social and economic fabric of their living environment. To achieve these objectives, educational programmes should be evaluated regularly, with a view to adapting them to the needs and expectations of individuals and communities.

Every country in Sub-Saharan Africa should establish a reliable system for managing and evaluating its education system. The observatories set up in each of these countries will use indicators that facilitate comparisons between the skills acquired by learners at school. Countries in Sub-Saharan African also should establish a joint observatory to monitor their education systems. The principal indicators of this overall African education observatory would be established according to the same methodology.

Languages in education — The mediocre results of numerous education systems in Sub-Saharan Africa are due, in part, to language issues. The fact is that in many African countries, the language of instruction frequently is a foreign language taught as if it were the mother tongue of the learner. This approach must be rectified by exploring or reinforcing the possibilities of teaching in a national language. Since children are receptive to multiple languages from a very young age, African education systems should endeavour to promote multilingualism.

Along with the introduction of national languages, countries in Sub-Saharan Africa should develop a bilingual approach in their education systems so as to facilitate regional communication on the continent. Special attention should be paid to ensuring that all learners will acquire a good knowledge of two of the major languages used for international communication.

The teaching of science and technology — Science and technology are playing a growing role in the lives of individuals and nations. An increasing number of practices and objects of daily use are founded or created on the basis of scientific skills and know-how, according to technological processes that can be repeated.

Training the mind and encouraging an aptitude for science must be started at the youngest age possible, through appropriate activities. It then should continue during all the years of study, through ever-more complex activities aimed at reaching an international level of competency.

The teaching of science and technology should be reinforced in terms of quality. It must be accompanied, at a very early stage, by a more realistic interaction between theory and practice. One of the constant concerns of education should be to demonstrate the applications of science in everyday life. The theoretical teaching of rules, laws, theorems and the fundamental principles of science should be dropped in favour of an approach founded on observations and experiments carried out by the learners.

In view of the fact that the world is evolving towards more complex science and technology, countries in Sub-Saharan Africa should introduce appropriate programmes and resources to familiarize learners with an inquiry-based approach to science at a very young age. Through this means, the continent gradually could be integrated into the world of technological and scientific discoveries.

II. SPECIFIC PROGRAMMES

II-1. Prevention of armed conflicts

Armed conflicts are a major challenge facing the continent. But armed conflicts are not inevitable; they can be prevented by educational action, such as through programmes of general psychology centred on studying local, sub-regional and regional mentalities. Educational programmes on the prevention of armed conflicts will also concentrate on education about peace and citizenship, mutual understanding and tolerance, human rights, and dialogue among cultures.

The main goal of these programmes would be to teach the notions of democracy and co-operation. They would be conducted in a subtle manner, and adapted to the education of very young children through activities within the reach of the age group. They would continue during primary school and into the first years of secondary school

through the study of texts and activities of a moral and civic nature. In the last years of secondary school and in higher education institutions, these themes would be treated through philosophical, political and legal documents.

Based on the above perspective, countries in Sub-Saharan Africa are invited to include educational programmes on good citizenship, peace, democracy and human rights throughout the years of study of their education system, with the goals of preventing armed conflicts, developing a dialogue of cultures and fostering mutual understanding among peoples. These programmes could form a common and compulsory core for all years of study, from early childhood care and education to the last years of higher education, without any distinction between specialized disciplines.

II-2. Health education, and the fight against HIV/AIDS and its prevention

Malaria, sickle-cell anaemia, diabetes and AIDS are among the most widespread diseases in Africa. These ailments handicap a large number of learners, either directly or indirectly. Education systems must implement adequate measures to take care of children suffering from or affected by these ailments. It is vital to include good hygiene and the prevention of these ailments in educational programmes.

Bearing this in mind, current practices should be rectified, because health education is often conducted outside of official educational programmes. By way of example, several establishments benefit from projects conducted by the United Nations Population Programme aimed at teaching students the right reflexes in the field of education about population growth. Similarly, many programmes focus on health education and HIV/AIDS prevention. However, such programmes only enter schools through the back door. In many countries, they typically consist of activities undertaken by clubs, under the responsibility of an NGO or association.

Given the numerous experiences already acquired, the countries of Sub-Saharan Africa should include contents

and activities designed to improve public health and hygiene in their official teaching programmes. This includes setting up structures to dispense a high standard of education, in keeping with the state of health, to populations who are capable of attending school or who are enrolled in a school but hospitalized for a long duration. Educational programmes in the field of health and hygiene should place particular emphasis on such major ailments as malaria, diabetes and HIV/AIDS, as well as reproductive health.

II-3. Minorities, displaced persons or refugees, and persons living with a disability

The beneficial effects and advantages of education should not be reserved exclusively for the healthy population. Persons suffering from a disability also have an inalienable right to education; as a universal right, education must be open to those of all social categories.

There are numerous disabilities, of a diverse nature, that can have a negative effect on the schooling of an individual or on access to the education system. Disabilities, be they physical or mental, can take on a social character when they affect minorities or displaced persons. Educational action must be designed in such a way as to reach all categories of the disabled.

Countries of Sub-Saharan Africa should introduce strategies that will ensure inclusive education for displaced persons, those living with a disability, or persons of any social category deprived of education because of cultural, social, economic or other reasons.

II-4. Specific programmes in higher education

Higher education must play a key role in the rapid development of education. Some of its fundamental missions are to foster innovations in education, debates, research on education and dissemination of the findings of pedagogical studies.

In contributing to raising the quality of education, higher education institutions in Sub-Saharan Africa are faced with two new challenges. The first is economic liberalization and its corollary, the opening of the education sector to competition. African universities, therefore, must be attractive in terms of the programmes they offer and their teaching methods, research strategies and capacity to follow-up on their graduates. The second challenge is to develop international comparisons between universities; to this end, African universities must adopti policies to renovate their teaching systems, research activities, and publications for the purpose of achieving greater international visibility.

In view of the missions of universities regarding both fundamental research and applied research, higher education institutions in Sub-Saharan Africa will have to adopt strategic renovation plans to reinforce their contribution to quality education. Such renovation plans should focus on teacher training and developing research on education. Universities must adopt the kind of strategies that could enable them to cope with the international competition that is dominating the education market. They should endeavour to fulfil the criteria of international comparisons between universities by introducing study programmes, research activities and communications aimed at improving their international visibility.

To achieve this objective, they should adopt a comparative grid specifically designed for African universities — one that would enable them to strengthen their co-operation in the fields of teaching, research, international scientific meetings and publications.

III. PEDAGOGY AND METHODS

III-1. Class size and modes of functioning

The efforts made to develop education in Sub-Saharan Africa since the International Education Conference in Jomtien in 1990 are clearly reflected in the school enrolment rates. Improved access to education has naturally led to increases in the number of pupils and the size of classes. The number of learners per class has risen significantly at all levels of education, whereas the number of teachers is growing more slowly.

Sub-optimum teacher/pupil ratios can have negative consequences on the quality and outcome of education. This new difficulty calls for the adoption of new pedagogical approaches to deal with large and heterogeneous groups.

Parallel to efforts to introduce free primary education aimed at improving the rate of enrolment and retention, and coping with the shortage of teachers and schools, countries in Sub-Saharan Africa should adopt appropriate strategies of in-service training to increase teachers' abilities to handle large and heterogeneous groups.

III-2. Pedagogical methods and approaches

Renovating pedagogical methods is an absolute priority. Teachers still resort frequently to traditional teacher-dominated methods, which place them at the centre of the teaching and learning activity. To correct this shortfall, teachers need to be better trained on how to use an active approach and adopt the kind of methods that place learners directly at the heart of the learning process. In other words, learners must be made the artisans of their own acquisitions.

Teachers, therefore, will need to be rigorously trained in applying the techniques and methods of pedagogical activities that are currently arousing great interest at the international level. These methods and techniques include structured teaching, outcome-oriented pedagogy, an approach based on skills, co-operative learning, collaborative learning, and open-ended and discovery-based instruction.

Improving the quality of education in Sub-Saharan Africa will require teachers who are trained to become genuine educational professionals, capable of using active and stimulating communication techniques that place learners at the centre of teaching, learning and research. Countries in Sub-Saharan Africa, consequently, will have to adopt appropriate recruitment policies and professional training strategies for teachers. Training strategies will be centred on knowledge and professional practices identified by research on education.

IV. TEACHING TOOLS AND TECHNOLOGY

IV-1. Textbooks and teaching aids

The shortage or unavailability of textbooks and teaching aids has negative repercussions on the quality and outcome of education. Despite the efforts many countries have made to set up publishing houses, there are few textbooks available, and the contents of many are irrelevant to current educational programmes. Textbooks published locally also suffer from high production costs, subsequent high retail prices and an absence of distribution networks.

In view of the financial cost of publishing textbooks, countries in Sub-Saharan Africa will have to adopt sub-regional policies for the conception, publishing and distribution of textbooks and teaching aids. They will, therefore, need to pool the resources allocated for the acquisition of textbooks and teaching aids in each country in order to create sub-regional facilities that could benefit from economically significant markets.

IV-2. ICT in Africa

The major challenges facing Sub-Saharan Africa in the area of education concern mainly the rising number of pupils, the inadequate number of teachers and schools, the inadequate level of recruitment and professional training of teachers, and the severe shortage of textbooks. The combined effects of these difficulties could be attenuated by exploring the possibilities offered by information and communication technologies: resources such as computers, the Internet, television, radio and electronic media (such as CDs) as well as mobile phones, etc.

Teaching, basically, is centred on communication and access to information, documents and abundant references that are reliable and available at the right time. If wisely exploited, ICT could make a considerable contribution to solving the current deficits frequently observed in the education sector of Sub-Saharan Africa.

In view of the needs and deficits of the education sector, countries in Sub-Saharan Africa will need to adopt incentive policies, pertinent strategies and a cost-effective

way to place information and communication at the service of renovating and raising the quality of their education systems. Incentive policies should focus, in particular, on customs duties, preferential connection costs and invoicing of telephone communications, electricity connections and consumption, etc.

The relevant strategies and cost-effective measures will aim mainly at capitalizing on the experiences acquired by the projects developed on the continent and elsewhere in the field of educational radio and television, the introduction of computers and computer science in education, distance learning, and self-teaching for learners (as well as for teachers, so that they can boost and update their professional skills).