



Association for the
Development of
Education in
Africa



**Strategic Policy Framework
for the Implementation of the
2012 Triennale Recommendations
(Ouagadougou, Burkina Faso)**



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INTRODUCTION

1. This framework is based on a synthesis of the strategic research and collegial reflection that has been going on since 2006 and well before that concerning the factors and conditions required for an effective contribution by education and training to the development of Africa. The process initiated by the ADEA during the preparatory phase for the Maputo Biennale in Mozambique has now culminated in the major conclusions of the Ouagadougou Triennale held in Burkina Faso in February 2012. This interactive and participative process involved all the stakeholders: the Ministers and Ministries of Education and Training in Africa, the bilateral and multilateral development agencies, professionals working in the sector, delegates from the private sector, professional agricultural and trade associations, organizations representing civil society and various youth movements, and many more.

2. The framework capitalizes on and structures the main lessons drawn from this process of analysis and dialogue about educational and training practices and policies, in Africa and elsewhere in the world, that have been found to be effective in confronting the challenges and problems of accelerated growth and sustainable development. Its objectives are:

- To promote strategic orientations and approaches to education and training policies that can respond successfully to the needs for skills so as to realize the vision for the future of the African Union with a view to accelerated, sustainable development;
- To support the determination of the political leaders of Africa at the highest level to implement this vision by taking ownership of the strategic pillars needed to overhaul and perfect the systems of education and training;
- To provide the continent's leaders with a reference tool that can serve to ensure the convergence and coordination of diverse continental initiatives in the field of education and training and to strengthen strategic oversight of the design and implementation of convergent regional and national policies in terms of support, follow-up and assessment;
- To inspire regional and national policies on education and training designed to achieve the African Union's vision of the future via the accelerated and sustainable development of the continent.

3. To this end, the framework consists of three main parts:

- The first concerns the vision of the future in light of the continent's current situation. There are opportunities to be grasped, strengths and potentials to be exploited, constraints to be coped with and challenges to be faced – all of which requires grasping the central and decisive role of education;
- The second part focuses on the education and training philosophies and policies that should be adopted in terms of general orientation, purposes, and goals. This leads to identifying the profiles of the critical skills required for the accelerated and sustainable development of Africa, as well as the factors and conditions needed to promote them;
- The third part tackles the reforms and paradigm shifts required both at the level of the strategic and structural orientation and at the level of the inputs and practices to be employed in the field to produce systems that are fully capable of promoting the targeted skills. It also sets out the optimal conditions for promoting and successfully implementing these reforms; this implementation is the most widely faced challenge in Africa.

4. A word of warning: it should be pointed out that the political, economic, social, and cultural diversity of Africa is a reality that makes it impossible to propose one-size-fits-all solutions for every country without taking their specific contexts into consideration. This is why the framework needs to be studied and used as a set of generic policy and strategy orientations for education and training that will make it possible to provide answers to problems and challenges that are widely shared by the continent's countries as they confront the imperative of accelerated and sustainable development. This means that each country concerned needs to scrutinize and adapt this framework in order to develop responses that are appropriate for its specific circumstances.

I. THE VISION OF THE FUTURE AND THE CURRENT SITUATION OF AFRICA

I.1 Africa will be the continent of the 21st century

5. The African Union's vision of the future is that of "An integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the global arena" (African Union, 2009).

6. The recent advances achieved by the continent seem to be headed towards these promising prospects. Since the mid-1990s, Africa has freed itself of the recession and economic stagnation in which it had been mired since 1973. Twenty-seven of the 30 largest African economies continued this acceleration in the first decade of the 2000s, with average growth rates of over 5%. In contrast to the initial period following independence, this growth was no longer based almost entirely on the export of raw materials. Every sector is contributing, thus ensuring more robust and sustainable growth. The African Development Bank (AfDB, 2011) estimates that the GDP of Africa could rise from 1700 billion dollars to 15,000 billion in 2060, with GDP per capita rising from 1600 to 5600 dollars. Africa will eliminate extreme poverty, and most African States will be countries in the middle-income range.

7. To enable it to maintain and propel this dynamism, Africa can draw on its enormous natural development potential: 20% of the land surface of the planet, 20% of which consists of forest, an immense reservoir of biodiversity, an exceptional potential for clean energy, 30% of the world's mineral resources, with more than 60 types of ore and mineral, and more.

8. Africa seems to be handicapped by its high demographic growth, but this is a handicap that could be turned into a "demographic bonus". By the middle of the 21st century, the population of Africa will exceed that of Europe, North America and South America combined. This population will be predominantly young, at a time when the populations in the other regions of the world will be aging or already old. By way of example, Africa will have 800 million under-25s compared to fewer than 200 million in Europe. The consequent rising power of the working population, along with the urbanization of most of the population, will make for a dynamic combination of quantitative and structural change with important implications for comparative advantages, economic competitiveness, restructuring and growing demand and markets.

9. For all these reasons, the most significant margins for economic growth anywhere in the world are opening up in Africa. Furthermore, the continent's countries can draw on two basic assets for development that have so far been insufficiently used: increasing the skills of women, most of whom are illiterate and marginalized, and drawing on the rich cultural, linguistic and historical heritage that has so far been ignored, in order to provide powerful tools for acceleration, as has happened in some of Asia's emerging economies.

10. Considered overall, these advances, potentials and assets for development also explain why returns on investments in Africa are now the highest in the world, and direct investments in the continent have risen sharply, from 15 billion dollars in 2000 to 87 billion in 2007. This trend offers an exceptional opportunity that must be seized.

11. All these prospects indicate that Africa's turn has come: the 21st century will indeed be Africa's century in terms of accelerated and sustainable development.

I.2 But there will be old and new challenges to face along the way

12. On the path towards accelerated and sustainable development also lie existing and new challenges that Africa will have to face to achieve the hoped-for future. These challenges pose stark questions when we see Africa's mediocre performance in the area of human development: Africa is not only back of the pack, it is also marking time.

Human development index

REGION	1990	2000	2010
Africa	0.4	0.4	0.4
East Asia and the Pacific	0.5	0.6	0.6
South Asia	0.4	0.4	0.5
Latin America & the Caribbean	0.6	0.7	0.7
OECD	0.8	0.9	0.9

13. The persistent obstacles underlying this underperformance are combined with some all-too-familiar world records: chronic poverty that strikes nearly half the population; epidemics and pandemics, including malaria and HIV/AIDS; a high level of illiteracy, particularly amongst women; 56 million children not in school; the hegemony of informal and subsistence economies with low added value; devastating civil wars and armed conflicts; poor governance and serious democratic deficits, etc.

14. There are also new challenges, two of which are particularly crucial.

15. There is a risk that global warming will worsen drought and desertification, resulting in severe shortages of water and of arable land, leading to unprecedented food shortages.

16. The acceleration and now permanent nature of the scientific and technological revolution, plus the increasing global hegemony of knowledge- and innovation-based economies, are currently deepening the cognitive, digital and technological fault lines that are increasingly decoupling Africa from the dynamism of the rest of the world.

17. If Africa cannot reverse the course of these negative trends, as is predicted by some future projections, the continent will sink deeper into its status as the “damned” of planet Earth (Hugon, 2000; Attali, 2006).

I.3 The skills of the human resources will make the difference

18. Beyond these scenarios – whether optimistic or pessimistic – based on projections from current data or likely trends, the future of Africa will depend essentially on the ability of its population to tap its development potential and cope with the challenges posed to make the needed ruptures and social transformations. Nevertheless, the capacity of the population or, in other words, the quality of Africa’s human resources, demands that critical skills must be promoted in sufficient quantity and quality to achieve these structural changes and take qualitative leaps to higher levels of development. This truth has been confirmed by past experience in both the developed and emerging countries. This is increasingly relevant today, and will be even more so tomorrow, because knowledge and innovation are becoming more powerful and more decisive every day as primordial factors in development.

19. This is why in Africa too, the promotion of knowledge and innovation must be placed at the center of constructing the future, and at the core of the strategies for accelerated and sustainable development. In this respect, Africa is confronting serious gaps in education and training that must be made up to enable it to lift the burden that hinders its progress along the path of sustainable and accelerated development.

Indicator RegionL	Literacy rate	Pre-Primary GER	Primary NER	Survival rate to the last year of primary	Secondary 1 GER	Secondary 2 GER	Higher GER
Sub-Saharan Africa	62	12	76	70	41	27	6
South and West Asia	62	21	86	66	71	40	10
Central Asia	99	20	90	99	98	95	25
East Asia and the Pacific	94	38	94	92	90	63	26
Arab countries	72	15	84	97	83	53	20
Latin America and Caribbean	91	56	94	86	101	74	38
Central and Eastern Europe	98	50	93	97	92	84	60
North America and Western Europe	99	75	95	99	103	98	70

Source: EFA Global Monitoring Report 2011

20. These statistics show clearly that Africa is quantitatively lagging behind in schooling and literacy at all levels of education and training. In addition, there are serious deficiencies in the quality and relevance of what is learned. The standardized assessments of school attainment in Africa performed by PASEC¹ and SAMEQ² show that at the end of their primary schooling, nearly half of the students have not mastered the written language or mathematics that are the basic tools required to cope successfully with subsequent learning. In addition, learning is usually reduced to “decontextualized” book learning, which does not go far to prepare the students to confront the challenges of their African environment, whether at the local, national or continental level.

21. This makes it an urgent necessity to identify clearly the critical skills required for development and determine the reforms required in the education and training systems if these students are to be able to develop them in sufficient quantity and quality to sustain the acceleration and sustainability of the continent’s development.

¹ PASEC: Programme d’analyse du secteur de l’éducation de la CONFEMEN (Conference of Ministers of Education of the French-speaking countries)

² SAQMEC: “Southern and Eastern Africa Consortium for Monitoring Educational Quality” which includes 15 African countries in the southern and eastern regions

II. FRAMEWORK FOR EDUCATIONAL POLICY AND PROFILES OF CRITICAL SKILLS FOR DEVELOPMENT

II.1 Framework for educational policy: general orientation, aims and goals

22. The African Union's vision of the future expresses the collective destiny that Africa seeks to achieve. An analysis of the political, economic, social, cultural, and human implications of this project leads on to the aims that must guide and shape a pertinent framework for education and training policy.

23. African integration presupposes a free union between the States and peoples, a union that is woven from mutual knowledge and understanding, solidarity and sharing, a democratic culture and full respect for human rights. The promotion of a Pan-African, perhaps even of a Pan-Africanist awareness, amongst both the people and their leaders, is crucial to winning the full acceptance of an African identity and citizenship.

24. Africa's prosperity depends on its accelerated growth and increased competitiveness, which demands that the continent should "run while others walk" (Mkandawire, 2009). It should be emphasized that the decisive factors to achieve this include expanding and increasing the skills and educational attainments of Africa's people in the fields of production and design on a large scale.

25. The crucial challenge to be faced if this acceleration is to be achieved without leading to the ecological and social disasters that similar accelerations have produced in other regions of the world raises the problem of sustainability. This demands, in addition to policies and strategies for equity and for environmental protection, the promotion of behavior and of production and consumption skills that conserve natural resources and promote equitable development.

26. In addition to the demands of living in cooperation, as highlighted above, peace also calls for a capacity for dialogue, the search for consensus, and a positive approach to and constructive resolution of any conflicts that occur. A State under the rule of law and good governance also contribute to this by ensuring equality and citizen participation, transparency and political stability.

27. African citizenship based on an African identity requires every African man and woman to master and take ownership of three key domains: African culture, language and history. The full exercise of African citizenship presupposes a deep grasp of Africa's unity amidst its diversity throughout history. Today the assumption of this citizenship militates in favor of the authentic promotion of public spaces for the expression of African citizenship and for initiative and responsibility.

28. The emergence of Africa as an influential player in the global arena must be linked to the process of African integration and to the hoped-for advances in the continent's development and political influence, but also to the successful inclusion of Africa in the globalization process as a producer, and no longer simply as a consumer, of science, technology and innovation.

29. From these aims emerges the profile of Africans that needs to be promoted:

- Human beings who are proud of their African identity, i.e. their cultural, linguistic and historical heritage, and who develop a Pan-Africanist awareness;
- African citizens who are aware, demanding and active in exercising their rights and responsibilities for sustainable development and democracy;
- Competent, productive, and innovative workers open to change and to technological developments;

- A scientific, technological, social, cultural, artistic, economic and political leadership that is engaged and capable of constituting a social force for qualitative change and for a drive towards invention, creation, innovation, entrepreneurship and good governance in the service of social transformation and accelerated, sustainable development.

II.2 Critical skills to promote the accelerated, sustainable development of Africa

30. The purposes and profiles thus defined are reflected in critical skills for the accelerated and sustainable development of Africa. The analytical work points to three levels of skills that correspond to the main missions of the education and training systems:

- A common set of core skills intended to promote, in all Africans, an African identity and a new African citizenship that is conscious, responsible and involved in all aspects of sustainable development and democracy;
- Technical and vocational skills designed to significantly enhance the productive and creative performance of the masses of workers so as to accelerate economic growth;
- Scientific and technological skills to create and strengthen an African transformational leadership that is capable of leading the ruptures, the structural changes and the qualitative advances that African societies and economies need as a foundation for their leap in knowledge and innovation to match the world's top levels.

31. The development of these skills is part of a lifelong learning perspective whose vision and policies are systematically addressed hereafter.

II.2.1 The common core skill-set

32. The common core skill-set includes basic skills that every African – child, youth or adult – must acquire. It provides the essential foundations for the human right to education, personal development, social inclusion, solidarity, peace, an African identity, environmental protection, the exercise of citizenship and the ability to continue learning. The acquisition of these common core skills can take place in various settings, including formal, non-formal and informal education, training and literacy programs. The AU is being asked to adopt, in a similar fashion to the European Union, a common set of African core skills, which are outlined here in three types.

The three types of basic skills that make up the common core

- Skills in communications and lifelong learning.* These concern skills in language, literacy and numeracy and cognitive skills involving observation, analysis, critical thinking, problem-solving, and decision-making;
- Skills for integration into society and the workplace.* These include social and citizenship skills that enable people to live in harmony in a democratic space that transcends discrimination and conflict in a spirit of cooperation, solidarity and peace. They also include generic skills to positively address economic and social development in a spirit of initiative and creativity with a positive vision of the world of work.
- Skills related to personal development and the promotion of an African identity.* These are above all life skills enabling each person to face the challenges posed by the crucial issues of health, nutrition, social protection, environment, the fight against spiralling poverty and the optimal development of the potential for personal development. These also involve skills for the assimilation of unity amidst the continent's diversity and cultural history so as to promote the values of solidarity and peace and to participate in the movement for African integration and re-birth.

Guarantee access to the common core skill-set at any age

33. It is essential to emphasize that learning some basic skills in the common core skill-set starts from birth. These then determine for the first six years of early childhood the development of intelligence, social inclusion and the success of future learning in school. This is why investment in education and early childhood protection is crucial for preparing children to learn. African States must thus develop programs for parents and communities that ensure the provision of adequate care and stimulation for all young children. As with preschool education, public investment must be directed primarily towards vulnerable children.

34. Universal primary education must provide access to the common core for all young people of school age. Otherwise, States should support the initiatives of local communities and civil society to introduce alternative arrangements to provide youth not in school the opportunity to acquire basic skills so that they can take charge of their personal lives and develop generic skills in preparation for a successful social and professional integration.

35. As for adults, many of them are illiterate or poorly educated. Some of the skills and progress they have made, often through non-formal or informal means, needs to be recognized. On this basis, the States must then give them the opportunity to exercise their right to belong, as active citizens, to the knowledge society and to access the common core of skills through training programs tailored to their needs and situations. It is imperative to mobilize the resources and the social forces needed to develop mass campaigns that include functional literacy programs so that in the near future the continent's literacy rate reaches the level achieved by other developing regions.

II.2.2 Technical and vocational skills for promoting a labour force that can accelerate Africa's economic and social development

36. Technical and vocational skills include generic skills related to the world of work and specific skills related to the various occupational qualifications. The former are cross-disciplinary aptitudes and skills that can be helpful in the performance of any job. They should be incorporated into every educational, training, and learning program and process so they can be acquired by every worker: methodological and organizational skills, teamwork, a spirit of initiative, openness to technology, the use of ICT, basic technical procedures used in the world of work, etc. From this perspective, the entire educational system includes a training component that justifies the need for a permanent conceptual and functional link between education and training.

From conventional technical and vocational education to the development of technical and vocational skills

37. With regard to specific skills, conventional models for technical education and vocational training present the drawback of being costly, undervalued, and too narrow to respond to the enormous level of need in each country. It would be wise to promote a new system that is more comprehensive, more diversified, more flexible, and more responsive to change – one that recognizes, mobilizes, strengthens, and integrates the various training and learning pathways, programs, and resources that currently exist, in either explicit or incipient form, in the economy and society, and promotes their interaction at every level:

- Formal training in the classroom, as part of a work-study program or in an apprenticeship;
- Non-formal training provided by companies, trade associations, local governments, civil society, etc.;
- Informal training in work environments, including traditional apprenticeships;
- Various potential training and learning resources that could arise from and be implemented through appropriate partnerships with businesses, trade associations, local governments, and volunteer initiatives.

38. This new approach will make it possible to provide training, skills, and access to the workforce, if not for everyone then at least for the largest possible number, and to young people in particular, with a view towards Africa's accelerated, sustainable development. It calls for an enhanced strategic partnership with the business community and trade sectors to establish, develop, and support each of the training processes and programs cited. In addition, it requires that gateways be created for career transitioning, along with national systems for

recognizing and validating expertise acquired through experience, in a professional environment, or by any other means.

39. In particular, the flexible and responsive nature of such a system, as well as the opportunities for dialogue and public/private partnership, will strengthen efforts to ensure that training programs respond to demand and to changing needs and requirements both within the economy and society as a whole and in specific business and trade sectors, while actively enlisting these stakeholders in the training process.

40. At stake here is the widespread expansion, effectiveness, relevance, and sustainability of vocational training in response to the decisive and urgent priorities for accelerating Africa's economic and social development.

First priority: transform subsistence economies into high-growth economies

41. The hegemony of the informal sector of the economy in the majority of African countries dictates the first priority task of national scope: to transform subsistence economies with low added-value into high-growth economies. In particular, agriculture, in its broadest sense, and craft industries are areas in which African countries must invest in order to raise work productivity, enhance the take-up of technology, and boost entrepreneurial capacity by promoting appropriate skills on a wide scale. The challenges for accelerating growth associated with such an investment, including the green revolution, are enormous, insofar as this informal sector is home to most of the employed and underemployed and provides training to the majority of workers in the form of apprenticeships. The challenge is also daunting because it involves a large number of illiterate workers whose vocational training needs must be addressed in the African languages through career-oriented literacy training.

Second priority: ensure youth employability and employment

42. This second country-level priority is tied to the first, insofar as accelerated economic growth would be expected to generate a significant number of jobs for young people. Depending on the perspective brought to this priority, this is seen by some as the "youth challenge" and by others as the "youth dividend". In any case, whether the large numbers of young people entering the job market in Africa are a demographic limitation or an asset, this presents a problem of employment and employability. To respond to this problem, the new system to develop technical and vocational skills enlists businesses and the trade sectors to provide training, encourages work/study training and apprenticeships in production units, enhances traditional apprenticeship programs, and takes employer needs and requirements into account in order to tailor young people's skills to the demand and to facilitate their transition from training to the workforce.

43. In addition, youth training needs to be focused on developing the capacity for self-employment and entrepreneurship against the backdrop of the development of a favourable environment, opportunities, and programs; in particular, central governments can aid this process by facilitating access to bank loans and institutional support.

44. Here, too, the challenges are enormous since, as noted earlier, Africa has a primarily young population, whereas in the rest of the world the population is comparatively old or aging. If Africa can successfully provide for the employment and employability of its young people, it will not only defuse a social time-bomb but also create a decisive comparative advantage that will make the continent substantially more competitive due to the significant increase in the working population and their level of skills.

Third priority: empower women with a major role in ensuring Africa's accelerated, sustainable development

45. Africa cannot achieve accelerated, sustainable growth without the full participation of women as a major force in the society and the economy.

46. Women represent half the population and perform the vital functions of reproduction, protection, and education. In addition, African women traditionally devote more than half their day – some sixteen hours – to laborious production and service tasks to ensure the survival of their families and the community.

47. But if women are locked into their traditional roles and status, their potential to be a major force in Africa's accelerated, sustainable development cannot be tapped. This is indeed currently handicapping the continent.

48. African women must have the same access as African men to opportunities for developing the technical and vocational skills that will enhance their employability and employment. This means not only strengthening their capacities in the income-generating activities they perform in agriculture, crafts, and the traditional processing of basic commodities, but ensuring their participation, on an equal level with men, in programs that prepare them for modern employment, self-employment, and entrepreneurship. This requires that every channel for developing such skills integrate the participation of women by eliminating discriminatory barriers to women and by developing targeted, incentivizing strategies and procedures.

49. It is the responsibility of governments to make the necessary decisions and provide the resources needed to develop and implement appropriate and effective strategies toward that end. In addition, they must take steps to remove all the ideological, cultural, and institutional constraints and barriers that restrict women's autonomy, creativity, and participation in training and economic activity, by promoting women's rights, by highlighting the valuable role that women play in society, by giving women equal access to property and land, and by ensuring their full participation in the social transformation that is needed if Africa is to enjoy accelerated, sustainable growth.

Respond to the demand for high-level professional skills

50. Alongside the two priorities highlighted above, there is a need to develop high-level professional skills and train advanced technicians who can monitor or even anticipate technological changes and innovations, lend support for the transformation of national production networks, and provide impetus to the continent's industrialization. Each country will need to rigorously identify priority areas for investment, in close conjunction with the most promising sectors and fields of employment, and taking into account the specific assets and potential for growth that constitute the country's comparative advantages.

Adopt strategic plans for the development of technical and vocational skills

51. Based on these guidelines and on an in-depth study of development needs and the market for job skills, each African country needs to develop a strategic plan for the development of technical and vocational skills, working in consultation and partnership with local governments, the private sector, trade associations, civil society, and youth movements. Ideally, the plan should be defined alongside other management, assessment, and governance tools to be established; these could include national quality standards, a system for providing information on the labour market and the skills needed for socioeconomic development, a national system for recognizing and validating acquired skills, and a participatory, partnership-based governance charter. These tools will make it possible to streamline, coordinate, and oversee efforts and initiatives in the sector, based on the strategic options and priorities set as well as on performance standards. For the purposes of strategic and operational governance, the partnership frameworks will need to include every possible stakeholder, from the central authorities to the basic training institutions.

II.2.3 Scientific and technological skills

Enormous gaps and shortfalls in Africa that need to be addressed immediately

52. When it comes to developing scientific and technological expertise, Africa has fallen substantially behind and must quickly make up lost ground; otherwise it runs the risk of being significantly excluded for years to come from the current trend towards globalization, which is being driven by ongoing breakthroughs in science and technology.

53. According to the 2011 EFA report, just 6% of the relevant age cohort has access to higher education, compared to 70% in North America and Western Europe, 38% in Latin America and the Caribbean, 26% in Eastern Asia and the Pacific and 10% in South and West Asia. In addition to this lag in the rate of access to higher education within its population, Africa is significantly handicapped in other ways as well: the marginal attention given to scientific and technological subjects by comparison with the dominant liberal arts and humanities; the formal, academic nature of most training curricula, with limited or no interaction whatsoever with the manufacturing sector; the weakness of research and knowledge creation, etc. Regarding this last

point, the numbers speak for themselves: in 2006 the number of research centres in Africa stood at 35, compared to 655 in Asia, 861 in North America, and 1576 in Europe. African researchers made up only 2% of the world's total in 2007, versus 40.9% for Asia, 21.9% for North America, and 29.5% for Europe (UNESCO, 2010).

54. In the face of urgent, vital needs, such as the management of natural resources and biodiversity, secure food supplies, the battle against poverty as well as pandemics and other epidemics, and economic competitiveness, it is therefore essential that Africa invest more heavily in education and training to expand its scientific, technological, and innovative expertise in order to capitalize on its assets and embark resolutely on a path of accelerated, sustainable growth. Otherwise Africa will remain largely condemned to its status as a supplier of raw materials, locked in past patterns of subsistence. This would merely accentuate its lag in development and exacerbate its state of impoverishment.

Disseminate scientific culture more widely throughout the educational and training system and society at large

55. The development of scientific and technological know-how begins not in higher education but during early childhood and thereafter, and continues throughout the years of primary and secondary schooling, as well as in both personal and collective experience. In other words, young people learn to observe, analyse, experiment, interpret, think rationally and critically, cast doubt, and use information and communications technology at every stage of their education and personal development and through influential scientific disciplines – indeed, in every learning activity. Children, young people, and society as a whole need to be inculcated with scientific and technological education and culture, including the use of ICT. Higher education has a threefold role to play in this regard:

- Science needs to be transposed or simplified for teaching purposes and stripped of its daunting or hermetic aspects to ensure it is universally accessible and comprehensible and that its basic concepts, laws, methods, and procedures are within everyone's grasp;
- Teachers must be trained in science and technology instruction or, more accurately, in the methods by which a scientific culture is learned;
- Research is needed into the reforms that must occur if education and training systems are to expand and strengthen the role and importance given to science and technology, not simply as disciplines but as educational building blocks for everyone, regardless of their ultimate objective.

56. In summary, the primary task is to combat ignorance by instilling in the community a scientific perspective on the challenges posed by their environment. We must then reverse the balance of emphasis throughout the educational and training system in favour of science and technology, establishing those subjects as the basic vehicle for ensuring Africa's accelerated, sustainable growth.

Tie the development of scientific expertise to the search for solutions to development issues in African societies and economies

57. If science and technology are to make an effective contribution towards Africa's accelerated, sustainable development, scientific and technological training will need to be closely coupled with the problems that local communities face with regard to their living and working conditions. When it comes to health, energy, nutrition, agriculture, and other concerns, local communities are being confronted with critical challenges and are developing practices and know-how in an attempt to meet these. Higher education needs to address these problems and challenges, as well as the endogenous solutions that have been developed in response, by training highly qualified skilled labour and expanding its research. It could foster interest among students currently in training by encouraging them to conduct research into these issues in cooperation in the field with the affected communities. Their reports could lead to research programs that focus on those same issues. This strategy entails a twofold approach that involves, first, a mutual learning experience between communities and higher education, and second, joint initiatives to resolve issues of concern. This type of dialectical interaction between science and technology on the one hand and the critical issues and challenges facing local communities on the other, supplemented by Africa's legacy of knowledge and practices, will generate scientific and technological know-how that is appropriate to and effective for an African context. Africa's appropriation

and internalization of science and technology will play a role as well, opening the door widely to invention and innovation that will enable Africa to become a producer, and no longer merely a consumer.

58. More broadly, the development of scientific and technological expertise must closely follow demand from African economies and societies – demand that will determine from the bottom up the respective weight given to higher education and research, while also enhancing the relevance and effectiveness of the training and research outcomes for the specific challenges posed by the socioeconomic environment.

Translate the results of research into innovative, useful practices and technology that can be implemented to boost the business sector

59. When knowledge is incorporated into the economic system of production, it brings wealth and growth. Furthermore, by putting scientific research to use, economic actors move from information to action and from science to development. Higher education that is committed to this perspective can become the principal driver of Africa's accelerated, sustainable development, by translating the results of scientific research into tangible technological progress and useful innovations in every field involved in development. The relevance and effectiveness of any system of higher education focused on this type of technology transfer will depend not only on the quality of the scientific study but also on how that process interacts with the actual specific environment. Therefore, wide-ranging curricular reform and efforts to enhance quality will be needed if higher education and research are to improve their scientific performance. Moreover, networks for dialogue and collaboration will need to be established, along with a framework for partnerships among universities, research centres, and public and private companies, in order to identify guidelines and needs with regard to technological development, operating procedures, and an institutional framework that defines mandates, roles and responsibilities, contractual terms and conditions, intellectual property rights, and so on. Over the medium or long term, such a process can lead to the creation of national networks for innovation, followed by offices for the transfer of technology. This will lend new impetus to the interactive relationship between science and development, a relationship that will in turn ensure that higher education and research play a greater role in building African economies that are based on knowledge and innovation. This will require that Africa make the necessary investment to acquire a critical mass of quality researchers, stop the brain drain, elicit the expertise of the African Diaspora, expand research budgets and infrastructure, and gain the confidence and active participation of the private sector and the production and business sectors. Investment on this scale becomes profitable once innovations, patent applications, and licensing agreements accumulate within the portfolio and begin to generate profits, at the same time that it significantly enhances the economy's competitiveness as part of a virtuous cycle of science-innovation-development. It also creates a favourable environment for attracting, motivating, and retaining scientific researchers.

Pool resources to ensure an effective, long-term response to common challenges and to the needs of cutting-edge sectors and highly specialized fields of science and technology

60. The cost of these national innovation networks and offices of technology transfer is quite high; moreover, they require state-of-the-art expertise in specialized scientific fields, as well as market studies, marketing campaigns, etc. African countries with limited resources are therefore advised to create a consortium of institutions whose member countries share a central office.

61. Pooling resources in this way is especially recommended in areas where countries are facing common challenges, such as HIV/AIDS research, or are addressing cutting-edge or highly specialized sectors in which no single African country – even South Africa – can invest the necessary resources to mount a long-term response.

Ensure the success of “Africa’s Science and Technology Consolidated Plan of Action” (AU-NEPAD)

62. With regard to the pursuit of these two objectives in Africa as a whole, “Africa’s Science and Technology Consolidated Plan of Action” (AU-NEPAD) identifies three pillars – capacity building, knowledge production, and technological innovation – for developing priority programs related to biotechnology, biodiversity and endogenous knowledge, water, energy, ICT, the use of basic technology, mathematics, the physical sciences, etc.

63. The Plan calls for African countries to commit to a steady process of developing centres of excellence over the short, medium, and long term: i) define the standards, criteria, and indicators for selecting centres of

excellence; ii) enhance the quality and relevance of both the programs and the skilled personnel and infrastructure at the centres of excellence selected; and iii) establish networks of centres of excellence both at the regional level and Africa-wide, support joint research programs, establish links with institutions outside Africa, and develop distance learning opportunities in order to bolster higher education at the regional level, notably on behalf of smaller countries.

64. In addition to these centres of excellence, the second pillar of the Plan calls for developing a science and technology infrastructure: the availability of ICT and the ability to use it, the construction and renovation of institutions, and the gradual expansion of infrastructure and facilities.

65. The third pillar involves collaborative links with the productive sector as the prerequisite for establishing networks of innovation: a mapping of each country's needs and economic priorities in light of its access to the necessary expertise, and strategic alliances with partners from the productive sector to integrate training at businesses and institutions of higher learning.

66. This strategy, aimed at aligning skills development with the developmental priorities of African countries, includes at least two other major challenges: the need to raise the level of African training and research to the highest international standards, and the creation of cutting-edge and/or highly specialized sectors that cannot be sustained within the confines of a single African country.

Develop a strategic plan for the development of scientific and technological skills

67. The policy guidelines defined above present African governments with the problem of repositioning and restructuring their higher education and research. These must first be re-legitimized and reoriented towards service to the nation and to local communities. This entails a process of differentiation prompted by the need to address the demands of the economy and society as closely as possible. This should result in an open, flexible system, responsive to its environment – one in which autonomous training institutions and research centres take the initiative and assume responsibility, with internal governance that draws on local stakeholders, notably representatives of local communities and businesses.

68. To prevent atomization, governments must first develop at the national level, in consultation with all the stakeholders, a strategic plan that defines priorities and options. They must also develop a framework for external governance that establishes links between these institutions and research centres, with an emphasis on developing scientific and technological expertise that is closely tied to the specific needs and development potential of their respective countries. These plans should be based on a clear, shared vision of the future to be built and the genuine assets on which each country can capitalize. Investment decisions should then be consistent with the priorities, options, and strategic objectives defined, based on the criteria of effectiveness and equity. Results-based management and funding will generate incentives and significantly enhance efficiency at these training institutions and research centres.

III. NECESSARY REFORMS AND PARADIGM SHIFTS

69. Africa's formal systems of education and training have proven largely unable to produce the necessary skills, in quantity or quality, to raise Africa's development to the level enjoyed by other regions of the world. These systems are usually not the result of each society's internal development, but imposed from outside by colonization. Their outward orientation and insularity with regard to their surroundings persist, despite the reform efforts that have been undertaken since independence. The "colonial school" mould, with its scholastic concepts, abstract formalism, elitism, and exclusion of Africa's heritage (languages and cultures), remains, consciously or unconsciously, the imagined benchmark of the Africans produced by that system. This makes reform difficult, given the dominant representations of what makes a quality school.

70. Today, any effort to promote policies and systems that can generate the skills needed to ensure Africa's accelerated, sustainable development requires an ideological, political, and epistemological break with the past, as well as a major reorganization that entails paradigm shifts and radical reforms.

III.1 Adopt a holistic vision of skills development that creates educational and training possibilities and opportunities outside the formal school system

71. Africa's need for skills cannot be met solely by formal education schemes or traditional schools, for obvious reasons of cost but also because their one-size-fits-all model is not suited to the wide range of learning needs and situations. Thus, the development of the necessary skills requires that we first adopt a holistic viewpoint with which we can explore, identify, and mobilize the various programs, networks, and resources for education, training, and learning that exist outside the traditional school system – whether existing or potential; formal, non-formal, or informal; in traditional or virtual classrooms; modern or traditional; with structured or open curricula, etc.

72. Parental and community-based education, intergenerational learning, alternative projects set up by civil society organizations, training provided by trade or faith-based institutions, apprenticeships developed at worksites and on the job, new opportunities offered by information and communications technology – these are just a few examples of the wealth and diversity of the resources and opportunities that we can identify, generate, encourage, support, and harness. The objective is to ensure that everyone has access to opportunities, adapted to his or her needs and circumstances, for learning and developing useful skills.

73. However, this wealth and diversity must not segregate, compartmentalize, limit, or marginalize categories of learners; rather, it should allow all the learners to draw on their full range of resources to reach their fullest potential. Thus, the system must include gateways and transitions, both lateral and vertical, by which learners can start or stop their education, shift their focus, and ascend from one level to the next by a variety of means. A system of this kind does away with the traditional pyramidal structure of schooling and the elitism and selection/elimination process inherent to that structure.

74. By this means we can foster a system that is comprehensive, diversified, integrated, flexible, and open – one that recognizes and strengthens all forms and methods of skills development, including experience and open learning.

75. Governments are invited to adopt this holistic view of skills development and to create favourable conditions for this, specifically:

- Integrated, ministerial-level administration of all educational, training, and learning programs, so that all the education sector's available resources can be pooled and synergies can be maximized;

- Collaboration with other sectors, so that the education sector can become aware of and respond to the need for skills in other sectors, and elicit support from those sectors when the conditions for enhancing universal access to learning demand a multi-sector initiative.

III.2 Promote a strategic approach to education and training policies

76. Africa's education policies and systems need to rupture with their operational mindset and replace it with a development mindset. The paradigm shift this entails – from supply to demand – indicates that education and training are not ends in themselves, but exist to serve development. Here, their mission is to achieve the human, social, political, economic, and cultural objectives defined in Africa's vision of its future.

77. Given the specific challenges that this future implies, any corresponding strategy will require that education and training be aligned with efforts to build both the foundations for sustainable development and the drivers of accelerated economic growth: a trained African citizenry that is responsible for and involved in sustainable development; an inclusive society; a stable, peaceful environment; improved labour productivity and economic competitiveness; knowledge- and innovation-based African economies, etc.

78. Each African government must take the initiative through national consultations and work jointly with all the stakeholders, including sources of financial power and the political opposition, to develop strategic policies for systemic reform towards that end. In particular, these policies should include:

- Democratizing education and training systems as part of a policy of inclusion to ensure that all learners have access to and can successfully master common core skills;
- Holistically aligning skills development with the needs entailed by sustainable development and economic growth and with labour market and community demand;
- Redefining system objectives accordingly, and adapting them into skills profiles and unified curricula;
- Incorporating African culture, history, and languages into these objectives, so that young people acquire skills that are rooted in their specific heritage;
- Promoting the new culture of learning entailed by the strategic choice of lifelong skills development and learning: learning to learn, to act entrepreneurially, to innovate, to mobilize knowledge and innovation to resolve development issues, to make informed decisions, to carry out projects, and to make learning a lasting, lifelong process;
- Making employment a core component of national plans and calling on all public, private, and community partners to help develop these plans in order to meet the "youth challenge" or capitalize on the "youth dividend", while at the same time enabling young people to acquire the necessary skills to ensure strong growth and greater economic competitiveness;
- Promoting an environment that is favourable to economic, business, and industrialization policies that foster entrepreneurialism and business growth, so as to improve employment prospects for young people.

III.3 Establish equitable, quality education and training as the basis for development

79. Equity in education and training does not mean that everyone learns under identical conditions, but rather that everyone enjoys opportunities adapted to his or her needs and circumstances and, as a result, can successfully acquire the necessary learning. Encouraging a diversified and integrated system is fully consistent with this inclusive view of education, in which no one is left behind. As indicated earlier, it is designed to eliminate discriminatory barriers both horizontally and vertically, and is open to special accommodations and strategies for addressing and reflecting gender and other differences.

80. Nonetheless, governments must go further still. Discrimination and marginalization in learning are rooted in factors that go beyond the education sector, as social, economic, cultural, and other forms of inequality react back on education. Thus, a policy of equity calls for a strategy of compensation or positive discrimination across multiple sectors, including health, nutrition, social security, and other sectors, in order to bridge any social, economic, cultural, physiological, or physical divisions that may prevent marginalized groups, notably women, from obtaining an education or training.

81. This equity-based perspective contains the seeds of a new culture of quality education and training. Quality is not excellence, which is focused on elitism. The notion of quality is closely linked to that of equity, because quality means first and foremost that everyone successfully obtains the required learning at a given level of the education and training system. Accordingly, failure is attributable not to shortcomings on the part of the learner, but to a system that failed to offer that learner the appropriate opportunities and conditions. This entails the need for alternative channels and resources for remedial learning, both internal and external, so that those who do not adapt to the existing model can still achieve success.

82. The notion of competency also adds an extra dimension to quality that must be taken into consideration. Successful learning can no longer be reduced to the mastery of knowledge. Competency requires something more of learners: the ability to use their acquired knowledge to respond to the developmental challenges and concerns posed by their local, national, continental, and global environment.

III.4 Make qualitative breaks with the past in order to put African systems on a new footing

83. The structural reforms and changes in strategic direction described above are integral to the task of constructing new education and training systems in Africa. In order for these new systems to emerge, we must make a sea change from the past, boldly and yet in rational, planned fashion, in order to build on a new foundation. With this aim in mind, we are proposing four radical changes designed to produce a qualitative leap to new systems of education and training in Africa.

Incorporate Africa's cultural, linguistic, and historical heritage

84. African societies have lived and worked in distinctive environments over the course of millennia, confronting critical challenges along the way. In the process, they have developed knowledge, practices, and skills for tackling issues of food security, human and animal health, natural resource management, etc. They have established methods of education, training, and apprenticeship for passing on this legacy from generation to generation, using the languages they speak.

85. All of this was ignored, marginalized, and devalued by colonial schooling, which shunted African languages aside and denied or distorted African history civilizations and their history. And it is precisely that legacy that these new systems must incorporate and enshrine on behalf of Africa's rebirth, by:

- Incorporating Africa's cultural and historical heritage into the curriculum, consistent with the Charter for African Cultural Renaissance (African Union, 2006), and specifically Africa's endogenous knowledge and practices as well as the General History of Africa;
- Using African languages as the primary languages of instruction within the context of a bilingual education.

86. The rational strategy behind this rupture consists of scrupulously identifying, and resolutely fulfilling, the prerequisites for its success, and in particular adopting the necessary linguistic, scientific, educational, instructional, and editorial measures to ensure that this process is grounded in irreproachable scientific rigour.

87. As was shown earlier in addressing the problems of local community development, higher education and research are central to the tasks involved here. Those tasks are far from insurmountable, especially given the considerable body of acquired knowledge on which they can draw.

88. Having created the monumental General History of Africa, UNESCO is currently lending its support to plans for using the History in African classrooms: adaptation of the curriculum at the various educational levels, teacher guides, teaching/learning materials, etc.

89. A number of African countries have accumulated many years of experience in bilingual education that includes the successful use of African languages, and these countries can share their knowledge with other interested nations. The African Union's African Academy of Languages (ACALAN) can provide invaluable help in this regard.

90. Moreover, several countries share regions bound with a common language, culture, and history – a strong argument for joint investment that would enable these countries to undertake these tasks cooperatively.

Instil a scientific culture in education and training systems

91. This change was cited earlier in the development of scientific and technical expertise. It means that the study of the sciences, mathematics, and ICT should play a central role in the learning provided by education and training systems at all levels. It also means instilling scientific literacy in such a way that everyone can grasp and make use of the ways that science interacts with other aspects of social, economic, political, and cultural life. The objective is to ensure that science provides insight and serves as a tool for describing current conditions, making decisions, and planning and taking action, specifically with a view towards Africa's accelerated, sustainable development.

92. In particular, the creation of a science-based culture needs to be closely intertwined with integration of Africa's cultural, historical, and linguistic heritage. The education and training process can create an important dialectical relationship between these two aims that generates:

- Productive interaction between the endogenous African legacy and exogenous knowledge;
- An emphasis on a dynamic, open African culture that is no longer purely focused on the past;
- Discoveries, inventions, and innovations in science and technology that bear Africa's stamp.

Promote lifelong learning

93. Humans in general are faced with the need to update their knowledge and skills in order to understand their needs and changing times and act, live, and work accordingly. Globalization, which has reduced the Earth to a planetary village; the embrace of the notion that knowledge is a primary and powerful factor in development; and the rapid pace of profound changes wrought by the scientific and technological revolution – all these factors lend vital meaning to the human being's existential needs.

94. This explains why the issue of lifelong learning arises so acutely in Africa, as it has in other parts of the world. Lifelong learning – i.e., from cradle to grave – requires complex networks providing access to learning opportunities at any age and in any location. This poses a challenge for education and training systems in terms of accessibility and for teaching/learning methods and in terms of strategies and outlooks for continued learning. Diversified and integrated systems are of course suited to meeting these needs; the concept of competency is relevant as well, as are teaching methods focused on learning and the learner. In this regard, skills development at any level should be viewed in terms of lifelong learning. The primary task is to provide for the prerequisites for access to lifelong learning, i.e., the tools of written communication: reading, writing, and digital literacy or basic mathematics. We must then ensure that these tools can be deployed to develop cognitive skills by helping learners to motivate themselves and acquire methods of learning, self-learning, and learning with peers. Lastly, education and training systems need to be incorporated into the broader and more complex infrastructure of lifelong learning.

95. This demonstrates why lifelong learning requires more of education and training systems: learning opportunities and networks need to be available in residential areas, work sites, leisure facilities, etc. Indeed, the goal is to build a true learning society that includes not just the new education and training systems but also communities of learners in every field, of every type, and in every location. Within this diverse, integrated,

and complex web of learning, each person not only has access to knowledge anytime and anywhere but, more important, can share and develop that knowledge.

96. This is the challenge facing African governments, which are urgently called on to design and develop policies for lifelong learning. Otherwise, the cognitive gap separating Africa from the rest of the world risks becoming even wider. The stakes involved in lifelong learning are enormous: raising the population's general educational levels, strengthening national expertise, closing the gap between African researchers and those of the global North, expanding the potential for innovation in African economies and societies, and so on.

Incorporate ICT into education, training, and learning

97. The use of information and communications technology (ICT) opens up new possibilities for spurring lifelong learning and, in general, accelerating an expansion and enhancement of education, training, and learning.

98. But which technology, for what purpose and for which applications, and at what cost?

99. This question must lie at the heart of any policy adopted. Governments must respond by defining a policy framework that establishes general aims, objectives, options, and strategies as well as systems, action plans, and standards for implementing, managing, and evaluating ICT. This policy framework must be based on research into which policies are best tailored to each country's circumstances and specific development objectives. It should also adopt technical and other options that are financially sustainable and should reflect the challenges and constraints posed by the specific environment.

100. ICT can be used in a variety of ways within the educational sector:

- To reinforce and enrich the instructional content and materials and the learning environments, which are generally poor at every level;
- To provide new options for initial and continuing education for teachers, whose current training is seriously deficient;
- To increase exponentially the number of participants in distance learning and free learning, in every subject area and at every level;
- To exchange and pool knowledge and expertise among the various people involved in the educational system;
- To build communities of learners online, etc.

101. In concrete terms, any use of ICT in education and training requires that these tools be mastered beforehand by those involved, notably the instructors and learners. The ability to use the related technology is becoming a basic skill to be included in the common core skill-set, but only with the assurance that it:

- Facilitates the search for information and critical thinking about that information,
- Aids users in acquiring knowledge and skills consistent with educational and training objectives.

III.5 Provide support for implementing change initiatives that have been adapted to the learning environment

102. The reforms that are needed in order to foster the critical skills for Africa's accelerated, sustainable development can only occur in a given learning environment once the following have been defined in consistent, concrete fashion:

- The purpose and objectives of education and training policies;

- General and specific skills that comprise the new training curriculum;
- New instructional methods and other teaching, learning, and training procedures and media;
- Assessment tools, criteria, and indicators that reflect the new quality standards;
- Empowerment of those charged with implementing the changes;
- Environments that are favourable to innovative teaching/learning strategies.

103. This adaptive process must be conducted systematically to ensure a unified, coherent curriculum. In terms of strategy, the primary requirement is that the process is oriented towards demand in the local community and economy. Consequently, governments must adopt a collaborative process in which businesses and other members of society play an active role, to ensure that their needs and requirements in terms of available skills are taken into account. Ideally, this dialogue and consultation will be informed and aided by data and analyses provided by expert scientific and technical assessments regarding both demand for skills in the community and standards for curricular reform.

104. Governments must also assume responsibility for mobilizing this expertise and lending support for the analytical work to be performed.

105. The second requirement flows from the notion of competency, which entails a shift:

- from atomized knowledge and conventional disciplinary boundaries to multi-disciplinary and cross-disciplinary integration of learning;
- from a mere mastery of knowledge to the ability to use knowledge to resolve problems in your surroundings;
- from transmitting/memorizing knowledge to enabling learners to develop competencies in the context of a problematic environment.

106. This in turn entails the following:

- Learning must go beyond the schoolyard gates, with learners investigating, researching, and interacting with their economic, social, and cultural surroundings;
- Performance evaluations must take non-cognitive competencies into account and measure the impact of learning in terms of external effectiveness or personal or social benefit, and must also provide adequate information to the appropriate families and institutions about each learner's performance;
- The learning environment must be restructured and its teaching materials updated to reflect the needs and requirements for competency development in light of the new instructional methods.

107. In order for these changes to be implemented on the ground, those involved must be empowered to act in accordance with the new culture and new approaches to be promoted. Teachers, who are at the heart of this process, must receive rigorous and systematic training in preparation, as part of a career development process that updates and refocuses teacher training objectives and strategies to ensure that teachers fully grasp the changes that must be carried out in order to usher in the new educational culture and approaches required by the reforms.

108. Likewise, the directors of each institution need to develop a transformational leadership so as to create a climate and an organization that are amenable to change. This means empowering not just trainers, educational advisors, and oversight bodies responsible for teacher supervision, but also the professionals involved in school system administration.

III.6 Create the critical conditions for successfully implementing reform

109. Reform initiatives have not been lacking in Africa and indeed remain plentiful. By contrast, very few countries have met with success in actually carrying out reform. The lessons gained from experiences in Africa and elsewhere in the world yield a number of recommendations for African governments:

- Build an adequately broad national consensus and mobilize the most influential societal forces behind that consensus, in order to overcome opposition and resistance to change and ensure that reforms are sustained over the long term, without regard to ministerial-level changes in the education sector and democratic transfers of power.
- Establish a participatory, partnership-based form of governance that includes all stakeholders at both the central and local level as well as at each learning institution, including local communities, the private sector, civil society, and young people.
- Mobilize and effectively allocate additional resources that are specifically set aside in support of the reform process.
- Enlist expert consultants to provide an analysis of the education sector and the political economy of the reforms and research to aid the reform process. Their work can offer a vision for the future, inform decision-making, and provide the basis for mechanisms and indicators that can be used to monitor, assess, and refine the changes implemented.
- Go beyond simple empowerment to motivate teachers and other stakeholders in reform, in particular by devising tools for measuring and recognizing their performance and by creating a consistently rewarding environment, active community participation, and a healthy school environment that fosters innovation and learning.

110. A commitment by political leaders at the highest level will be decisive in ensuring the success of the reforms, in terms of mobilizing the government and society to support the reforms, making the necessary trade-offs and decisions to encourage reform, allocating incentivizing resources to the reform process, mobilizing the various ministries to collaborate across sectors, integrating the reforms into a comprehensive process of social transformation, etc.

III.7 Develop effective strategies for exchange and cooperation on behalf of skills development

111. In order to promote the critical competencies needed for accelerated, sustainable development, African States can strengthen their policies and internal resources through exchanges and cooperation:

A strategic partnership for exchanging and sharing knowledge and experience among African countries

112. By exchanging and sharing their experiences and knowledge, African countries can enhance their abilities and tools for analysing, formulating, and implementing skills development policies and strategies. The inter-country quality nodes that have been tested with ADEA's support in the areas of literacy, peace education, and technical and scientific skills development deserve to be adopted and strengthened in that regard. The quality nodes model clearly gives countries greater control over the conditions and factors that make reform successful.

Pooling resources for projects, programs, and institutions at the regional and sub-regional levels and continent-wide

113. One effective and fruitful way for countries to address common challenges and/or tackle skills-related issues that would exhaust their resources individually is to pool their resources at the regional or sub-regional level or across the continent as a whole. The Science and Technology Consolidated Plan of Action (UA-NEPAD) cited previously offers one example with respect to the development of scientific and technical skills; other examples include the work carried out by PASEC and SACMEQ in the field of learning assessments.

Mobilizing and enlisting the support of the African Diaspora

114. The African Diaspora, which boasts high-level expertise, has demonstrated its readiness to contribute to the development of critical skills on behalf of Africa's accelerated, sustainable growth. Towards that end, it has taken steps to determine how it can respond to identified needs and the conditions for its mobilization. African nations must assess the level of support needed for skills development and set up responsive facilities for hosting Diaspora members at the national, regional, and continental levels, along with remote working networks in order to draw the maximum benefit from the Diaspora's contribution.

SOUTH/SOUTH and NORTH/SOUTH exchanges

115. Outside aid for skills development in Africa must be targeted more closely in order to enhance its effectiveness. South/South cooperation now offers a setting for learning about policies and strategies for skills development in emerging African economies, as the example of South Korea indicates.

116. North/South cooperation should be redeployed on behalf of the most disadvantaged groups, with a special focus on women: literacy for children and adults, skills development in rural areas and the informal sector, second-chance education for children without access to schools, etc.

117. Any strategy for obtaining outside support for African skills development should also be rooted in a learning process. Preference should be given to expert methodological and instrumental support for each country, so that nations can develop their own skills in response to challenges in the field, rather than rely on fill-in expertise or outside training – stratagems that have primarily helped to reinforce Africa's scientific and technical dependence on other countries and hasten a brain drain.

Support from multinational firms operating in Africa

118. The numerous multinational companies present in Africa must assume their share of responsibility for skills development by:

- Being actively involved in the public/private partnership conceived and established for that purpose,
- Lending their commitment to national plans for skills development and enhancement within their business sector, so that outside expertise can be replaced with in-country expertise over time.

Conclusion

119. Africa has a shared vision of the future that serves as a compass for guiding strategies and policies for accelerated, sustainable development. In the context of today's world, this vision conceived by the African Union includes some essential requirements: democracy and the rule of law; good governance and citizen participation; strong, sustainable economic growth; the development of economies built on knowledge and innovation; the creation of inclusive, peaceful societies; the promotion of open, dynamic African cultures; clean energy production and a turn to eco-friendly production and consumption models among the population; the availability of a critical mass of scientific and technological skills and resources; the elimination of devastating pandemics and epidemics such as malaria and HIV/AIDS; continental integration and enhanced geopolitical influence, etc.

120. Education and training are at the core of the transformations that must occur in order to fulfil these requirements. They are the wellspring of the skills that will be critical to Africa's accelerated, sustainable development.

121. But what are these critical skills, and what kind of education and training is needed to encourage them?

122. The strategic framework aims to address this question by identifying those skills and setting out guidelines for policy reforms to be developed and implemented in response. Thus, this framework is integral to the creation of the African Union's vision of the future, shared and approved by Africa's Heads of State. The conditions and factors for the success of those policies have been developed out of the lessons gained from past African experience, as part of a collegial discussion in which African education ministers have played a central role. It is now up to Africa's leadership at the highest levels to embrace this framework as a means of exercising its responsibility to guide, monitor, assess, and lend strategic support to Africa's construction.

123. The ADEA could then serve as a technical arm of the African Union, providing a forum for analysing, sharing, and capitalizing on promising policies and strategies in the field as well as a platform for exchanging, sharing, and pooling knowledge and expertise. It could also play a proactive role in supporting the development of new inter-country quality nodes for the radical changes needed in Africa's education and training policies in order to build new education and training systems that are firmly oriented towards Africa's rebirth.

124. Within this dynamic, it is our firm hope that Africa truly embarks on a process of transformation that will make it the continent of the XXIst century.

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