

THEME

Revitalizing Education towards the
2030 Global Agenda and Africa's Agenda 2063

THE BROADER "HOW"

GENERAL SYNTHESIS



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Ushirika wa Maendeleo ya Elimu Barani Afrika
الرابطة لأجل تطوير التربية في إفريقيا
Association for the Development of Education in Africa
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General Synthesis

This document was prepared by Mamadou NDOYE for the Association for the Development of Education in Africa (ADEA) for its 2017 Triennale meeting in Dakar, Senegal

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ACRONYMS

ADEA	Association for the Development of Education in Africa
AFD	French Development Agency
AfDB	African Development Bank
AIMS	African Institute of Mathematical Sciences
ANCEFA	Africa Network Campaign on Education for All
ANER	Adjustment Net Enrolment Rate
APPEAL	Asia-Pacific Programme of Education for All
ASPBAE	Asia South Pacific Association for Basic and Adult Education
AU	African Union
CAR	Central African Republic
CEFE	Competency Based Economies Through Formation of Entrepreneurs
CESA	Continental Education Strategy for Africa
CESAP	Committee for Studies, Education and Care for People with Multiple Disabilities
CONFEMEN	Conference of Ministers of Education of French-Speaking Countries
CSR	Corporate Social Responsibility
DAC	Development Assistance Committee
ECOWAS	Economic Community of West African States
EECP	Education and Early Childhood Protection
EFA	Education for All
EMIS	Education Management Information System
ESD	Education for Sustainable Development
ESET	Enhancement of The Skills of Entrepreneurs and Trainers
FIRST	Forward Inspiration Recognition of Science and Technology
GCE	Global Campaign for Education
GCED	Global Citizen Education
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
GESCI	Global E-Schools and Communities Initiative
GHA	General History of Africa
GLUPA	Great Lakes Universities Peace Association
GNI	Gross National Income
GPPAC	Global Partnership for The Prevention of Armed Conflict

HIPC	Highly Indebted Poor Countries
HIV	Human Immunodeficiency Virus
ICQN	Inter-Country Quality Node
ICON-MSE	Inter-Country Quality Node on Mathematics and Sciences Education
ICT	Information and Telecommunication Technology
IDP	Internally Displaced Persons
IEC	Information Education and Communication
IECD	Integrated Early Childhood Development
IIEP	International Institute for Education Planning
ILO	International Labour Organization
ISESCO	Islamic Educational, Scientific and Cultural Organization
JICA	Japan International Cooperation Agency
LGEP	Local Group of Education Partners
MDG	Millennium Development Goals
MOOC	Massive Open Online Course
NER	Net Enrolment Rate
NGO	Non-Governmental Organization
NPI	Nairobi Peace Initiative
OAU	Organization of African Unity
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OWG	Open Working Group
PASET	Partnership for Applied Science, Engineering and Technology
PGCE	Peace and Global Citizenship Education
PPP	Purchasing Power Parity
PPP	Public Private Partnership
R&D	Research and Development
RRAG	Research Review and Advisory Group
SDG	Sustainable Development Goals
SNE	Special Needs Education
SADC	Southern African Development Community
SIDA	Sweden International Development Agency

EMIS	Education Management Information System
SMASSE	Strengthening Mathematics and Science in Secondary Education
STEM	Science, Technology, Engineering and Mathematics
TPSD	Technical and Professional Skills Development
TVET	Technical and Vocational Education and Training
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO BREDA	UNESCO Regional Office in Dakar
UNESCO UIL	UNESCO Institute for Lifelong Learning
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UPEACE	University for Peace
USAID	United States Agency for International Development
VBE	Values Based Education
WEF	World Education Forum
WG	Working Group
WGEMPS	Working Group on Education Management and Policy Support

EXECUTIVE SUMMARY

The Association for the Development of Education in Africa (ADEA) organized its Triennale on the theme: “**Revitalizing Education Towards the 2030 Global Agenda and Africa’s 2063 Agenda: The Broader HOW**” from 14th to 17th March, 2017 at the Abdou Diouf International Conference Centre (CICAD) in Dakar, Senegal. The main theme consisted of the following four sub-themes:

- *Sub-theme 1: Implementing education and lifelong learning for sustainable development*
- *Sub-theme 2: Promoting science, mathematics, and information and communication technology*
- *Sub-theme 3: Implementing education for African cultural renaissance and pan-African ideals*
- *Sub-theme 4: Building peace and global citizenship through education*

The ADEA 2017 Triennale took place in a context that was marked by the commitments, orientations and objectives of the 2030 United Nations Agenda and the Framework of Action for the Implementation of the Sustainable Development Goal 4 (SDG4) on Education, as well as those of Africa’s Agenda 2063, and the Continental Education Strategy for Africa 2016-2025 (CESA 16-25). Both the global and Africa-initiated frameworks propose to re-orient African education and training systems towards the realization of the continent’s vision for the future. To achieve the global transformation goals from a sustainable development perspective, including SDG 4, each region has to adopt inputs, approaches and priorities that reflect its realities, needs and challenges, depending on its peculiar circumstances and aspirations. In Africa, they are defined by Agenda 2063 and CESA 16-25. For this reason, the development of the Triennale theme placed SDG4 at the centre of the revitalisation of education (sub-theme 1), and then articulated priorities related to major challenges in Africa’s education and development, namely: bridging the scientific and technological divides to build African knowledge economies and societies (sub-theme 2); building a strong pan-African identity as a basis for continental integration and African renaissance (sub-theme 3); and building a continent of peace, democracy, freedoms and human rights (sub-theme 4).

This ADEA flagship was the first real effort initiated by the Association, supported by the African Union and key partners that aimed at answering “the how” in implementing the continental and global agendas, from the lens and context of Africa. The analysis of Africa’s record reveals persistent challenges in implementation, which means that the main objectives set in the past are still far from being achieved today. The theme of the Triennale therefore, aimed to interrogate pertinent and perennial questions such as: what are the challenges facing the implementation of education frameworks and programmes in Africa? How can they be identified through the African experiences studied and in the different fields targeted by the Triennale theme? What are the effective responses to them from lessons learned from successful implementation experiences? What new approaches to implementation require the achievement of much more ambitious targets in 2030 than those of past frameworks when the latter have so far not been achieved? The theme benefitted from contributions to the preparatory analytical work, regional consultations and discussions at the 2017 Triennale itself on how to implement education transformation within the African context.

This general synthesis report presents a framework for the implementation of the recommendations made at the 2017 Triennale. It also explores the lessons learned from success stories and best practices identified and how they can inspire countries in search of successful factors and conditions

suitable to their specific context. It presents the knowledge and experience shared at the policy dialogue and, more importantly, the outcomes as per the following framework:

1. Assessing the stakes, ambitions and issues of Africa's Agenda 2063 and the 2030 Global Agenda: challenges and opportunities for the development of education in Africa;
2. Analyzing the strategic axes and priorities for action towards the transformation of education in Africa;
3. Ensuring quality education and lifelong learning for all;
4. Bridging the scientific and technological divide;
5. Building Pan-Africanism and African cultural renaissance;
6. Promoting global citizenship and the culture of peace;
7. Deploying conditions and factors for successful implementation; and
8. Adopting a continental roadmap.

The analysis of the state of education in Africa, as well as lessons learned from successful experiences, underscore two decisive conditions for the attainment of the objectives and targets of 2030 Agenda and Africa's Agenda 2063, namely:

- If educational policies are not transformed, the status quo is bound to produce the same results as those obtained from independence up to now: the countries always remain far removed from the set objectives by the successive education development programmes;
- It is necessary to transform the orientations, contents and the operational modalities of education to be able to transform Africa and the world in terms of sustainable development.

But what must Africa change in order to successfully attain the global and continental education objectives? What needs to be changed in education to enable it to change Africa and the world? How will the desired educational transformation be implemented? Admittedly, Africa is not lacking in educational reform projects. The problem is that only a handful of countries have succeeded in implementing them effectively. Therein lies the main challenge of achieving the goals and targets for the 2030 Global Agenda and the Africa's Agenda 2063. An African roadmap towards attaining the objectives of education under both Agendas was adopted to ensure the follow-up of the Triennale and provide support for African countries. It draws inspiration from the 2030 Framework of Action, which represents the international roadmap for the realization of the SDG4 by 2030 and which proposes strategies of suitable actions for each country.

The African roadmap consists of the following guiding principles: (i) the principle of taking ownership and regional adaptation in articulating the perspectives of both the 2030 Agenda and Africa's Agenda 2063 as well as the outcomes of reflections at the Triennale; (ii) the principle of inclusion of all the education stakeholders in Africa: ministers, civil society organizations and the private sector, development agencies and foundation, teachers' unions, parent's associations, women and youth movements, research and expertise networks; and (iii) the principle of effectiveness, by avoiding duplications and putting in front the comparative advantages of coordination. The roadmap presents the following 5 priority areas and their corresponding strategies of action:

Priority Action 1: Achieve SDG4: It entails: (i) Implementation of quality education for all towards sustainable development; (ii) Integration of the approach to transformation of the curricula and the learning and training environments, schools and other training institutions and all educational resources into factors for the promotion of adult education and lifelong learning; and (iii) Development of technical skills, youth employability and decent work for all.

Priority Action 2: Build a new African School System. It calls for contextualisation and African transformation of education to better target the educational needs, adaptation of the models to the resources to enhance the search for solutions at the local level, integration of the programmes and perspectives to the processes of planning, and community decision-making, and the interaction of the systems with the surrounding community, through multi-partite networks.

Priority Action 3: Revolutionize Skills. It will consist of (i) Skills revolution through the promotion of teaching and learning of mathematics, science and technology and the twofold increase in the number of students registered for these courses; (ii) Higher education and STEM at the service of economic acceleration and sustainable development of Africa; and (iii) Integration of ICT in education, particularly in the processes of teaching and learning and offer of quality online learning.

Priority Action 4: Learn to live freely and in peace together: It involves: (i) Integration of peace education and global citizenship in the systems; (ii) and Participation of women and the youth: peace movements, global citizenship and sustainable development, contribution to advocacy and policy development and implementation.

Priority Action 5: Deploy conditions and factors of success: They include: (i) Mobilization of the Committee of Ten Champion African Heads of State on Education, Science and Technology; (ii) Implementation of Innovative Financing Mechanisms and the African Education Fund (AEF); and (iii) Transforming teachers' cultures and practices for educational transformation.

The strategies for action consist of the following:

Strategy 1: Communication for mobilizing commitment from all the stakeholders: advocacy, information, sensitisation, social mobilisation;

Strategy 2: Assistance granted to the movement: dialogue forum on the policies, exchange networks on the best practices and knowledge sharing, learning and peer review, studies and research setting up of learning communities on the steps facing the problematic questions and major challenges;

Strategy 3: Facilitation of sub-regional, regional, and international partnerships in collaboration with the institution and the players at these different levels;

Strategy 4: Mobilisation of targeted resources to leverage the creation of catalyst effects; and

Strategy 5: Monitoring/evaluation of progress at the continental level, support to the diagnoses and studies, to exchanges on results and measures.

The key word during the discussions and conclusions of the 2017 Triennale was **Transformation**: It means:

- The vision of transformation and the resolute commitment of the political leadership at the highest level: The intermediation of the Committee of Ten Champions African Heads of State on Education, Science and Technology established by the African Union must be mobilised towards this end, in particular, the high-level meetings proposed in the roadmap;

- The increase in educational financing coupled with a better definition of the implementation priorities and strengthening of effectiveness and equity in educational expenditure. The African Education Fund has been adopted to complement, pool and support the efforts of countries towards the attainment of the set objectives; and
- The availability of strong technical and institutional capacities, including strategic planning and operational planning, requires planned programmes for the development of capacity within the period and going forward. The roadmap incorporates them in exchanges between countries and in learning with peers, but it also allows for resource mobilisation for the African Education Fund to propose a regional institutional response to this vital need.

The implementation of the roadmap involves all stakeholders and partners in the transformation, with mutual accountability as espoused by the participatory approach adopted. The roadmap enhances Africa's chances of attaining the goals of the 2030 and 2063 agendas through the pooling of resources, brainstorming, learning and development of skills which makes impossibility a possibility.

1. INTRODUCTION

The Association for the Development of Education in Africa (ADEA) organized its 11th Triennial Edition of Education and Lifelong Learning in Africa on the theme: “**Revitalizing Education Towards the 2030 Global Agenda and Africa’s 2063 Agenda: The Broader HOW**”. The overall theme of the Triennial, held from **14 to 17 March, 2017**, at the Abdou Diouf International Conference Centre (CICAD), in Dakar, Senegal, was broken down to four sub-themes:

- Implementing quality education and lifelong learning for sustainable development (SDG4)
- Promoting Science and Mathematics and Information and Communication Technology in the educational systems for successful structural transformation of Africa;
- Implementing Education for African Cultural Renaissance and Pan-Africanist Ideals for the Emergence of the United States of Africa (Confederation or Federation); and
- Achieving success in education for peace and global citizenship to promote mutual understanding within and among human groups, the ability to live together in peace and solidarity while ensuring respect for diversity.

1.1. Continuity of the Reflections from Ouagadougou 2012 to Dakar 2017

The theme of the 2017 Triennial falls within the context of the ongoing examination of Africa’s critical educational issues, particularly those highlighted at the last Triennial held in 2012 in Ouagadougou, Burkina Faso on the theme: “**Policy Framework to Promote the Skills for Accelerated Growth and Sustainable Development in Africa**” (ADEA, 2012), which identified three main areas of expertise to be developed.

- **A core set of competencies based** on three basic skills: (i) communication and life-long learning skills (language and mathematical, literacy and cognitive skills of observation, analysis, critical reflection, problem solving and decision making); (ii) skills for integration in society and the world of work (social and civic competences, generic work skills); and (iii) skills for personal development and assertion of an African identity (skills for the promotion of health, nutrition, social protection, environmental preservation, participation in integration and African renaissance).
- **Technical and professional skills** based on four priorities: (i) transforming subsistence economies into high-growth economies; (ii) youth employability and employment; (iii) empowering women as major actors in accelerated and sustainable development in Africa; and (iv) the formation of a critical mass of professional skills capable of anticipating and implementing technological change and innovation, changes in national production systems, and the impetus of industrialization on the continent.
- **Scientific and technological skills** that can create and strengthen African transformational leadership capable of building the growth of African societies and economies on knowledge and innovation to get them to the best levels in the world through: (i) the dissemination of scientific culture throughout the educational and training systems and the society; (ii) the close articulation of the development of scientific competence in the search for solutions to the specific developmental problems faced by African societies and economies; (iii) the transfer of research findings into innovative and useful practices and technologies for development; and (iv) the pooling of resources for effective and sustainable responses to

common challenges and demands in advanced sectors and highly specialised fields of science and technology.

This framework remains current since it is in line with accelerated growth and sustainable development, which are at the heart of Africa's Agenda 2063 and the 2030 Global Agenda.

1.2. 2017 Triennial: a new context marked by major changes and re-orientations.

However, the 2017 Triennial is taking place in a context different from the 2012 one, and is marked by major changes and re-orientations of the 2015 assessment, which have substantially affected the environment, scope and aims of education and training. These include the commitments, orientations and objectives of the 2030 UN Agenda and the Framework of Action for the Implementation of SDG4 on Education, as well as those of the African Union Agenda 2063, and the 20162025¹ continental education strategy, which proposes to re-orient African education and training systems towards the realization of Africa's vision for the future. While continuing with the pursuit of unattained objectives under the Millennium Development Goals (MDGs) and Education For All (EFA), these new reference frameworks focus on new philosophies, paradigm shifts and transformational requirements developed around the change of a sustainability concept that is no longer limited to the environment but is now multi-pronged:

- Social Sustainability: eradication of hunger and poverty, inclusiveness of all, gender equality and empowering women and girls;
- Economic sustainability: sustained, shared, inclusive and environmentally friendly economic growth that guarantees decent work for all;
- Environmental sustainability: modes of development, consumption, production and use of climate-friendly natural resources, including fauna and flora biodiversity;
- Cultural sustainability: recognition and respect for cultural biodiversity developed around peace, exchanges, cooperation and solidarity among all peoples of the world and around commitment to the universal human rights, fundamental freedoms and democracy;
- Sustainability of Learning: eradication of illiteracy, quality education for all, opportunities for lifelong education for all.

The stakes here are quite high: transition to a development model based on humanity, generational and inter-generational solidarity, mutual cultural understanding and peaceful co-existence in diversity, progressive future of humanity, survival and self-fulfilment of the human being on earth - these are some of the conditions for the transformation of the world within this perspective. The United Nations clearly affirms the need for a holistic and intersectoral approach to sustainable development. For instance, economic growth can hardly be sustainable without social inclusion and/or without environmental conservation, and vice-versa. These interactive linkages touch on seventeen sustainable development goals (SDGs), including SDG4 on education, the implementation of which must be designed, planned and executed through an integrated approach.

¹ CESA 16-25 works hand in hand with the Technical and Vocational Education and Training (TVET) Strategy and the Science, Technology and Innovation Strategy for Africa (STISA 2024).

1.3. Theme for the Triennial: Revitalisation Concept and the “How” Issue

The post-2015 agendas also carry high humanistic ideals, strong ambitions and voluntarist commitments that represent the purposes, guides and levers to the repositioning and rebuilding of education towards an in-depth search for meaning and relevance in the humanisation process of individual and collective education. They also represent the revitalisation and diversification of education to suitable responses for the needs for each and every one regardless of gender for their mobility; and for social equality and cohesion. Reorganizing education to achieve these goals requires a redefinition of the mission of education and training systems to guarantee to all human beings and in full equality the effective exercise of the fundamental right to education and make it a decisive factor for sustainable development in its broadest sense, as indicated above. Given the history of African education, the concept implies here, more than elsewhere, a break driven by transformational policies, strategies, cultures and practices influencing both the purposes, contents, processes and resources, institutions and stakeholders.

Furthermore, an analysis of Africa's record shows progress but, above all, reveals persistent challenges in implementation, which means that the main objectives set at the time are still far from being achieved today. What are the challenges facing the implementation of education frameworks and programmes in Africa? How can they be identified through the African experiences studied and in the different fields targeted by the Triennial theme? What are the effective responses to them from lessons learned from successful implementation experiences? What new approaches to implementation require the achievement of much more ambitious targets in 2030 than those of past frameworks when the latter have so far not been achieved?

It is around these questions, centred on implementation of the transformation within African contexts that the theme called for contributions for the preparatory analytical work, regional consultations and discussions at the 2017 Triennial. Beyond what to implement for the targeted transformation, the questions focus particularly on how are they to be implemented?

1.4. Thematic Focus and African ownership

The above-mentioned sustainable development concept and approach include the aspirations of Africa's future vision enumerated in the 2063 Agenda, just like the CESA 16-25 goals. However, the 2030 Agenda and its objectives are universal. To achieve the global transformation goals from a sustainable development perspective, including SDG 4, each region is committed to adopting inputs, approaches and priorities that reflect its realities, needs and challenges, depending on its peculiar circumstances and aspirations. In Africa, they are defined by Agenda 2063. For this reason, the development of the Triennial theme places SDG4 (sub-theme 1) at the centre of the revitalisation of education, and then articulates priorities related to major challenges of Africa's education and development, namely: bridging the scientific and technological divides to build African knowledge economies and societies (sub-theme 2); building a strong Pan-African identity as a basis for continental integration and African renaissance (sub-theme 3); and building a continent of peace, democracy, freedoms and human rights (sub-theme 4). This universal-continental breakdown achieves a first level of African ownership, which explains the structuring of the theme in four sub-themes.

The second level of African ownership is achieved in the participatory approach to the analytical work on the theme. Based on a strategic research-action, it included countries and educational

stakeholders of the five African regions in the preparation process on issues raised by the theme and the sub-themes. Regional consultations were thus held for countries by sub-theme as follows:

- East Africa in Nairobi, Kenya on sub-theme 1;
- West Africa in Dakar, Senegal and of North Africa in Marrakesh, Morocco on sub-theme 2;
- Southern Africa in Luanda, Angola on sub-theme 3;
- Central Africa in Libreville, Gabon on sub-theme 4.

The regional consultations were concluded with a continental consultation in Egypt. This participatory preparation strategy motivated all countries and education stakeholders in Africa to contribute to the collegially prepared analytical work on the topic through experiences and knowledge that they could capitalize in the form of case studies or summary documents. Throughout the process, ADEA's Working Groups (WGs) and Inter Country Quality Nodes (ICQN's) documented the achievements of the work they have accomplished during all these years in collaboration with their networks of experts and countries. All these contributions are the subject of the four thematic syntheses relating to the four sub-themes, as well as this general synthesis, which were presented for discussions at the Triennial.

Apart from the introductory sessions and the conclusion, the Triennial brought together a high-level panel of experts, Ministerial round-tables and parallel workshops, which enriched the concept papers, not only in respect of the sub-themes, but also in the critical aspects on the agenda: "Implementation priorities for education in Africa", "quality education for all at all levels", "adult education and lifelong learning for all", "developing competencies, youth employability, entrepreneurship and decent work for all", "higher education and STEM", "mechanisms for financing education, a global public good", and "perspectives and approved plan of action at the Triennial". It is worth noting that the Chairman of the panel on financing education was the President of the Republic of Senegal, and this was a high point in the event.

The Triennial succeeded in pooling ADEA Member States' successful experiences for implementation of education for sustainable development and for ensuring quality education and creating opportunities for lifelong learning for all within African contexts. To ensure the monitoring of Triennale's recommendations, a continental roadmap was adopted.

This document analyses the knowledge and experience sharing of the outcomes in 8 points:

9. Assessing the stakes, ambitions and issues of Agenda 2063 and the 2030 Global Agenda: challenges and opportunities for the development of education in Africa;
10. Strategic thrusts and priorities for action towards the transformation of education in Africa;
11. Ensuring quality education and lifelong learning for all;
12. Bridging the scientific and technological divide;
13. Building Pan-Africanism and African cultural renaissance;
14. Promoting global citizenship and the culture of peace;
15. Deploying conditions and factors for successful implementation; and
16. Adopting a continental roadmap.

2. ASSESSING THE STAKES AND ISSUES OF EDUCATION DEVELOPMENT IN THE 2030 PROGRAMME AND 2063 AGENDA

Challenges and opportunities for the development of education in Africa

The 2063 Agenda, adopted in 2013 by African Union Heads of State, outlines the vision for the future of Africa in seven aspirations: (i) a prosperous Africa based on inclusive growth and sustainable development; (ii) an integrated continent, politically united and based on the ideals of pan-Africanism and the vision of African renaissance ("United States of Africa: Federation or Confederation"); (iii) Africa where good governance, democracy, respect for human rights, justice and the rule of law prevail; (iv) Africa of peace and security; (v) Africa with a strong cultural identity, common values, ethics and heritage; (vi) Africa with citizen-centred development, building on the potential of its populations, especially its women and youth, and caring for children; and (vii) Africa that has become a strong and influential player on the world stage.

The 2063 Agenda strategy of action is based on six pillars: (i) structural economic transformation and inclusive growth; (ii) promoting science, technology and innovation; (iii) people-centred development; (iv) environmental sustainability, natural resource management and disaster risk management; (v) peace and security; and (vi) finance and partnerships.

The 2030 Agenda adopted by the United Nations General Assembly in 2015 incorporates the general aspirations of the Africa's Agenda 2063 such as prosperity, inclusion and sustainable development, democracy and the rule of law, peace and security, and human-centred development. The vision of the future that 2030 Agenda bears is immediately asserted in its title: "Transforming our World: The 2030 Agenda for Sustainable Development". The paths and goals of this transformation reflect lofty humanistic aspirations: to eradicate poverty in all its forms and dimensions; to combat inequalities in and between countries; to preserve the planet; to create sustainable, shared and lasting economic growth; to achieve human rights for all, gender equality and the empowerment of women and girls; and to foster social cohesion, peace and security in the world.

2.1. Huge Challenges for the Future of Africa and the World

The challenges facing the Africa's Agenda 2063 and 2030 Agenda are therefore huge for the future of African peoples and for all humanity. In a nutshell, it is an issue of turning the page on a declining world that no longer fits the interests and aspirations of the overwhelming majority of humanity in order to make way for the emergence of a new world through a development model based on commitment and the satisfaction of the basic needs of all human beings, without any distinction between those who are alive today and those who will live afterwards. The stakes are particularly high for Africa if action is not taken given that it is a continent beset by desertification and famine or the preservation and regeneration of natural resources, the loss of immense arable land and the wars of appropriation of the rest or the conservation of the agricultural heritage and food security for all, deepening the divide with the rest of the world and mass emigration or accelerated development and valuation of the demographic dividend, marginalisation or continental integration.

The success of the expected transition thus becomes an imperative, and at the same time, a huge challenge of historical break and a qualitative leap. But no such revolution can be accomplished peacefully without education. In other words, to accomplish this transformation, Africans need to

acquire the consciousness, behaviour, values, knowledge and skills that make them capable of promoting sustainable development in all its dimensions. It is important to emphasize here that in the 2030 Programme, the sustainable development vision integrates the conceptual shift of sustainability. This vision was initially a concept essentially linked to the environment, focusing on the need to exploit nature in such a way as not to impair its productivity or resilience. This concept has been expanded to include the social and economic infrastructure that determines a society's ability to sustain itself in a rapidly changing global context. In the contemporary African contexts, this "capacity of a society to maintain itself" poses a fourth cultural dimension in relation to the imperative of cultural identity in globalisation. This is what the 2063 Agenda is all about. In short, the concept of sustainable development reconciles four inseparable and interactive dimensions: (a) protecting and safeguarding the environment, particularly the fight against climate change; (b) promoting a model of sustainable economic growth based on rational exploitation and conservation of natural resources; (c) the construction of inclusive societies based on the effective fight against poverty and all sources of discrimination and inequality; and (d) strengthening mutual recognition in cultural and spiritual diversity and understanding between different groups, societies and peoples in the sense of living together in peace and harmony. This concept is what renews the vision of education as an essential condition and decisive factor for achieving the objectives of the 2030 Programme and 2063 Agenda. In this perspective, the table below, drawn from the 2016 Global Monitoring Report, and adapted for this report, reveals the specific links between education and the other 16 SDGs and 23 objectives of Agenda 2063.

Table 1: The Link between Education and the respective objectives of SDG and Agenda 2063

SDG	G2063	
SDG1	G 1.1.	To eradicate poverty and raise the standard of living and quality of life for all, education is a decisive factor of social mobility.
SDG2	G1.5.	Education is a key contributor to the progressive adoption of more modern, more productive and more sustainable farming methods and a better understanding of nutrition.
SDG3	G1.3	Education can make a real difference in many health-related areas: early mortality, reproductive health, spread of diseases, nutrition and healthy life-styles, well-being.
SDG5	G6.1	The education of women and girls is crucial if we are to achieve basic literacy, strengthen participatory skills and competences and improve the chances of life, and ensure full equality between men and women in all spheres of life.
SDG6	G1.7	Education and training strengthen skills and capacities for more sustainable use of natural resources, and can promote hygiene.
SDG7		Non-formal and informal education programmes can encourage energy conservation and stimulate the adoption of renewable energy sources.
SDG8	G1.4	There is a direct correlation between areas such as structural transformation and economic vitality, entrepreneurship, skills adapted to the labour market, and levels of education.

SDG9	G1.7	Education is necessary to develop the skills needed to build more resilient infrastructure, economies and communities and to promote more sustainable industrialisation.
SDG10		Accessible and inclusive education is a proven means of reducing social and economic inequalities.
SDG11	G1.7	Education provides everyone with the skills to participate in the organization and maintenance of more sustainable cities and resilience in disaster situations.
SDG12	G1.7	Education can revolutionise production (especially in the circular economy) and help consumers understand goods are produced in more sustainable ways and how to prevent waste.
SDG13	G1.7	Education is essential in helping as many people as possible understand the impact of climate change. It promotes adaptation and mitigation, especially at local level.
SDG14	G1.6	Education is essential in promoting awareness on the marine environment and building a proactive consensus on what constitutes wise and reasonable exploitation.
SDG15	G1.6 G1.7	Education and training strengthen the skills and capacities needed to support sustainable livelihoods and preserve natural resources and biodiversity, especially in threatened environments.
SDG16	G4.1 G4.2 G4.3	Social learning is crucial to the sustained development of peaceful, open and secure societies.
SDG17	G1.7	Life-long learning builds the capacity to understand and promote sustainable development policies and practices.
	G2.1 G2.2 G2.3 G7.1 G7.2.	Education imbues the ideals of pan-Africanism in the minds of young people in order to establish the basis for the continent's integration and unity in a Federal or Confederate Africa, as a condition for achieving high aspirations for prosperity, full sovereignty and global influence.
	G3.1. G3.2.	Education is essential for the development of a conscious and active citizenship that promotes democratic values and practices, universal human rights principles, justice and the rule of law, and corresponding leadership and institutions.
	G5.1.	Education builds the historical, cultural and linguistic fundamentals of a strong cultural identity based on African Renaissance.
	G6.2.	Education facilitates the exercise of the fundamental rights of young people and children and strengthens their awareness of duties and responsibilities.

These linkages between the SDG4 and the other 16 SDGs of the 2030 Agenda and the 23 goals of Agenda 2063² call for a rethinking and repositioning of education policies in respect of basic orientations: purposes, aims and general objectives. They also encourage educators to better target the meaning and relevance of educational action, in other words, to better ensure its usefulness in the promotion of individual and collective human development.

2.2. Highly Ambitious Objectives and Targets consistent with the Scale of the Transformation Envisaged

SDG4 of the 2030 Agenda and Objective 1.2 of the 2063 Agenda are therefore expected to play a decisive role in education in transforming Africa and the world in interaction with other development objectives.

To this end, SDG4, "Ensure universal access to quality education on an equal footing and promote lifelong learning opportunities", sets seven targets and three implementation modalities (a, b and c):

- **4.1** By 2030, ensure that all girls and boys undergo a full cycle of free and high quality primary and secondary education on an equal footing’;
- **4.2** By 2030, ensure that all girls and boys have access to early childhood development, early childhood care and quality pre-school education that prepare them for primary education;
- **4.3** By 2030, ensure that all women and men have equitable access to quality, affordable technical, vocational or tertiary education, including university education;
- **4.4** By 2030, significantly increase the number of young people and adults with skills, including technical and vocational skills, needed for employment, decent work and entrepreneurship;
- **4.5** By 2030, eliminate gender inequalities in education and ensure equal access for vulnerable persons, including persons with disabilities, indigenous peoples and disadvantaged children, to all levels of education and vocational training;
- **4.6** By 2030, ensure that all young people and a significant proportion of adults, both men and women, can read, write and count;
- **4.7** By 2030, ensure that all pupils acquire the knowledge and skills needed to promote sustainable development, including through education for sustainable development and livelihoods, human rights, gender equality, the promotion of a culture of peace and non-violence, global citizenship and the appreciation of cultural diversity, and the contribution of culture to sustainable development;
- **4.a** Build schools that are appropriate for children, persons with disabilities and both sexes or adapt existing facilities for this purpose and provide an effective learning environment that is safe, violence-free and accessible to all;
- **4.b** By 2020, significantly increase at global level the number of scholarships offered to developing countries, particularly least developed countries, small island developing states

² The 12 strategic objectives (SOs) of CESA 16-25 are: SO1 - Revitalize the teaching profession, SO2 - Build and rehabilitate infrastructure, SO3 - Harness the capacity of ICT, SO4 - Ensure acquisition of requisite knowledge and skills, SO5 - Accelerate processes leading to gender parity and equity, SO6 - Launch comprehensive and effective literacy campaigns, SO7 - Strengthen the science and math curricula, SO8 - Expand TVET opportunities, SO9 - Revitalize and expand tertiary education, SO10 - Promote peace education and conflict prevention and resolution, SO11 - Improve the management of education system as well as the statistic tool, and SO12 - Set up a coalition of all education stakeholders.

and African countries, to finance the follow-up of higher education, including professional training, computer science, technical and scientific curricula and engineering studies, in developed and other developing countries;

- **4.c** By 2030, significantly increase the number of qualified teachers, including through international cooperation in teacher training in developing countries, especially in least developed countries and small island developing States.

Goal 1.2 of the 2063 Agenda focuses on "well-trained citizens and a skills revolution underpinned by science, technology and innovation" with the following targets:

- a) Achieve a literacy rate of 100 per cent by 2025;
- b) No gender disparity at all levels of education by 2030;
- c) Achieve a 100 per cent education enrolment rate for children by 2035;
- d) At least 70 per cent of the population receive quality education at all levels;
- e) Increase the number of qualified teachers by at least 30 per cent, focusing on science, technology, engineering, and mathematics (STEM);
- f) Achieve 100 per cent enrolment in universal secondary education by 2020;
- g) Achieve 100 per cent enrolment in post-secondary education by 2025;
- h) Ensure access of at least 70 per cent of secondary school graduates to higher education;
- i) Achieve a 10 per cent rate of diplomas awarded by universities or engineering colleges in computer science and information technology by 2040;
- j) Achieve 30 per cent of degrees awarded by universities or engineering colleges in engineering by 2040;
- k) Achieve a 10 per cent rate for diplomas awarded by universities or engineering colleges in the fields of biology or health sciences and biotechnology by 2040;
- l) Achieve a 10 per cent rate for university degrees in basic sciences;
- m) Provide free access to TVET education by 2030 for all secondary school students without access to higher education; and
- n) Improve the quality of education for at least 70 per cent of the population by 2023.

Consultations and preparations for the implementation of the 2063 Agenda targets led to the adoption of the 2016-2025 Continental Education Strategy. The strategy aims to redirect education towards the realisation of the vision of the future 2063 Agenda through the following strategic objectives:

- S01 - Revitalise the teaching profession to ensure its quality, relevance and adequacy at all levels of education;
- S02 - Build, rehabilitate and preserve school infrastructure and develop policies that provide a permanent and supportive learning environment for all, in order to increase access to quality education at all levels of education;

- S03 - Harness the ICT capacity to improve access and quality of education and training, and management of education systems;
- S04 - Ensure the acquisition of the required knowledge and skills, as well as the improvement of completion rates at all levels and for all groups, through regional and continental national harmonisation processes;
- S05 - Accelerate processes leading to gender parity and equity;
- S06 - Launch ambitious and effective literacy programmes to eradicate the scourge of illiteracy;
- S07 - Strengthen science and mathematics programmes among young people and promote scientific literacy in society;
- S08 - Increase the potential for technical and vocational training in secondary and higher education by strengthening the beneficial links between the world of work and education and training systems;
- S09 - Revitalise and increase access to higher education, research and innovation in order to meet the continent's challenges and promote global competitiveness;
- S010 - Promote education for peace, and conflict prevention and resolution at all levels of education and for all age groups, based on common African values;
- S011 - Improve the administration of education systems and statistics by strengthening the capacity to collect, manage, analyse, communicate and use data;
- S012 - Organize a coalition of all education stakeholders to lead and support initiatives arising from the implementation of the CESA 16-25.

In examining all these objectives and targets, the question that arises from the outset is this: Are African education systems capable of achieving the performance required by the 2030 Program and 2063 Agenda?

2.3. Complex Issues of Education Acceleration and Transformation

Let us begin with what seems to be the simplest and most fundamental: universal access to basic education in 2030, which raises the issue of unprecedented acceleration. From 1960 till date, the pace of growth in schooling remain insufficient for basic educational needs. Africa still lags behind in universal primary schooling, which seems to still be a far-reaching goal for most countries on the continent. According to the 2016 World Education Monitoring Report, 31.4 million primary school-aged children, 23.6 million secondary school-age adolescents 1 and 33.1 million youths of secondary school age 2 are still out of school. What can be done to accelerate the pace of inclusion of all those who have been abandoned and are the most difficult to reach, and whose relatively high population growth rate continues to increase? How can the enormous needs for teachers and infrastructure be met? What can be done to ensure that those who enter the system are kept in the system, when it is evident that since 1960 the average rate of primary school completion has stagnated around 55-57 per cent? The resolution of such problems is an emergency and a categorical imperative because it is also a matter of recognising human dignity in each African through the effective exercise by every one of the fundamental right to education. This right also implies that all children are adequately prepared for enrolment through integrated early childhood development programmes.

The second problem is even more complex: how can the education provided effectively promote accelerated growth and sustainable development in Africa? Learning assessments reveal that at the end of primary school, one pupil in two lacks a satisfactory level of basic reading and mathematical skills. How then can we eradicate illiteracy, get an educated population and develop a critical mass of civic, life and work skills with such learning outcomes? Moreover, most schools focus on delivery but do not sufficiently develop conceptual understanding and education in the sense of changing attitudes, behaviours and values. How then can existing systems promote, democratic citizenship, ecological awareness and sustainable lifestyles, for example? Moreover, the knowledge transmitted is often irrelevant to African contexts and is therefore not related to life and work issues that are faced there. A possible hypothesis is that few social and economic benefits accrue to learners as well as to society. How can such knowledge acquired in schools be effective in contributing to economic development and social inclusion? This second problem revolves around the issues related to the quality of education required to transform Africa and the world.

The third issue stems from the articulation between education and sustainable development in the four dimensions outlined above. There is also another dimension to this wider understanding of the concept of sustainable development: the sustainability of learning outcomes in a "global village" where the media, technological and scientific revolution has become such a permanent product of rapid change that knowledge and skills acquired quickly become obsolete. This dimension of sustainability raises two cross-cutting issues: the need for lifelong learning and the inter-sectoral approach to education that should no longer be conceived and implemented in isolation from the other components of the social entity, but rather in interaction with them. Both questions call into question the academic monopoly of knowledge acquisition, and challenge the ability to build new societies of learners or organize the society's cooperative intelligence for learning at any place and at any age. In addition to acceleration, the transformation of the education and training systems presents another problem.

The Life-Long Approach: Learning in Work and Daily Life

Environmental changes also require other types of learning than formal schooling or traditional education within the community. Everyone must be able to act and make a contribution to environmental sustainability at all ages of life, hence the crucial need to learn both at work and in everyday life. Lifelong learning encompasses all learning activities undertaken in the course of life in order to improve one's knowledge, skills and aptitudes for personal, civic, social or professional purposes (UIL, 2015). The lifelong learning approach focuses not only on curricula but also on intergenerational knowledge and values produced by communities. It encourages synergies and connections between different groups in society to meet environmental challenges. Government agencies, religious organizations, non-profit and community associations, trade unions and the private sector can all contribute to lifelong environmental education.

Global Monitoring Report on Education, UNESCO, 2016

Clarifying the challenges, ambitions and problems of educational development in the perspective of the 2030 Programme and 2063 Agenda leads to the question of measuring the gap between them and the current performance of education and training systems in Africa in order to identify and assess the challenges and opportunities on the path of achieving the objectives and targets set.

2.4. State of Education: Again, Africa has come a long way

To accomplish the changes outlined in the 2030 Programme and 2063 Agenda, Africa should, through education and training systems, train a sufficient stock of high quality skills that meet the SDG4 targets. Where are we today?

The review of the 2016 GLOBAL EDUCATION MONITORING REPORT provides some amount of data for an overall assessment. It should be noted here that, in addition to the regional averages presented below, there are very large disparities between countries and between the different localities within each of these countries.

With regard to participation, the table below provides a picture of African performance compared to that of other regions of the world for the reference year 2014 (World Education Report, UNESCO, 2016).

Table 2: Comparative Table of Performance in Education across the World

<i>REGIONS</i>	<i>NER adjusted before the official age of entry to primary school</i>	<i>Adjusted NER Primary (ANER)</i>	<i>Completion rate Primary</i>	<i>Transition Primary secondary General</i>	<i>Adjusted NER Sec. 1</i>	<i>Adjusted NER Sec. 2</i>	<i>Percentage of young people (15 to 24 years) enrolled in technical and vocational secondary education</i>	<i>GER Higher</i>
	T-M-F	T-M-F	T-M-F	T-M-F	T-M-F	T-M-F	T-M F	T-M-F
Global	67- 67- 67	91 - 92 - 90	-	97 - 97 - 98	84 - 84 - 84	63-63 - 62	3 - 4 - 2	34 - 33 -36
Sub-Saharan Africa	41 - 40 - 42	80 - 82 - 77	55	85 - -	66 - 68 - 64	43 -46- 39	0,6 - 0,7- 0,4	8 - 10 - 7
North Africa and West Asia	51 - 51 - 50	89 - 90 - 88	-	99 - 98 - 99	86 - 89 - 83	67-69 - 66	2 - 4 - 2	37 - 38 - 37
Latin America and the Caribbean	90 - 89 - 91	94 - 94 - 94	94	97 - 96 - 98	92 - 92 - 93	76 - 75 - 77	2 - 2 - 2	44 - 39 - 50

East and South East Asia	79 - - - -	96 - 96 - 96	-	91 - 90 - 92	91 - 90 - 91	77 - 74 - 80	5 - 5 - 5	39 - 37 - 41
South Asia	- - -	94 - 94 - 94	77	97 - 95 - 98	80 - 79 - 82	50 - 51 - 49	0.7 - 0.9 - 0.3	23 - 24 - 22
The Caucasus and Central Asia	49 - 49 - 50	94 - 95 - 94	100	99 - 99 - 100	96 - -	84 - 83 - 85	6 - 6 - 5	24 - 24 - 25
Europe and North America	93 - 94 - 93	97 - 96 - 97	-	100 - 100 100	98 - 98 - 98	92 - 91 - 92	14 - 16 - 12	75 - 66 - 85
Pacific	76 76 76	94 - 95 - 93	-	- - -	98 - 97 - 98	66 - 61 - 70	0.4 - 0.7 - 0.2	62 - 52 - 72
Developing countries	64 - 62 - 62	90 - 91 - 89	73	95 - 100 - 89	82 - 82 - 82	59 - 59 - 58	1 - 1 - 1	29 - 28 - 29
Low income countries	41 - 41 - 41	81 - 84 - 79	48	79 - 80 - 77	65 - 69 - 62	40 - 44 - 35	- - -	8 - 10 - 5
Countries affected by conflict	58 - 59 - 58	81 - 84 - 79	62	95 - 100 - 87	76 - 79 - 74	54 - 56 - 52	1.2 - -	26 - 26 - 26

The findings from the data on school enrolment show that, compared to other regions of the world, Africa is performing poorly. The continent still has a long way to go before achieving target 4.1 of SDG4: "all girls and boys go through a full cycle of free and quality primary and secondary education on an equal footing". Net primary enrolment rates (NPER) (80%) and completion rates of primary (CRP) (55%) are below the average for developing countries (90% and 73%). They are similar to average countries affected by conflict (81% and 62%) and low-income countries (81% and 48%). Despite this low completion rate, the actual transition from primary to secondary is 85%. The completion rate of secondary 1 (CRS1) (60%) is lower than that of primary and secondary 2 (39%). Thus, a strong selection-elimination pyramid is established in Africa. The net primary school enrolment rate of 80% drops to 66% in Secondary 1, that is, 16 points below the average for developing countries (82%) and 10 points below countries affected by conflict (76%). The rate falls to a dismal 43% in Secondary 2, compared to 59% for developing countries, 54% for conflict-affected countries and 40% for low-income countries. Finally, the gross enrolment rate in higher education drops to 8%, while stands at 29% for developing countries, 26% for countries affected by conflict, and 8% for low-income countries.

Universal access to early childhood development and protection, and to pre-primary education that makes all girls and boys ready for primary education, is far from being achieved. There is insufficient coverage of early childhood needs and inadequate preparation of children for schooling. The under-five mortality rate (84 deaths per 1,000 live births) and the percentage of children under 5 years with moderate or severe growth retardation (33%) remain high in comparison with developing countries (48 and 26%), conflict-affected countries (57 and 35 per cent) and low-income countries (76 and 35 per cent). The gross enrolment ratio in pre-primary education is only 22% and the adjusted net enrolment rate (ANER) one year before the official primary school enrolment age is 41%, although these figures stand respectively at 39% and 64% respectively for developing countries, 23% and 58% for countries affected by conflict, and 17% and 41% for low-income countries.

Universal access to technical, vocational and higher education, including academic, quality and affordable education would seem out of reach for Africa by 2030. Only 0.6% of young people aged 15-24 have access to technical and vocational secondary education, and the rate of secondary school enrolment is only 6.5%. With such performances, it is difficult to significantly increase the number of young people and adults with relevant skills, including technical and vocational skills for employment, decent work and entrepreneurship, given that the adult population's educational level remains low due to the stagnating high rates of illiteracy.

With regard to the elimination of gender disparities in education, the disaggregated data reveals its persistence despite progress made since 2000. Although the parity (1,01) has been achieved in pre-primary, it is not the case in primary (0.93), secondary general (0.86) and higher education (0.70) where girl participation remains at a disadvantage. Girls also remain the most excluded from literacy. In primary education, 55% of the 31 432 000 out-of-school children are girls. When it comes to out-of-school adolescents of secondary 1 and 2 ages, girls make up 52% and 53% respectively. Among the 0.6% of young people enrolled in technical and vocational education, girls account for 0.4% as against 0.7% for boys; female participation in higher education is 41% against 59% for boys. Gender parity indices in the completion of primary education (0.89) in lower secondary (0.96) and upper secondary (0.63) are likely to maintain these school disparities in the same way as the literacy parity indices of young people (0.86) and adults (0.76), to the detriment of girls and women. The risk is even greater for female teachers who, with the notable exception of pre-school (76%), are in the minority in primary education (44%) and more widely in secondary (29%) and higher education (21%).

Geographical and socio-economic disparities also need to be eliminated. The respective parity indices are 0.60 and 0.37 in primary completion. While the average primary completion rate is 55%, it is only 24% for the poorest girls and 29% for the poorest boys. At the level of Secondary 1, these four figures drop to 0.36, 0.12, 4 and 8 respectively, and in Secondary 2 to 0.19, 0.05, 0 and 2.

Ensuring that all young people and a significant proportion of adults, both men and women, acquire literacy and numeracy skills is one of the areas where Africa is not making significant progress. Youth and adult literacy rates are respectively 71% and 60%, while the number of young illiterates is 48,765,000, of which 59% are women; adults make up 188,315,000, out of which number 61% are women.

Achieving education for sustainable livelihoods, human rights, gender equality, the promotion of a culture of peace and non-violence, global citizenship, African cultural identity, the ideals of pan-Africanism, the valorisation of cultural diversity and the contribution of culture to sustainable

development remains an enormous challenge. It will require curricular and pedagogical reforms, as well as changes in the environments, cultures and practices of stakeholders, to make educational systems capable of developing awareness, implanting values and changing attitudes and behaviours. These conditions are far from being achieved today. For example, few African education systems have fully integrated gender equality education (2 out of the 16 that provided data), human rights education (1 out of the 12 that provided data), education in sustainable lifestyles (1 out of the 16 that provided data), peace education (1 out of the 12 that provided data), and citizenship education (3 out of the 15 that provided data).

The same holds true for building the foundations of a strong African identity. For example, the pedagogical use of the "General History of Africa" is fully integrated only in higher education. In primary education, only one country has done so, in Secondary 1 five countries and in Secondary 2 seven countries out of a total of 51 countries surveyed. In addition, African education systems continue to favour the use of foreign languages for instruction.

In all, Africa remains the region of the world farthest from the targets of SDG4 and G1.2 of the 2063 Agenda. In addition, it is also the region where the need for education increases most because of the relatively high population growth rate of 2.6 per year, while it has the lowest per capita GDP (1,025 in current US \$ and 2,258 in PPP dollars) and the highest poverty rate (population living on less than US \$ 1.90 PPP: 38.4%). In view of educational history, culture and languages, Africa is also the continent with the lowest rate of ownership of official education systems by the populations.

2.5. Africa Faces Huge Challenges in Achieving Objectives of the 2030 Programme and 2063 Agenda

The situation described above explains the well-known and persistent challenges:

- The inclusion of high numbers of out-of-school children: 50% of out-of-school children worldwide, i.e. 55 million out-of-school children, live in Africa, while the African population represents about one-tenth of the world's population;
- The inclusion of a considerable mass of young people (48,765,000) and illiterate adults (188,315,000);
- Eliminating the enormous waste of resources devoted to education: between 20 and 50 per cent wasted because of repeating and especially drop-outs, which explain the low internal efficiency and particularly low completion rates in primary education (55 per cent);
- Reversing the strong extraversion of education: linguistic and cultural heritage, endogenous development needs and problems are barely present in learning;
- The substantial improvement of low learning outcomes for students, including in basic literacy and mathematics;
- The pedagogic revolution necessary to put back on track teaching and learning processes that prioritise memory at the expense of the observation, experimentation, analysis, logical thought, the critical mind, etc.;
- Strengthening external effectiveness to overcome the gap between learning outcomes and the ability to use them to solve problems of life and work.

- Sectoral coordination of educational sub-sectors and training under the oversight of several ministries.

The 2030 Programme and 2063 Agenda have set goals, objectives and targets, as well as policy and strategic options that pose new challenges for education in Africa:

- Design a holistic vision of sustainable development, which establishes the place, role and the approach to education in an integrated and intersectoral perspective;
- Ensure a clear and operational definition of the responsibilities of the various stakeholders involved in the implementation and participatory and decentralised management of educational policies both at the local and national levels;
- Guarantee the combined universalisation and quality of free basic education including a year of pre-schooling, and primary and secondary education for all;
- Offer lifelong learning opportunities to all as an imperative and emergency in the 21st century as well as digital skills / ICTs;
- Go beyond parity to implement gender equality;
- Empower everyone to achieve decent work;
- Effectively integrate changes in awareness, attitudes and behaviour in the learning curriculum to promote a new world and a new Africa in the perspective of sustainable development;
- Promote African renaissance and the ideals of Pan-Africanism towards the emergence of the United States of Africa;
- Reverse the relationship between literary and scientific studies to the benefit of the latter for the construction of African knowledge societies and economies and to equip Africa with scientific and technological skills for building knowledge societies and economies.

2.6. Africa Must Seize Opportunities to Achieve Qualitative Developmental Leaps

These challenges are also targeted by commitments to mobilize states and other stakeholders in the 2030 Programme and 2063 Agenda. In this sense, they are also opportunities. It is appropriate here to take a retrospective look at the programmes launched in 2000. Although Africa has not achieved the MDGs and the EFA goals, it has made remarkable progress through these programmes. Trends of the main indicators for monitoring the six EFA goals show the significant progress made between 1999 and 2014: pre-primary GER doubled from 11 per cent to 22 per cent, primary ANER gained 30 points (from 50 to 80 per cent), the parity between girls and boys in primary education increased from 0.85 to 0.93 and in secondary education from 0.82 to 0.86. At all levels of education systems, there has been a marked increase in enrolment. Regarding the MDGs, Africa has significantly reduced poverty, infant and maternal mortality, and the incidence and prevalence of HIV / AIDS. Most African countries have achieved the target of 10 per cent coverage of protected areas -- their territorial and marine areas.

These advances, made through the MDG and EFA movements, confirm that post-2015 initiatives can be exceptional opportunities for further progress in education in Africa. Moreover, specific commitments by African States tie in with and integrate universal commitments. Education approaches and objectives are closely linked to those of sustainable development for synergy of

interaction and overall dynamics at the service of transformation. To the achievements that can serve as the basis for a virtuous circle and exceptional opportunities offered by the 2030 Programme and 2063 Agenda, we should add:

- African economic growth, which stood at 5-6 per cent within the period, clearly above the rate of population growth, providing an opportunity for increased financing and accelerated educational development, in contrast to the period of stagnation of the 1980s (a slowdown is projected but a significant number of countries on the continent still manages to maintain a good growth momentum);
- The rise of a middle class (growth of 59.6 per cent, higher than the population growth estimated at 27.6 per cent over the period 2000-2010) which encourages the development of private education, especially at higher levels, thus offering an opportunity to redirect public financing towards basic education and the poorest sections of the population;
- The growing potential for the participation of communities and civil society, an inadequately exploited asset, which decentralisation policies that promote the emergence of local leaders and empower grassroots actors can enhance and harness;
- The rapid expansion of ICT to strengthen equitable access and improve the quality of education, while providing effective support to improve governance systems.

The African Union also offers solid support that can serve as levers:

- The establishment of a Champions Committee of Heads of State and Government on education, science and technology;
- The establishment of the Pan-African University comprising a virtual branch;
- The extension of Technical and Vocational Education and Training (TVET) to secondary and higher education levels;
- The institutionalisation of a school feeding programme, which is observed annually on 1 March.

How can all these opportunities be used to achieve SDG4 and the 2063 Agenda's Objective 1.2? The exploration of lessons learned from success stories and best practices identified can inspire every country in the search for successful factors and conditions suitable to its specific context.

3. STRATEGIC THRUSTS AND IMPLEMENTATION STRATEGIES FOR THE TRANSFORMATION OF EDUCATION IN AFRICA

3.1. Persistent challenges to be addressed in spite of the successive commitments

As early as 1961, the Conference of African States on the Development of Education in Africa urged the newly independent countries on the path to make primary education more widespread within 20 years, to redirect education towards the needs of the economy, promote science, considerably expand secondary and higher education, develop technical and vocational education and adapt it to technical progress and development requirements, and reform education and training contents, as well as methods to reinforce their relevance to the realities, needs, heritages and resources of the African context.

Thirty-six years later, the first Decade of Education for Africa (1997-2006) targeted four priority areas: equity and access to basic education, quality and effectiveness of education, complementarity of learning methods and capacity building. The second education Decade of Education for Africa (2006 - 2015) focused on the following areas: the establishment of effective management information systems at national level (EMIS) linked to regional and continental EMIS networks; full integration of education in the policies, programme activities and organizational structures of the African Union Commission and regional economic communities; improvement of educational outcomes (access, quality, effectiveness, merits); gender equality in primary and secondary education; the systematic sharing of experiences and mutual assistance for the promotion of education; mechanisms to ensure that education contributes to regional integration. These African policy frameworks were supported by those launched at the international level. Thus, the Jomtien Framework for Action in March 1990 focused on the goals and strategies for addressing the basic educational needs of all in the year 2000: expansion of early childhood care and development, universalisation of primary education, improvement of learning outcomes, reduction of adult illiteracy by half, expansion of basic education and training in other essential skills for adolescents and adults, increased acquisition by individuals and families of the knowledge, skills and values needed for a better life.

It was followed by the Education for All framework of the Dakar Forum in 2000, which focused on six objectives to be achieved by 2015: a) to develop and improve all aspects of early childhood care and education; b) provide all children with the opportunity to access and complete compulsory and free primary education of good quality; c) meet the educational needs of all young people and adults by ensuring equitable access to adequate programmes for the acquisition of life skills and knowledge necessary for day-to-day life; d) improve literacy levels for adults, especially women, by 50 per cent, and ensure equitable access for all adults to basic and life-long education programmes; e) eliminate gender disparity in primary and secondary education and achieve equality in this area; and f) improve education quality with a view to excellence so as to achieve universal and quantifiable learning results for all, especially in reading, writing and numeracy, which are essential skills for everyday life.

These successive commitments have still not helped most African countries to attain the minimum goals of equity and quality education: universal primary education and eradication of illiteracy. Why? Among the causes of non-attainment by African countries of the Education for All (EFA) objectives and the other objectives set before by African and international conferences is the failure of African governments to reform policies inherited from the colonial era. The colonial educational policies were imposed from outside for goals orientated very often towards the selection and training of a local allied elite in the administration and economic exploitation, or even in the political and cultural domination of the colonies. The elitist orientation, the pyramidal structure and functioning modes, based on selection-elimination of these systems, as well as the paradigms, cultures, languages and educational contents, which ignore the endogenous heritage and problematic questions, are the marks of their profound influence. In the case of French colonies, the financing and cost modes were also made similar to those of the metropolis. Today, this process of African ownership of these systems is a challenge for many countries. That is why African countries that have left the colonial systems in place face serious challenges in realizing the set objectives:

- including all in schools designed and structured for producing an elite;

- ensuring the success of all in schools where the dominant culture in terms of quality necessitates the exclusion of the mass of learners with learning difficulty so as to be able to concentrate on a small minority who should be led to the highest level possible, which will be known as excellence;
- developing competencies massively for sustainable development in school system created for responding solely to the narrow needs of the administration and colonial commercial enterprises; and
- imprinting an African cultural identity in schools where the languages and the axiological and epistemological benchmarks continue to debunk and/or under-rate the historical and civilizational achievements of Africa.

3.2. Strategic thrusts for the transformation of education in Africa

Confronted by these challenges, most educational policies adopted since independence up to the present have been orientated towards the quantitative expansion of these systems and, at best, the occasional correction of some of their glaring aberrations, for instance, the Africanization of the contents and of textbooks that shocked the national conscience, in disciplines such as history and literature. That is why the achievement of the objectives of the 2030 Programme and Agenda 2063 demands a clean break from colonial policies and the adoption of transformational policies, which rest, first of all, on the key principles of (re)-contextualisation and (re)-connection.

Re-contextualisation

Every educational system invents itself in a specific natural, economic social and cultural context. The first mission of education is to impart the inter-generational heritage which is the bedrock of the survival of human communities, taking into account the accumulation of experiences and knowledge as they confront common and specific challenges. From that point of view, basic education is not new to African societies; it is delivered through a diversity of modes and traditions. The needs assessment and the formulation of objectives of such an educational system, just like the educational models and resources necessary for its implementation, rested upon a choice of priorities and the attaching of value to the endogenous potential without requiring external assistance. These reminders do not suggest a return to a distant past, which, in a way, still persists in certain African villages. They are rather an invitation to the repositioning of education and its foundations in today's context. What are the specific challenges and problematic questions of health, hygiene, nutrition, communication, environment social inclusion, axiological referential, cultural well-being, citizenship, labour and others which come up fundamentally in our national contexts? Which responses can and must education bring these? Which models and systems of education adapted to the mobilizable resources in our national contexts in order for us to be in charge of these responses?

Answers to such questions will form the basis of an educational system capable of responding to the demand of society, providing social and economic individual and collective benefits, with models and costs adapted to needs, and domestic resources rendering generalization feasible, and therefore all inclusive. This process operates across the periodic evaluation of performances, followed by adjustments and introduction remedies, in line with lessons learned from the analysis of experience which should not be simply reproduced, but viewed as 're-created' models in terms of the specificity of the context.

Reconnection

Clearly, education is not made for itself, and the school must not be an island in a society. To place education at the service of educational development, it is necessary to re-finalize it to the service of transformation of the economic, social, environmental and cultural dimensions and take the school out of isolation. It is through interactions with diverse environments and players that the school can optimise itself, in synergy with the other sectors, the transformational potential of education both for its transformation and for the transformation of other sectors. Outside of the national inter-sectorial policies and strategies and multi-sectorial central interventions or the decentralised integrated ones, these interactive processes are achieved in the opening of the schools and the teaching-learning to the surrounding area, in the community participation and the crossed partnerships with the players in the economy and the society also in the planning as well as the management and the implementation of education and training. That is where also, the mobilisation of new resources of education and training when the school leans out towards all the local activities of the surrounding environment, thus turning the places of work, of entertainment, of residence and others into opportunities for learning. In short, for education to transform Africa and the world, it needs to transform itself by reconnecting to the society and by constructing a platform of interaction and convergences with the different sectors of the State, the society and the culture of the economy of the milieu.

Approaches of Educational Transformation

From the different components and their interaction, the approach of transformation in education must be systemic, that is, it needs to:

- take into consideration all the constitutive elements of the system: in-puts, processes, procedures, evaluation, community and institutional environment;
- carry to all the levels and modalities of education: general education of the pre-primary to the higher education, professional and technical training; and
- involve the different dimensions: access, equity, quality, governance.

In the perspective of re-finalization, the approach of transformation of education is not translated by the simple addition of new subjects -- environmental and entrepreneurial education, citizenship education, conflict prevention education -- but also, and especially, by deepening the meaning of learning activities through integration of new social, economic, environmental and cultural dimensions in the activities and disciplines. It is about:

- reinforcing the meaning of existing learning activities by putting them in link with search for solutions to social, cultural, economic, environmental problem of the local and national surrounding;
- linking up learning the cognitive to the socio-affective and the psychomotor in order to articulate, to the acquisition of knowledge, the changes in values, attitudes and comportments, as well as the development of competencies;
- empowering the learners take responsibility in the governance of the institution of the class, in the school project, in cultural display, in the preservation of a school environment, so that by practice and critical reflection on this practice that they may effectively exercise and learn on a daily basis what is conscious citizenship and active in rights and duties, in freedoms and

in responsibilities, leading a sustainable life styles in the living together peacefully and in solidarity.

Conducting Change

The success of the implementation of all this transformation pre-supposes the existence of strategies and principal levers of change. Looking at the lesson drawn from experience, the hybrid governmental strategies are working all right. They are at same time betting on:

- the descending approaches (*top-down*) based on the authority and intervention of a strong, national technical team; capable of effectively driving and supporting the conceptual and methodological plans; an instrument also in strategic design and operational planning and in implementation
- the ascending approaches (*bottom-up*), leaning on the information, the sensitisations, social mobilisation and participation in change, so that all adhere to the same rules and progress in the same direction.

Such a combination may prove to be a winner. Obviously, this transformation cannot be achieved overnight. Strategic planning of change is therefore necessary just like the stages of experimentation under the classic form or pilot-project. In both cases, a challenge emerges, often at the level of scaling up, which, beyond the preliminaries of resources and capacities, raises the problem of flexibility of innovation in relationship to its adaptability and its effective adaptation to different local contexts.

3.3. Implementation priorities for the transformation of education in Africa

The ministerial round tables organized during the Triennial encouraged the participants to identify implementation priorities for education in the new post-2015 context. The discussions highlighted educational reconstruction and restructuring for transformation by taking into consideration the SDG4 Framework of Action and the CESA 2016-2025 in order to meet the aspirations of Africa's Agenda 2063. Towards this end, the identification of implementation priorities underscores the need to rethink the existing educational models and work towards a paradigm shift.

Reversing the current extroverted orientation of African educational systems by undertaking an endogenous re-anchoring of education is the foremost priority of reconstruction. This can be achieved by integrating cultural identity and endogenous knowledge and practices into these systems. It also calls for the establishment of interactive links between educational systems and grassroots communities, since the links create back and forth movements for the promotion of both intergenerational learning and better mastery of development issues and substantial enhancement of the local development potential through the school. Such a process brings about diverse thoughts and the pooling of knowledge and practices between the school and the surrounding environment, particularly between endogenous heritage and the "universal" knowledge, which educate all the beneficiaries, the local population and the school's stakeholders. A prerequisite for the success of such discussions is the introduction of indigenous languages in school, thus promoting literacy in those languages. To implement such an option, different additional multilingual strategies were viewed as effective: early, late or semi-late withdrawal.

This interactive relationship is also helpful for the development of critical technical and vocational skills in that it builds operational bridges between training and the different community enterprises, whether formal or informal, industrial or small-scale. The most important factor is to establish multiple alternate operational training partnerships and ensure improved assessment of supply and demand within the economy and the society. The reorientation of the education system towards the attainment of the target, which is decent work for all, must be given decisive support by opening and diversifying the training sectors through learning, sandwich training, polytechnic education and the introduction of a system of vocational guidance that enable interested students to acquire a vocation at any stage of the educational system. In essence, it aims at achieving effective education-training by providing training suitable for the needs and vocation of every individual.

The transformation process of education systems calls for exchanges and cooperation programmes between countries committed to knowledge and experience sharing. This can be realized through the pooling of research and resources. The Inter Country Quality Nodes represent precious points of support that must be put to good use.

Placed within the context of the SDG4 and the Objective 1.2 of the 2063 Agenda, this deconstruction/reconstruction of education puts quality and equity at the centre-stage of the implementation priorities. "Ensure complete cycle of quality primary and secondary education, which leads to a very useful learning" for all requires that all children should be ready to go to school. Beyond the school space facilities to receive them, the question that arises here is the integrated development of early childhood for all, the implementation of which requires that in Africa, in addition to the increased efforts of the State, the potential of community and private sector participation is optimised. Some countries have thus opted for a one year institutionalisation of pre-primary class for all. Then, to maintain all the children in the system for the entire 12-year duration of compulsory education, it is necessary to establish plans for the prevention and prohibition of school dropouts, with operational strategies and capabilities of diagnosis, remediation and catching-up to effectively support the learners facing problems.

Basically, achieving the above-mentioned Target 4.1 of SDG4 is to ensure successful learning for all by linking it closely with relevance and external efficiency of these learning activities. Embedded in these objectives is the understanding that quality and equity are inseparably connected. In addition to the required curricular reforms and materials, the challenge highlights the priority to be given to the issue of teachers. Apart from the challenge of the recruitment of teachers in adequate numbers to achieve the manageable pupils/teacher ratios, the implementation strategies focus on the change of cultures and practices for successful learning by all pupils. This in-depth change calls for a reconsideration of the elitist ideal of selection-elimination, which is in force in the traditional systems, to inculcate into the consciousness and teaching practices that any young child is teachable and can succeed in basic learning if suitable opportunities are provided for his needs. Such a process of change can be realized through practices geared towards self-learning by critically undertaking a self-assessment of their practice, inter-learning by critical exchanges between colleagues facing similar challenges and the sharing of experiences, close guidance and counselling and continuous vocational development. It calls for initial and continuing quality training of teachers both in the philosophies and skills of their managers and in the area of content and approaches regarding the capacity for effective preparation for the targeted change, particularly for appraisal and self-appraisal of practices, critical thinking, innovation, responsibility for learners facing problems. The professional dialogue on the results of the comparative assessment of learning is also to be

implemented to promote collegial brainstorming on change among teachers. Changing teachers' culture and practices to address the challenge of quality posed here also raises the issue of motivation of teachers. The implementation of an evaluation system and recognition of merit were highly recommended as more effective than general measures that do not take performance into account. In this regard, teachers working in remote or disadvantaged communities deserve special attention. Some experiments have put in place continuing mobile training teams and incentives to support the teachers in these locations.

Teacher training policies should have as their implementation priority the promotion of innovative educational and teaching practices that can contribute to the dual objective of endogenous transformation of education and quality for all. In addition to praxis-oriented research and training for teachers, the process of change must ensure that research centres and African universities make contributions at the local, regional and continental levels.

The success of targeted reforms and changes is also contingent on good governance of education systems. This must be participatory and collaborative to include all stakeholders and must implement transparency in all management procedures and decision-making processes and ensure accountability at various levels, guarantee efficiency and equity in the allocation and use of resources. Results-oriented management, generalisation of performance contracting, including for teachers, and a mechanism for periodic evaluation can support the steering of planned changes to promote quality education for all. The strategic thrusts and implementation priorities of the transformation of education in Africa, developed in general terms, were broken down in the analytical work and discussions along the lines of the Triennial's the four sub-themes. For each sub-theme, the analysis focuses on the main issues raised, the successful/promising experiences identified, the lessons learned and the key messages that emerged.

4. IMPLEMENTING QUALITY EDUCATION AND LIFELONG LEARNING FOR ALL

Regarding the bases and requirements for the promotion of quality education and lifelong learning for all, there is first and foremost the universal human right and the issue of sustainability of learning in the context of rapid changes. Quality education determines the effective exercise of this right by the success of basic learning by all, which opens the door of other fundamental rights. Quality education understood in this sense must take into account the diverse needs and capabilities of the learners to offer to each one suitable opportunity for learning. Beyond the exercise of this fundamental right, quality education must equip learners to contribute effectively to the structural transformation of the African economy and to sustainable development. In pursuing these strategic objectives, it is necessary to mobilize and enhance the societal image of systems in all their formal, non-formal and informal modalities.

Such a policy should allow for training that leads to empowerment by virtue of the relevant knowledge acquired for life, health and employability. By broadening and strengthening partnerships with the grassroots communities and other stakeholders, the social governance of schools should improve and make it possible to: i) obtain innovative and sustainable financing and ii) promote a peaceful environment for learning, especially one that fosters gender mainstreaming.

4.1. Issues

For the promotion of quality, inclusive, lifelong learning, ten strategic interventions or problem pillars have been identified. They relate to i) quality of learners; ii) recruitment, deployment and professional development of teachers' quality; iii) quality of content; iv) dealing with gender inequalities; v) inclusion of the "marginalised", vi) provision of an Integrated Early Childhood Development (DIPE) and basic education for all; vii) continuum of Education-Training; viii) development of technical and vocational skills and youth employability; ix) development of the higher education sector; and x) use and promotion of ICT.

Addressing the quality of learners is to ensure that education is available for all (the deprived-girls-child workers, children in conflict situations- nomadic children, children with disabilities) without any discrimination. It seems that most African countries have large populations of children who are out of school. The challenge is to be able to maintain those who enter school and to reintegrate the drop-outs and ensure their completion of secondary education.

Quality processes and teachers call for appropriate and continuing professional development, which strengthens teaching skills, motivation and professional ethics. The teachers must also create an academic environment that is gender-sensitive and explores the various mechanisms of ensuring that the teaching and learning processes are tailored to the specific needs of boys and girls.

Regarding the quality of contents, special emphasis will be laid on value-based education (VBE), recognised as one of the strongest human development pillars. By mobilizing and involving communities, considered as key providers and "interpreters" of the content, the entire local and indigenous knowledge, expertise and value systems will be integrated. This harmonisation of teaching –learning with local realities (common set of core skills) can be a factor of quality and relevance. In this regard, legislation could be enacted on the need and obligation for African educational systems to give priority to indigenous knowledge and expertise.

Addressing gender inequities is to ensure that schools are made secure and become friendly places not only for girls but for all kinds of weak or marginalized children. This must also assist in supporting the transitions towards higher education and the development of local leadership.

Inclusion of the "marginalised" means addressing as much as possible the negative effect of social stigmatisation faced by parents and children living with disabilities or attending alternative educational systems (Koranic schools-apprenticeships –literacy – etc.). Education for Special Needs (ESN) is still another critical dimension for inclusion as well as the imperative of human rights. Provision of quality Early Childhood Development and basic education for all children can be a systematic means of influencing in a more conscious and meaningful way, social knowledge, fundamental values and attitudes of children, particularly to neutralize gender stereotypes before they become a mode of thought and unconscious behaviour.

The development of the higher education sector should incorporate creative and innovative solutions for sustainable reform and transformation in the development sectors. A revitalised higher education system would produce well-trained and committed professionals, especially for literacy, adult education, lifelong learning and educational leadership.

Adult education and lifelong learning

Basic literacy and adult education, designed to advance democratic processes, security and individual self-fulfilment, constitutes a key component of life-long learning. Adults must receive lifelong education to enable them to adapt the knowledge so acquired to current exigencies, democratic change, and technological changes and to globalisation. As the changes bring about a lot of insecurity, it is important to anticipate the challenges posed, and this by improving the provision of learning to adults. The strategy of Coaching and Mentoring has been retained as a major aspect in guiding adults since it promotes experience in the professional world. Furthermore, each person in any age bracket must have access throughout his/her life to sufficient and quality education in order to fully discharge their duties in the society in which they live. It is necessary to provide drop-outs with learning adapted to their specific needs and this applies to women, rural dwellers and marginalised groups.

Putting in place mechanisms for the evaluation and recognition of the gains of these learning processes, whether formal, non-formal or informal would help to develop them. However, many countries have still lagged behind in adopting the basic standards retained in that respect.

The inclusion of local knowledge, the use of national languages and integration of ICT in the systems represent powerful inputs that can both facilitate access to programmes and enhance the quality of provision and strengthen the acquisition of new knowledge. The increase in life-long learning opportunities calls for the participation of all: public and private stakeholders, civil society, local authorities, associations, various communities, labour organizations and others) to determine needs and create opportunities.

Summary of discussions at the 2017 Triennial

Teachers must be able to help the pupils and students to become collaborative learners, problem solvers and be creative in the use of ICT. This must be carried out both in the formal and non-formal systems. It calls for satisfactory integration of ICT in the existing initiatives, programmes and projects rather than using it in a separate entity. The lack of any continuum between education and training is a major cause of exclusion among the youth for the simple reason that the ones who leave the school system because of academic failure, and without attaining the required level of performance, are left out of the system without any opportunity for training required for employment. This exclusion of young people poses a threat to the socio-political stability of a country. The anticipation of such a situation can be tackled, not only by building bridges between the different types of training and education in the formal, non-formal and informal sectors, but also 'by operating a shift of the TVET towards technical and vocational skills development (TVSD).

“Youth Training, Integration and Employment in Africa”

Three observations:

- All the countries are confronted with a very high level of exclusion of young people from the labour market. Consequently, Africa must resolutely establish a new social pact with the

youth, failing which they will be turned into a sacrificed and a potentially problematic generation.

- The reasons for this high exclusion are due to the short-sighted view of effective development dynamics. African economies, as a matter of priority, consist of a fabric of self-employed workers and micro and small enterprises which are actual creators of wealth and employment, but who are often marginalised, mostly in public policies and vocational training.
- The development of technical and vocational skills is undervalued and devoid of resources. In reality, there is a widespread general discrepancy between the national strategic guidelines focused on the need for vocational training of a large number of young people and the very small number of young people actually received and trained in the training institutions. Moreover, the large numbers of young people trained by the productive sector are not recognised and public policies are not designed to provide any support to them.

Three priority action areas initiated by the countries:

- **Action area 1 (2015):** invest in the enhancement of skills of entrepreneurs and trainers. None of the ongoing changes can be realised without a genuine policy for retraining of all the public and private stakeholders involved in the various arrangements and processes for skills acquisition.
- **Action area 2 (2016):** promote the education/training continuum. The lack of such a continuum is one of the major causes of exclusion of young people, considering that those who come out of the school system with failure or without any recognisable school achievement find themselves in the streets without any opportunity to go through active training when entering the labour market. The country reports indicate new reorientation opportunities between education and training that may have to be deepened and shared.
- **Action area 3 (2017):** design and operationalise inner-country experiences of facilitating access for the youth to employment. The national experimental fields are often too limited to achieve practical applications that will provide good answers to questions that are broadly transnational. The Quality Node should enable one to propose and especially operationalise measures that are common or at least convergent in the areas leading to actual employment.

Contributions of the ICQN/TVSD to the preparatory analytical work of the 2017 Triennial

4.2. Major Challenges to be addressed

The following are some of the major challenges:

- A state of physical, mental and psychological preparation for the benefit of pupils to learn and have a network of support from their families and communities;
- The availability of libraries to contribute to the emergence of a culture of sustainable reading in a literate environment in the schools and institutions, in the community and at the home;
- The development of a model and evaluation and monitoring procedures to obtain objective, equitable and transparent outcomes;

- Productive teachers: creative – resourceful – endowed with critical minds – capable of making good use of appropriate technology for teaching and learning;
- Addressing the gender gap in education and skills training;
- Attracting new personnel to the profession by improving the status and management of teachers;
- Developing a culture of social dialogue;
- Harmonizing at the continental level, qualifications frameworks, the mobility system of teachers, thus highly reducing the brain drain syndrome and the shortage of mathematics, science, engineering and technology teachers; and
- Creating opportunities for lifelong learning.

Promoting life-long learning

All Africans, irrespective of age, should be given an opportunity to learn and continue to learn. From birth, lifelong learning for all, in all circumstances and at all levels of education should be integrated into the systems by means of institutional strategies and policies, programmes accompanied with the necessary resources, as well as solid partnerships at local, regional, national and international levels. This requires a multi-dimensional and flexible process, as well as entry points and reintegration at all ages and at all levels of education, strengthening of linkages between the formal and non-formal structures and the recognition, validation and accreditation of knowledge, aptitudes and skills acquired within the framework of non-formal and informal education. Lifelong learning also includes improved and equal access to quality technical and vocational education and training, including higher education and research. Specific measures and adequate funding of the education sector would pull millions of children, young people and adults out of illiteracy. Furthermore, all young people and adults, especially girls and women, should be given the opportunity to achieve relevant and recognised levels in the area of functional literacy and skills in calculations and the acquisition of essential skills for everyday life, and decent work. It is therefore important to ensure the provision of opportunities for adults concerning education, training and learning. Educational systems should adopt intersectoral approaches consisting of education, science and technology, the family, employment, industrial and economic development, migration and integration, citizenship, social well-being and public finance policies.

Framework of Action SDG4

- A TVET that marks a departure from the traditional learning systems dating back to the colonial era to adopt a development of a more open and more flexible technical and vocational skills;
- A pedagogical and technological requalification generally applicable to TVET teachers;
- A greater participation of the private sector and youth enterprises in employability of school graduates;
- Strengthening of relationships between training and the labour market by developing programmes based on knowledge targeted by the labour market.

“Skills Development, Youth Employability, Entrepreneurship and Decent Work for all”

Africa is confronted with the challenge of creating jobs that meet the growth of its working-age population, especially the growing number of young people. Though the scheme has created more than 37 million salaried jobs during this decade, the pace is far from meeting the needs of the teeming youth on the labour market. Young people account for two-thirds of the African population, and in 2050 seven out of ten young people in the world would be Africans. Today, it has been found that millions of young people are entering the labour market without qualifications or with qualifications that do not meet employers' needs. Furthermore, skills considered adequate in the recent past have become unsuitable for the needs of the current market.

Education is expected to play a critical role in youth employability since it equips them with suitable skills for work, employment and self-employment as well as entrepreneurship; it also strengthens their leadership role and ensures that their voices are heard by policy-makers and private sector and societal leaders. Thus, the development of the demographic transition would translate into an economic dividend and serve as a launching pad for a prosperous continent. However, the lack of a linkage between school learning and basic labour skills, the inadequacy and unsuitability of technical and vocational sectors and the expansion of literary and social courses to the detriment of scientific and technological courses limit the effectiveness of the current systems. Furthermore, policies, strategies and public and private supporting resources for employment and entrepreneurship are seen to be inadequate and ineffective to date. But, the rapid growth of youthful population, with little prospect of employment is a real social time bomb, more so as desperate emigration in large numbers can expose young people to violent extremism. To address these challenges and risks, the following concrete action must be urgently taken:

- Provision of access for all, in particular, for the most disadvantaged groups to free quality elementary and secondary education, which, when linked to the labour market provides a basic leverage for employability by developing indispensable skills for the youth to live and work in the 21st century: learning to adapt to new situations, innovate and take initiatives, undertake and manage time, work in teams, use ICT, critical analysis.
- Continuous adaptation of training curricula to the current and future needs of the socio-economic world especially by strongly involving the socio-economic world (public-private) sectors in identifying and anticipating training needs and co-development of programmes;
- The extension, diversification and flexibility of the vocational and professionalizing sectors should factor changes occurring in existing trades and envision the advent of numerous upcoming trades which are not yet known;
- The momentum of STEM and integration of Information and Communication Technology (ICT) in the educational systems, particularly to address development challenges in agriculture, energy and infrastructure;
- Extensive focus on the inclusion in training and employment of the decent work factor with a special focus on deprived people and ensure gender mainstreaming;
- Promotion of the spirit of entrepreneurship from a tender age and throughout schooling to encourage self-employment and the creation of start-up businesses;

- Facilitation of access to credit for the youth should be in place by proposing innovative financing mechanisms while transmitting lessons of practical experiences of the labour market and enterprise;
- Facilitation of meetings, exchanges and partnerships among the youth networks to be actively involved in the various formal and informal economic sectors;

These actions can yield fruitful results if they focus on:

- Empowerment of the youth to take charge of their problems;
- A strategic vision of development and high-level political will;
- Active participation of all partners in both the private sector and civil society.

In conclusion, education and training play a critical role in youth employability in that they equip them with relevant knowledge, strong entrepreneurial skills and the ability and confidence to express their views.

Summary of discussions at the 2017 Triennial

Among other challenges to the development of higher education is the lack of financing to meet the growth in demand for access (infrastructure – research – education scholarships for the most deprived persons). Additionally, there is insufficient commitment on the part of the stakeholders. Furthermore, the universities which have always been educational institutions are confronted with the challenge of repositioning as training, research and innovation institutions with a focus on development.

4.3. Successful/promising experiences

Lots of experiments and studies have been carried out in the area of quality education and lifelong learning. The results of these experiments and studies, carried out in Africa and elsewhere, point to benefits that can be derived from the promotion of quality education providing skills for all. These experiments centred on the targets and beneficiaries, content development, methods, procedures and learning tools, learning environment, teachers' professional development, improving school environment, governance, increased educational financing, compulsory schooling, etc. Innovative teaching methods have been developed through integration of ICT in Côte d'Ivoire, DRC, Mauritius, Niger, Senegal and Egypt, including examples of the relevance of curricula that incorporate endogenous contents and entrepreneurial skills, quality assurance mechanisms involving stakeholders (in collaboration with the private sector) in order to strengthen employability of the learners. Select examples are cited below.

In South Africa, the government has integrated the re-establishment of social justice in the development of education. The option guarantees education for all including free education in the rural communities and structures education around three areas: academic, vocational and trades.

The recent assessment of education on skills necessary life by UNICEF provides an intermediate solution through the development of a conceptual and methodological approach which led to the development of a matrix applicable to formal, non-formal and informal sub-sectors. The specific

elements of the Matrix, reference framework for a total and functional understanding of the common core skills (CCS) include knowledge, attitudes and aptitudes that all African learners would acquire to be able to respond to personal and societal needs and expectations, on the one hand, and to preserve their individuality, uniqueness and citizenship as children, young people and adults, on the other hand. The Matrix provides i) the basic principles of an inter-disciplinary approach, ii) the link between theory, reality and practice, iii) pedagogical aspects such as REFLECT (Regenerated Freirean Literacy through Empowering Community Techniques) and the TYLAY approach, which provide concrete responses to learning needs in the various contexts based on societal values and vision. The intervention, Accelerated School Preparation (ASP) is an alternative approach to strengthening the preparation for early childhood at the primary school and to address the inadequacy of access to preschool education and the high cost of preschool in rural areas.

In Rwanda, a career and educational planning orientation programme in a post-conflict environment uses “Mobile Laboratories” equipped with appropriate ICT infrastructure, including Wi-Fi connectivity, tablets and laptops to maximise talents and potential and their population of learners and to harness them for personal, community and national development.

The CAMED in Tanzania is an example of packages of actions which i) provide support for community initiatives to improve enrolment of girls; ii) train the mentors of teachers and staff and parents to improve the quality of education; iii) develop and distribute low cost educational resources. It also enables young female graduates to play a leadership role as “Learners’ Guides” in their local schools in order to train them and provide a relevant life skills programme.

A case study on the education of girls in Kenya is advocating for a primary school governance system that is favourable to gender equality consisting of: a) awareness raising among parents and the community on the importance of girl child education; b) the security and safety of girls by providing boarding facilities and menstrual pads; c) guidance and counselling; d) school feeding programmes; e) enforcement of laws to reduce child labour and promote the right of girls to education; f) increasing subsidies and abolition of school fees; and the provision of basic learning materials. *Good Neighbours (Bons Voisins)*, is a Malawian girl education strategy, which addressed these challenges through sex education, education on the rights of children and education for the prevention of child marriages.

Benin opted for a public integration policy in the school cycle rather than a separate institutional mechanism for the inclusion of children with disabilities in education and development. Several results of this experience are noteworthy: breaking the taboo and the stigma associated with people with disabilities in the community; successful mobilisation of private and public initiatives and interventions; partnership and strategy for multisectoral organization in public policy; continuous awareness raising and community ownership; and support for the learner with special needs.

In the Asia-Pacific region, financial resources were mobilized for education through several legislative and regulatory provisions. They include, i) the compulsory contribution arising from Corporate Social Responsibility (CSR); ii) taxation from extractive industries; iii) SIN taxes on lottery; iv) SIN taxes on alcohol and tobacco; Impact on Education Obligations (or the conversion of a debt stock into bonds for development).

In Mali, close to 300,000 young people turn out on the labour market, the majority of them without qualifications. To address this problem, the government has developed several strategies which

consist of establishing training centres for skills development among the youth, women and farmers. This includes, the creation of a national observatory for training and innovation covering all the ministries. Innovative financing mechanisms have been found: youth taxes, vocational training taxes...

The MasterCard Foundation supports the youth and underprivileged through various initiatives implemented by governments or academic institutions. One of them is “Africa Innovation”, which identifies talents among the youth through learning by experience. The other one, ISSEP, develops a professional and technical training where students are exposed to the same contents both in class and work place training under the supervision of professionals working in these enterprises. This type of collaboration between training centres and a production entity strengthens students’ employability by facilitating school-labour market transition. It is in the same approach adopted by the African Institute of Mathematical Sciences (AIMS) Foundation and the African Leadership University.

The African Development Bank has focused its programmes on supporting the youth, particularly by developing higher education and entrepreneurship to enhance access, strengthen the effectiveness of the training, promote African integration and revitalise research. In this light, the “Jobs for Youth Strategy 2016-2025” initiative was launched to integrate youth employment through cross-cutting measures in projects covering all areas of intervention by the Bank. The initiative has set a target of 6000 learning young people and proposes a methodology to evaluate the Bank’s employment creation and personnel training in this thematic area. The programme covers 16 countries and it is developing 61 projects at the cost of US\$2 billion. They include a training centre for the manufacture of ready-made clothes in Côte d’Ivoire, an ICT Enterprise Initiative and an agricultural entrepreneurship project in Ethiopia and a women and youth training programme in Tanzania.

The Republic of South Korea has shared its economic acceleration experience. The main lesson drawn from it is the role played by education in promoting start-ups. The process started with the establishment of 50 start-up centres which attracted the best students from poor families who were trained for industry and equipped to become captains of their enterprises. These centres have increased from 50 to 182. The government has also supported this dynamic by establishing new technological innovation centres in 40 universities.

The Global e-Schools Communities Initiative (GESCI) has presented programmes on human/technology interface for employment creation. One of these programmes, “the *African Knowledge Exchange Program*”, is an integrated model for skills development and digital-oriented start-ups. The programme converts ICT-based skills into a commercially relevant standard. It has trained 20 students in Kenya who have received work guidelines that provide technical counseling, mentorship and consultations with industries and experts to promote team work and collaborative projects. This has led to start-ups in marketable products and services.

4.4. Lessons learned: success conditions / factors

To achieve the SDG targets and Objective 1.2 of the 2063 Agenda, important lessons can be derived from shared experiences. Among the success conditions/factors, the following can be highlighted:

- Governments must develop and implement holistic education policies linking and pooling all levels of the education and training system, from early childhood to higher education,

including formal, non-formal and informal training and education, in order to succeed in providing quality education for all;

- It is necessary to integrate endogenous and innovative contents in the learning programmes to strengthen their relevance while involving all stakeholders in their development as pertains in the quality assurance standards; reduce the gap between school learning and issues concerning life and work, strengthen youth employability through a more closer interaction between the school and the business community and deepen the empowerment of stakeholders in school governance;
- The universalisation of pre-primary preparation is necessary for quality education for all since it allows not only all the children to be ready to go to school and start well but to also maximise the opportunities to succeed in schooling;
- The transition from parity to equality requires the sensitivity of the learning environment and the pedagogy of teachers vis-à-vis the needs of the different groups of learners (people with disabilities, girls and women, chronically ill people, poor people in the rural communities, etc.), cultural transformation, representations, behaviours, institutions coupled with targeted policies of affirmative action (legal protection, free care, prepared teachers, feeding programmes, vocational guidance...)
- The remedial schools are workable (relevance, cost-effectiveness, broadening the opportunities for vocational training for employment, self-employment and entrepreneurship coupled with the maturation and entry into adulthood) in the fight against exclusion, dropout rates and school failures;
- There is a need for systematic intervention and research-action on the part of external stakeholders and greater empowerment of teachers to become researchers with emphasis on action;
- Every level of educational continuum must produce values, knowledge and relevant knowledge to constitute the basis for the subsequent;
- The level of performance of the students is enhanced when a learner takes the initiative to deepen his understanding and capacity to transfer knowledge into all disciplines and situations;
- The learners, especially in basic and preschool education, literacy and non-formal education produce best results when the teaching is done in the mother tongue or in the language they understand better;
- There are transformational models potentially replicable in other countries or regions of Africa.
- Vocational training and decent employment for all requires the mobilisation and development of all the available training resources in the society and the economy: linkage between professional and technical training (PTT) and learning, partnerships with the private sector, employers' organizations and producer organizations, master craftsmen...
- The programmes which support youth transition from school to the labour market have common features: focused on the youth, they take into account their areas of interest, guide them to the relevant careers, through a curriculum that is consistent with the needs of the market and practical learning where the young people live in alternating environments

between school and labour market while benefitting from linkages in job opportunities, partnerships, financing, etc. as well as sustained and targeted monitoring after completion of the training;

- Successful training in the area of socio-professional integration take into account the fast-growing workplace requirements and create the space for youth initiative and leadership; avoid double employment and tapping the expertise of each person and sharing their experiences and concentrating on delivery.

2015 Kigali Ministerial Conference: “Enhancement of the skills of entrepreneurs and trainers (ESET)”

Four observations:

- The ESET does not form part, without exception, of national TVET policies;
- The ESET remains more often at the stage of: who is to be recruited, at what level and for which status?
- The professional trainers are often part-time workers or visiting lecturers;
- All the same, the mechanisms are progressing more and more towards involving professionals in the training and calls for a full review of the existing ESET.

Six areas of action and cooperation among the countries:

1. Place the ESET at the centre of the TVET reform and its development towards the TVSD (intangible investment);
2. Not to separate the ESET; and upscaling of training materials and equipment (tangible investment);
3. Redefine the trainer from a three-pronged stance: technical (mastery of a special discipline), pedagogical (ability to ensure that students’ progress from their actual situation) and professional (requirement of professionalisation in actual work situation);
4. Consider the entrepreneurs as full-fledged beneficiaries of the existing ESET arrangements or as those to be developed;
5. Significantly develop the skills of entrepreneurs in the informal sector who train the young people at the work place;
6. Consistently develop the training mechanisms in turns and through learning, and in this regard, train the trainers and entrepreneurs in a coordinated and complementary manner.

Contributions of the ICQN/TVSD to the preparatory analytical work of the 2017 Triennial

4.5. Key messages

- *For them to work, ideas need the support of an appropriate eco-system and the participation of stakeholders;*
- *Re-orientate the training systems to vocational and technical skills, not in the area of supply but on the demand side by establishing the link between the curricula and the training*

programmes and the most important labour needs of the country, by establishing training partnerships with all stakeholders of the economy;

- *Move from the equal number of registration of girls and boys in the schools to the advancement of the priorities of education of “the second generation” of girls: completion at the different levels, success in scientific and technological training/learning;*
- *Promote a multilingual education and internalise endogenous knowledge in the curricula;*
- *Promote ICT in the teaching-learning process;*
- *Adopt and operationalise an attractive system within the teaching profession with continental professional standards which can be adapted by the countries as guiding principles for the management of teachers in order to boost motivation and professionalism;*
- *Transform the professional development of teachers by committing them to research-action, brainstorming practices, learning in pairs, approaches to cultural changes and practices, taking care of learners facing difficulties, pedo-centrism and by preparing them for improved flexibility and adaptation to different formal, non-formal and informal learning contexts;*
- *Take into account the determining role of the evaluation system, textbooks and learning environments as well as the leadership and school projects in the orientation and contents of what is actually taught and learned in classrooms;*
- *Ensure greater involvement of local stakeholders in the management of the schools;*
- *In addition to refining indicators of the learning outcomes, develop the equity indicators linked to inclusion in order to control the quality of education for all;*
- *Ensure adequate funding to guarantee the provision of good quality education, especially for the benefit of marginalised groups;*
- *Ensure that schools are safer and more secure;*
- *Promote lifelong learning.*

5. BRIDGING THE SCIENTIFIC AND TECHNOLOGICAL DIVIDE BY POOLING AND INTERNALIZING SUCCESSFUL INNOVATIONS

5.1. Issues

One of the characteristics of the 21st century is the preponderance of the knowledge economy in a highly globalised world where science and technology have become the main drivers of economic growth and development. This preponderance is based on a critical mass of scientific and technological skills wielded by the developed countries and which provides them with a huge potential for research, invention, innovation and sophistication. In this vital area, the gap between Africa and the rest of the world seems to be so wide that the current focus is to bridge the technological, scientific and digital divide. According to the 2016 World Report on Education, Sub-Saharan Africa has recorded the lowest GER in the world in higher education or 8 per cent, whereas the global average is 34 per cent, the rate for developing countries is 29 per cent, that of countries in transition is 58 per cent, and for developed countries it is 74 per cent. This huge lag is worsened by the fact that 80 per cent of these African students register for courses in “arts and humanities”, thus creating a huge imbalance to the detriment of STEM [cf. 2016 Report of the African Capacity Building

Foundation). Recent data provided by UNESCO on science clearly indicate this gap. For instance, Africa's share of global research and development expenditure is 1.4 per cent (0.8 per cent SSA and 0.6 per cent for Arab States in Africa) whereas this share is 28.9 per cent for North America, 22.7 per cent for Europe, 3.5 per cent for Latin America and the Caribbean and 42.2 per cent for Asia. Regarding the share of the number of researchers in the world, the figures indicate 2.4 per cent for Africa, 18.5 per cent for North America, 31 per cent for Europe, 3.7 per cent for Latin America and the Caribbean and 42.8 per cent for Asia. The future seems to be more worrisome since the Foundation's report cited above projects that Africa will have a deficit of 5 million engineers and scientists in the next five years.

All these figures are alarming, and they provide a measure of the extent of challenges posed. One therefore understands why the African Union's 2063 Agenda calls for a "sustained revolution of skills by means of science, technology and innovation". This is broken down by the Continental Education Strategy for Africa (CESA 16/25) by positioning science, mathematics and ICT as the main drivers of accelerated and sustainable development of Africa.

The issues raised revolve around i) effective policies and strategies to be implemented to correct the imbalance in students' orientations in the course areas and to substantially increase intakes in STEM and improve the outcomes of their learning ii) quantitative (inadequate recruitment due to lack of candidates) and qualitative (skills and performance to be enhanced) solutions for the teaching issue; iii) curricular and pedagogical reforms to make these disciplines more accessible and attractive and enhance their sense in respect of the search for solutions to problems in the surrounding environment; iv) the integration of ICT in schools and, in particular, their use in the teaching-learning processes; v) introduction of national languages as a medium, and consequently, their conceptual enrichment in these disciplines; vi) gender equality and equity in the acquisition of STEM and vii) STEM and research/development.

Promotion of STEM in Africa

Today, African graduates come out of school mainly with academic qualifications in the arts and social sciences, with the number of students from the science, technology, engineering and mathematics disciplines accounting on the average for 25 per cent of the products. Furthermore, women are under-represented in these disciplines.

As a result of recent progress achieved in Africa regarding enrolments, increasing numbers of students are able to complete their primary and secondary school courses. This new generation must be able to acquire the skills and knowledge they may need to address the challenges confronting the continent. At the beginning of the year, the Rwandan authorities and the World Bank organized a high-level Forum on higher education in science, technology and innovation in Kigali. At this event, the participating countries and their partners made an appeal for action by setting an ambitious goal: a two-fold increase in the number of students leaving African universities with a science or technology certificate by 2025. It is at such a price that an accelerated transition of Africa towards a knowledge-based society can be achieved within a time span of one generation.

How do we proceed? Several measures which have already been successful will help to adapt higher education to the needs of the 21st Century and brighten the career prospects of young Africans. They centre on a keyword, partnerships: partnerships between the universities in Africa

and elsewhere, between universities and the private sector and between African countries and new investment partners in Asia and Latin America. Systemic reforms are also important, especially to improve the quality of education at all levels and make higher education more responsive to the expectations of employers.

The World Bank, together with eight African countries and the Association of African Universities, has developed an initiative aimed at establishing 19 “Centres of Excellence” in West and Central Africa. The plan is to develop and support excellence in higher education in Africa, particularly in the areas of science and technology, by promoting regional specialization; by bringing the best teachers and researchers together and promoting the sharing of knowledge. This form of cooperation is critical to maximise the impact of very limited resources and promote increased regional integration.

Makhtar Diop, Vice-President of the World Bank, Africa Region, 2014

5.2. Major challenges

The successful promotion of science, mathematics and ICT education in Africa calls for the major challenges to be addressed. They include:

- The low production of STEM research and in the physical sciences;
- The lack of benchmarks in the culture of science and mathematical standards;
- The poor command of the language of instruction by the teachers and learners;
- The gender disparities in school participation and in science and mathematics results;
- The low educational background of learners concerning basic skills in reading, writing and mathematics;
- The gap in teaching and physical resources (school textbooks – basic services such as water, sanitation and electricity);
- The lack of ICT tools such as radios, computers, television sets and installation of internet facilities;
- The low mastery of the use of ICT tools by the teachers and students;
- The lack of comprehensive policies on integration of ICT in the provision of education;
- The shortage of science, mathematics and ICT teachers;
- Teachers with inadequate training or without qualifications, less motivation as far as working conditions and remuneration are concerned;
- The big size of classes at the higher education level.

Higher Education and STEM in Africa

The expansion of STEM in higher education is a strong factor for accelerated economic growth and sustainable development in Africa. However, the continent is still unable to address the challenge of promoting them to a critical level. Nevertheless, in addition to the commitments made by the States in the various regional and international conferences, different projects have been initiated within the context of Africa's higher education to make leaps in this direction. Apart from national initiatives, the following can be cited, among others:

- STEM-Africa Project which encourages and supports young scientists including research in the area of STEM;
- IBM Digital Nation Africa which forms part of a global initiative that places multimedia equipment at the service of the development of STEM skills;
- Programme FIRST -- Forward Inspiration Recognition of Science and Technology (which includes STEM) is an *open-innovation* programme that enables students to undertake projects in teams with regard to new services linked to digital life through coaching by experts from Telecom Foundation's partner enterprises;
- PARTNERSHIP FOR APPLIED SCIENCE, ENGINEERING AND TECHNOLOGY (PASET): an initiative from countries such as Senegal, Rwanda and Ethiopia for a programme on partnership for science, engineering and technology which aims at supporting 10,000 theses during the next ten years; it is also an innovation and research fund that seeks to support environmental research;
- World Bank Centres of Excellence Project: it is a flagship project consisting of 19 centres of excellence established within universities in seven countries in West and Central African countries to support specialised educational sectors in disciplines such as science, technology, engineering and mathematics (STEM) including agriculture and health with a total budget of 150 million dollars;
- ECOWAS NOWNNNICA Azikiwe Academic Mobility Programme (ENAAMS) enables universities and other higher educational institutions to benefit substantially from the use of qualified and experienced teachers for highly specialised courses where lecturers are lacking or are inadequate or where the institutions are unable to use full-time lecturers. The programme seeks to enhance access to education in disciplines of strategic importance for the region including the knowledge base of the region by promoting research, exchange of ideas, information and academic equipment among universities and other higher educational institutions by offering scholarships for studies at Masters and Ph.D. levels.

All these projects are ongoing and have a common feature: they enhance STEM skills by mobilizing resources and the necessary partnerships for that purpose. Their mode of financing is innovative and involves synergies with governments and Regional Economic Communities (RECs). For now, their impact has not yet been felt regarding progress in the targeted areas. The share of student population in the STEM at the higher education level is at a standstill. Girls and women are under-represented. This gap between the teaching issues and academic research on the one hand, and the needs of the population and development issues of African countries persists, on the other hand.

How can all this be corrected? What works in STEM in higher education in Africa? What should be done further?

- Greater political will on the part of States is necessary for the development and implementation of the necessary holistic policies consisting of the needs and factors driving STEM.
- Availability of financing is critical to recruit and train teachers in sufficient numbers and in quality, to establish the necessary infrastructure and equipment, put in place adequately effective incentive measures for the students, teachers, parents and the other stakeholders.
- Creating partnerships among all these regional initiatives, among financing institutions themselves and among the latter and governments and the academic institutions is a matter of the requirement of effectiveness and stimulus through co-action, pooling and research so that together the challenges confronting the promotion of STEM which defy individual efforts could be addressed.

However, action at the macro level alone is not enough. At the same time, the current teaching and learning approach must be changed: what is taught about STEM, the mode of teaching, what is learned and the way of learning it. The connections between what is taught and what is learned, on the one hand, and the daily reality and the problems that crop up, on the other, must be explained through learning situations. The way of teaching and learning must go beyond courses and lectures to be dispensed and registered; it is essential to incorporate more interactiveness between teachers and students and among the students themselves. The learning environments must be welcoming and motivating: laboratories, kits, new attractive technologies which enable students can work in teams and interact among themselves and with the available technologies. Such changes call for the promotion of new values and pedagogical skills on the part of the teachers.

It will be necessary to master learning replication to find the linkages between real life situation of students and the general academic knowledge in order to develop the appropriate interactive learning situations. It will be necessary to know how to conduct, together with the students, a conceptualisation process from a real-life situation. In this way, the sense of learning STEM will be highlighted, i.e. their usefulness and their use in solving key life problems. It is here that the door opens to linkages between the acquisition process of STEM as an approach to solving problems, needs and issues concerning the local context. When they are established both in teaching and research, then a real ownership of STEM used for solving Africa's development problems will occur. The interaction implied here requires exchanges and partnerships with enterprises and promising sectors where these issues are found: access to potable water, sanitation, agriculture and sufficient food, processing of raw from teaching and research materials, in short, taking into consideration the seventeen sustainable development goals and the seven objectives of the 2063 Agenda. That is the reason why it is necessary to broaden the perspective to integrated multisectoral programmes where STEM can transform Africa on condition that they are linked to the key economic, social, environmental and cultural dimensions of development. It is also in this interactive approach between theory and practice anchored on the search for solutions to development problems that a determining contribution of Africa can be developed for the progress of STEM in the world and the transformation of the latter.

The teaching-learning process of STEM in higher education as recommended above can be consolidated or undermined by the system and the types of evaluation adopted. The continuous evaluation, like a summative evaluation of this learning process and its outcomes, must be congruent. They cannot be summed up in memory exercises or the search for solutions to model problems without returning to forma presentations and memorisation. They must rather solicit logical brainstorming skills, critical analyses, concept development, experimentation, scientific evaluation, innovation when new situations occur. Thus, they strengthen the training of the scientific mind and the skill to solve new problems.

ICT represents the relevant materials to engage in these change processes, both in respect of teachers and students, even of parents and other stakeholders. It facilitates targeted interactions, supports inter-learning and self-learning, distance learning and research. It can broaden access, strengthen equity and improve relevance and quality of teaching STEM on condition that it is appropriately integrated into the teaching-learning processes. It is a major challenge that teacher training must effectively address the latter to serve as a precious tool for the promotion of STEM.

The low enrolment of students in STEM courses was raised as a huge concern and a critical problem to be solved. However, it cannot be resolved mainly at the higher education level. More specifically, vocational guidance of students in STEM is carried out from early childhood, therefore from the pre-primary level and it continues through primary and secondary stages before entry into higher education by which time the major activities would have been carried out already. That is the reason why the promotion of science, mathematics and technology education through the basic and intermediary stages is determinant in attempting to deal with the imbalances in question. Higher education in this context has a critical role to play in view of the influence it could have on these levels. It could offer contributions through research and translation of the outcomes of the research by shedding light on the most effective policies and strategies and in relevant curricular reforms, as well as learning and teaching tools for the attraction and strengthening of scientific and technological attitudes at an early age. From these gains, it can also improve teachers' training and their performance in STEM education since it can usefully support strategic mentoring programmes that encourage and support young learners from a tender age to be oriented towards scientific options.

In conclusion, the experience of new emerging economies shows that effective higher education programmes in the STEM disciplines play a critical role in acceleration, technological catching-up and social inclusion. They promote the creation of start-ups and the training of innovative leadership and a critical mass of skills capable of anticipating and implementing changes required by structural transformation of the economy. They enhance the capacity to access and generate new knowledge, to welcome global experiences and to own them for profitable use at the local level. To achieve this, it is important for Africa to:

- Mobilise the necessary investments on an internal and sustainable basis since most of the initiatives identified here depend on support provided by international institutions and by foreign countries in a project-based approach;
- Translate the political will affirmed by African countries into policy priorities and substantial budgetary trade-offs;

- Assume leadership role of partnerships developed around the promotion of STEM in order to direct them towards the priorities and needs of African countries as part of holistic development policies;
- Carry out the changes that this promotion requires in the educational systems by planning and implementing them at the macro, meso and micro levels;
- Establish research and capacity building programmes necessary to effectively support these changes in higher educational institutions and in the entire education and training system with the aim of achieving at least a twofold increase in the number of graduates by 2030 and to close the current deficit of STEM skills.

Summary of discussions at the 2017 Triennial

5.3. Solutions to address the major challenges identified

Several options and approaches can assist in surmounting the major challenges of promoting STEM and ICT in the teaching-learning processes. Furthermore, these options and approaches would contribute to enhancing understanding and the recognition of the importance of science and mathematics in national development by the learners and teachers. The solutions include:

- The establishment of a support mechanism for teachers for their professional development and permanent improvement of their teaching practices;
- The provision of ICT infrastructure and the strengthening of knowledge and skills for optimum use of these materials;
- The use of ICT to broaden learning opportunities at the higher education level, while contributing to enhancing efficiency in the use of resources;
- The elimination of gender disparities in the learning of the STEM subjects through targeted interventions which motivate girls to register in the STEM courses;
- The inclusion of indigenous knowledge, popularisation and promotion of scientific knowledge from all segments of the African society into the school curricula;
- The establishment of a system of guidance /support for teachers and learners towards the acquisition of cultural tools associated with STEM, such as the “language” of the courses in the African context where the language of instruction is different from the mother tongue;
- The design of a platform for the sharing of knowledge at the continental level for the dissemination of successful experiences as well as good practices.

Strengthening science and mathematics curricula and dissemination of knowledge and the scientific culture in the African society

- a. Introduce science from the start of the educational curricula and develop attractive extra-curricular activities such as science parks and clubs;
- b. Encourage practical training and reward innovation and innovators;
- c. Facilitate the implementation of incubator projects and mentoring programmes;

- d. Use informal and non-formal means to disseminate knowledge and the culture of science;
- e. Include contextualised scientific knowledge in curricula and in alternative educational approaches;
- f. Promote scientific knowledge and indigenous culture.

CESA 16-25

5.4. Successful Experiences – Promising Solutions

To establish scientific benchmarks and mathematical standards in Africa, the Inter-Country Quality Node (ICQN) on mathematics and science education (ICQN-MSE) and the Working Group on Educational Management and Policy Support (WGEMPS) are working on the development of a framework for the design of specific benchmarks. It should be understood that such a mechanism will not be in harmony with internationally-recognised principles and approaches. The successful and promising experiences that were analysed come from several countries.

Kenya is implementing **an innovative school curriculum for environmental science education**. The curriculum allows the students to be linked to their environment through science, especially by incorporating indigenous knowledge into science taught at school. This is an example of “self-acculturation” or “scientific inculturation”.

Another Kenyan programme, “**Strengthening Mathematics and Science in Secondary Education (SMASSE)**”, comprises of several segments including online orientation for Elimika teachers, which provides the teachers with new information on the school curricula, the teaching methods, etc. Subsequently, SMASSE has been institutionalised and regularised, both as a capacity building programme for mathematics and science teachers in the primary and secondary schools all over the country.

SMASE-Nigeria was launched and managed in the form of a project between the Nigerian Federal Ministry of Education and JICA. After the convincing results of the pilot phase, the project was replicated in all the same targeted regions before becoming a programme for the Federal Minister of Education, which took over the financing of all the activities in 2014. Similar activities have been implemented in Ethiopia, Malawi, Morocco and Zambia.

In Tanzania, **an experimental study** assisted in teaching students the same concepts in biology and geography by using two different languages: English, the language of instruction; and Kiswahili, the local language of the learners. This is a success story for the promotion of the “science talk”.

A programme at **the Rabat Advanced Teacher Training School for Mines** in Morocco relates the contents of mathematics to real life experiences. Thus, solutions were developed for the problems related to population growth, resource management (water, energy, mineral resources etc.), demand for energy, climate change, the new epidemics and health, disaster management and terrorism.

To address the issue of overcrowding in classrooms, the University of Cadi in Morocco is implementing and managing UC@MOOC, which is **a digital platform introduced to help address the issue of overcrowding of students in the universities**. The platform is also used by students in

neighbouring countries such as Tunisia, Algeria and Senegal. It allows university students to learn, without any face-to-face interactions with their lecturers, through the use of the digitalized content in CD-ROMs and DVDs, for example.

The **experimental solution EDUCI**, developed in partnership with Microsoft, Orange, Nokia and UNESCO-IIPE, was tested in December 2012 by the Ministry of Education of Côte d'Ivoire. It helps to collect information on educational inputs, thus replacing the traditional paper survey forms.

The **Real-Time Access and Utilization of Children's Learning Data Project in Ghana**, helps students to access their results on their mobile phones to establish local, regional or national statistics that form a database to foster information sharing and the circulation of experiences among schools.

Connecting the learners to their environment and culture is the goal of the **Aga Khan Enterprise Initiative in Mombasa**. The students learn the scientific content in English, the official teaching language; then in Kiswahili, a national language; as a means of improving scientific understanding, developing their environment and connecting to their culture.

Linking mathematics to daily experiences, this is an approach adopted by the Rabat Advanced Teacher Training School for Mines, in Morocco. Mathematics is taught to show how it can be used to solve concrete problems such as population growth, resource management (water, energy, minerals, etc.). The initiative makes it possible for users to model mathematics problems and simulate a computer software.

Digital Technology for Education in Africa

Making quality suitable contents available for targeted audiences

In the first place, ICT can provide large-scale access to various forms of contents, to individuals or groups, both for the preparation of the courses and for activities in or outside the classroom. Thus, in the face of the shortage of school materials, ICT offers a large number of resources at very affordable costs, with an avenue for updating the contents.

Improving the training of teachers

The shortage of qualified teachers at all levels of the system (especially at the primary level for the teachers already at post) can be partly bridged through nomadic technology, which provides greater flexibility for the organization of the training, particularly in the area of apportioning time between the activities requiring the physical presence of teachers and the activities relating to distance self-training. This flexibility is all the more important if the long absence of teachers from the classrooms must be avoided. But technology can also help in supporting the students by tutorship, which could address the problem of demotivation.

Promoting a learner-centred approach

ICT can facilitate a teaching approach inspired by methods referred to as "active", which are geared towards developing skills beyond the transmission of knowledge. These methods are based on collaborative learning, case studies, situations-problems, teaching methods led by the learners.

ICT also allows for both the transmission of knowledge and the solving of complex problems, case studies and simulations, etc.

Among the classroom practices associated with performance improvement of students, the sustained controls and examinations can be supported by mobile technology, which facilitates the administration, correction and consultation of results, both internally and externally.

Addressing the lack of data for the management of the educational system

The availability of reliable and current data on learning and school materials, the number and the qualifications of teachers, the organization of the influx of students and the times for study is an essential requirement for the development and conduct of any educational activity. Many governments and policy makers facing issues of inadequate and up-to-date information and data have become aware of the use of smartphones or tablets to address these difficulties...

AFD Common Stocks of Knowledge (Savoirs communs) No.17

5.5. Lessons learned and key messages

- *Indigenous knowledge is as important as science and it must be reflected in the school curricula.*
- *The language of instruction plays a critical role to enhance the conceptual understanding and performance of the students in science and mathematics.*
- *When the teachers spend more time on teaching and learning activities, the students learn more and obtain better learning outcomes.*
- *A concerted effort among all African countries enables each of them to benefit from the initiatives intended to improve the teaching of science and mathematics.*

Consequently, it is important to:

- *Provide adequate resources towards the improvement and upscaling of equipment required for strengthening science and mathematics education;*
- *Ensure a better attraction and ownership of mathematics and science education: bilingual education, curricula reforms, linkages with problem-solving approaches of the surrounding environment, teaching methods reforms, enrichment of the learning environment with ICT and virtual training platform, multiple incentives to schools, students, teachers and parents;*
- *Develop and implement a professional development plan and motivation of teachers in the scientific disciplines;*
- *Move towards the creation of a continental platform “virtual space” for the sharing of information and best practices in the area of teaching-learning of STEM to ensure that each African country can learn from these successful and innovative initiatives.*
- *Invest more in the research and innovation sector by going beyond 1 per cent of current GDP;*
- *Develop an operational strategy for the integration of the African in the STEM promotion programmes.*

Dissemination of the science culture in the entire educational and training system and in the society as a whole

The development of scientific and technological skills starts from early childhood and then, throughout primary and secondary school and even from personal and collective experiences. In other words, learning from observation, analysis, experimentation, evaluation, interpretation, rational and critical reflection, from methodical doubt, the use of ICT can be achieved at all levels of the educational system and personal development and through promising scientific disciplines, and beyond that, in all learning activities. In fact, it touches on culture and science and technological education with the integration of ICT, which must be inculcated into children, the youth and the entire society. In this regard, higher education can play a three-fold role:

- Learning transfer or popularisation, and the demystification of science as a daunting discipline and a difficult subject, in order to ease accessibility at all levels and create understanding and ownership of concepts, laws, methods and basic approaches;
- Training of teachers for science and technology education or, more precisely, for the pedagogy of learning the culture of science;
- Research on reforms to be undertaken to ensure that education and training systems broaden and strengthen the place and the role of science and technology, not only as disciplines, but also as the foundation of all types of training for all, irrespective of the final destination of the learner.

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

6. IMPLEMENTING EDUCATION FOR AFRICAN CULTURAL RENAISSANCE TO PROMOTE AFRICAN IDENTITY AND TO BETTER PROJECT THE FUTURE OF THE CONTINENT**6.1. Issues**

African integration can be advantageously developed around a humanistic approach to education, which would itself be developed around multicultural and multilingual ethic that promotes inclusion, mutual understanding and social cohesion. Furthermore, the close correlation between the use of mother tongues in multilingual settings and the promotion of African cultures has been highlighted on the one hand, and the use of mother tongues in education and sustainable socio-economic development, on the other hand. Hence, African education must not only depart from the school form but also open itself adequately to its environment in order to incorporate the three dimensions which are indigenous knowledge, practical knowledge and innovative knowledge. In other words, it is important to stop the extroversion of the African educational systems which are designed from models inherited from the colonial period. This is because, in these systems, local cultures, African history and indigenous knowledge are not adequately incorporated into the educational curricula and the training of the African youth.

Six basic concepts or structural components would guide the reorientation. They are: i) Pan-Africanism; ii) African cultural renaissance; iii) Multiculturalism; iv) Multilingualism; v) Continental integration; and vi) Indigenous knowledge and expertise.

Though Pan Africanism, as a social, cultural and political emancipation vision, hopes to promote and encourage the practice of solidarity between Africans wherever they may be in the world, African renaissance is a way of being and getting to develop Africa, the African historical conscience, to bring about fruitful dialogue among Africans with their own cultural heritage. Thus, it is a question of enhancing African creativity in a world where one does not just “receive”, but must also “give” “participate”, “develop” and “act”.

The number of languages spoken and/or written in each African country varies between two (2) (Burundi), to more than 400 (Nigeria). At least 56 African languages are used in administration and 63 in the judicial systems. More than 65 African languages are used in written commercial communications, and more than 240 are used in the media. This linguistic profusion and vitalizing dynamic should be an asset and not a factor for isolation of the continent in relation to the emergence of knowledge economies. Obviously, an advantage can be derived by subscribing to an ideological movement founded on a multilingual vision where African languages as much as the official languages (French, English, Portuguese, Arabic, etc.) play their role in the partitions which promote inclusion and continental integration.

African integration represents the concretisation of the feeling of solidarity for the entire continent. Such integration is founded on the following pillars: recognition and promotion of African social and cultural heritage – pooling of “national sovereignties” for the benefit of a “collective sovereignty” – convergence of sectoral and macroeconomic policies – formation of a regional market to stimulate investment and trade – building of regional physical infrastructure. It also contributes to the promotion of an education founded on humanism; this implies the enhancement of cultural diversity, universality and inter-culturality.

The indigenous knowledge and expertise emerge from oneself; and they build on empirical and intellectual data of a given culture. Turning to them helps to identify knowledge implementation, experiences and good practices which should be incorporated into education and training at all levels in order to develop an education for African Cultural Renaissance, the ideals of Pan-Africanism and continental integration.

African Cultural Renaissance

Convinced That

- African unity can find its foundation particularly in its history;
- The affirmation of cultural identity translates a common concern for all Peoples of Africa;
- Cultural diversity and African unity are a balancing factor, a force for the economic development of Africa, conflict resolution, the reduction of inequalities and injustice for national integration;
- There is the urgent need to build educational systems which acknowledge African and universal values and thereby entrenching the youth in the African culture and opening them up to the contributions of other civilizations and to the mobilisation of social forces towards sustainable indigenous development;

- There is the urgent need to resolutely ensure the promotion of African languages, vectors and avenues for tangible and intangible cultural heritage in what is not only more authentic and essentially popular, but also as a factor for development;
- There is the urgent need to carry out a systematic inventory of the tangible and intangible cultural heritage, especially in the areas of history and traditions, knowledge and expertise, arts and the craft industry in order to preserve and promote it.

Extracts from the CHARTER OF AFRICAN CULTURAL RENAISSANCE

6.2. Major Challenges

Several major challenges must be addressed for the successful implementation of an Education for the African Cultural Renaissance. They include:

- The limited knowledge of traditions;
- The difficulty in integrating the identified traditions in the curricula;
- The poor mastery of the knowledge linked to the understanding of the contents of cultural identity (systematic fact-finding about the indigenous culture) and the ideals of Pan-Africanism, their didactic transposition and the curricula planning;
- The difficulty in integrating concepts related to Pan-Africanism and to African integration;
- The difficulty in correcting the image that Africans themselves make about Africa and Africans;
- The unwillingness on the part of many policy makers to understand the importance of the integration of the cultural dimension into education;
- The lack of skilled human resources;
- The gap in suitable learning materials;
- The poor dissemination, promotion and harnessing of work on multiculturalism for curriculum development;
- The inadequate inclusion of African languages in educational systems;
- Methodological difficulties faced by educationists in incorporating Pan-African-related concepts and, African cultures and values into the curriculum;
- The limited knowledge of traditions and the low dissemination of work on multilingualism for curriculum development;
- The active or passive, conscious or unconscious resistance by the elite, particularly, regarding the use of African languages in education.

6.3. Lessons learned

Among other preliminary requirements or conditions to be addressed, is the actualisation of a bold policy of literate environments sensitive to the issue of African languages. This can hardly be achieved without promoting African languages as a medium and focus of education but also as a medium and

cultural vector for greater social justice (cf. use of ICT in the teaching-learning process), or as a component of a common body of knowledge and skills to be grasped by the learners.

Recommendation on Investment in African Languages and Multilingual Education

1. Standardise multilingualism for social cohesion and for individual and social development through language policies based on natural command over two languages or more. Such policies must be anchored on the social vision for a country, translated into legislation and reflected in planning, budgeting and research in all sectors of the society.
2. Enhance and develop African languages which are the most vibrant means of communication and the source of identity of majority of Africans and thus, to develop all the language policies (for instance, accept African languages as official languages and the language for writing examinations).
3. Establish a system of dynamic partnerships for education among all the stakeholders (government, educational service providers, language experts, labour market, local communities and parents) in order to engage in a participatory dialogue and mobilise large-scale support for an integrated, holistic and diversified multilingual education which will stimulate empowerment and transparency.
4. Plan an additive or late-exit multilingual education based on the mother tongue, develop it audaciously and implement it without any further delay by resorting to models adapted to the conceptual framework, to the situation and to the unique resources of the country concerned. For education to be relevant, it must, from the outset, prepare the students for active citizenship and enable them to pursue their academic goals.
5. Improve access to learning and information and make education effective by dismantling the language barrier and using languages the learners are proficient in, by proposing relevant programmes from the socio-cultural point of view, and by further promoting the use of African languages in the educational context.
6. Combine optimisation of the use of language and the adoption of relevant and high quality educational programmes, methods and materials which will help in obtaining the best results and ensure the reduction of the drop-out and repetition rates in the entire educational system and establish an education for individual and social development in Africa. Be conscious of the fact that the choice of language and the way the languages are used in the classrooms can impede or facilitate communication and learning, and hence can empower or not empower people. Communication is a key component of the effectiveness of the teaching and learning methods. It also facilitates access to knowledge and knowledge creation. Furthermore, the relationship between the use of the language in the classroom and the life of the students outside the school determines the possibility of applying and putting into practice what is taught; in other words, the relevance of education and its impact on individual and social development.
7. Make maximum use of available expertise and resources and continue to develop skills in the education sector and the media, as well as at the work places. Sharing responsibilities with the universities, teacher training institutions, the media, the labour market, businesses and other institutions that are well-resourced.

8. Conduct inter-disciplinary research and awareness campaigns and build consensus in order to update knowledge relating to language in education and for development.
9. Cooperate at the international level and make use of regional resources.
10. Use the policy Guide on integration of African languages and cultures in the educational systems mentioned below

Why and how must Africa invest in African languages and multilingual education? An evidence and practice-based policy advocacy brief. Second ADEA publication, 2010

The success of learning and improvement of school performance in education for cultural renaissance is also facilitated by greater involvement and social empowerment. The school management committees in the experiences of Namibia and Mali illustrate clearly the need for such an approach.

The raising of the credit hour allocated to the teaching of history is also another requirement. Equally, strengthening of autonomy of History as a discipline, should be enhanced because it has been more or less undermined by pedagogical re-organizations. The design and use of textbooks in line with the cultural renaissance is another requirement since the history textbooks in use in most of the schools are full of clichés and stereotypes.

To achieve a real African cultural renaissance in education, there is the need to reprofile and to revisit, if not rewrite school curricula by i) adding more value to the existing work on multiculturalism and ii) incorporating into it social issues and the specific needs of the people. It will be imperative to have a common set of core skills encompassing all forms of education (formal, non-formal and informal). The most relevant strategy is the bottom entry point approach. It consists in experimenting and disseminating curricula designed in mother tongues, in the border areas which are real socio-cultural melting pots. Furthermore, it may be necessary to:

- Continue and systematise the work of codifying the African languages;
- Legislate on the implementation modalities for the use of the mother tongues in the curriculum;
- Systematically incorporate modules on the transcription of African languages in the teacher training colleges;
- Develop teaching materials that are sensitive to African cultural realities;
- Popularise the integration of a common set of core skills (cf. Benin – Ghana – Senegal).

Policy Guide on Integration of African Languages and Cultures in Educational Systems (ADEA, 2010)

The multilingual and multicultural education policy calls for:

1. The establishment of policy and legislative frameworks;

2. Awareness raising and advocacy measures at the national level and the development of regional networks;
3. An institutional strengthening and capacity building;
4. The development of monitoring and evaluation strategies to ensure the evaluation of learning outcomes and follow-up;
5. The development of curricula and training of stakeholders;
6. A publication in national languages and a book policy;
7. Research work and pedagogical innovations;
8. The mobilisation of financial resources.

Why and how must Africa invest in African languages and multilingual education? An evidence and practice-based policy advocacy brief. Second ADEA publication, 2010

Along these lines, aspects concerning facilitation and acceleration are available. They include the need to:

- Use the General History of Africa as proposed under the UNESCO Project on the pedagogical use of the HGA;
- Use the museums as a platform for learning as illustrated by the Burkina Faso experience;
- Dedicate public places to great African heroes and to the major events marking the history of the continent;
- Use of the Ubuntu approach, which seeks to promote humanism based on humanistic interdependency, positivism, collective approach to solving social problems;
- Use of family relationships, which is a widespread phenomenon in West Africa and which remain an excellent practice to facilitate inter-family and inter-tribal relationships;
- Explore tales and drama to promote African values and identity among the learners (cf. CARTEL-CITO Federation);
- Organize study tours for teacher interns in the local communities of several countries in order to expose them to the multicultural realities, thus promoting their opening up to others through contacts and immersion into grassroots communities.

Pedagogical Use of the General History of Africa

Some key ideas cut across the entire work:

- The centrality of Africa as a cradle of humanity and for its location and its continuous trade relations with other regions of the world;
- The cultural unity of African civilizations, beyond the diverse situations (illustrating local developments) and expressions of creativity of Africans;

- The continuity of African History beyond the break-ups caused by the Atlantic slave trade and colonisation.

This continuity is also due especially to the ability of Africans to resist, produce and to self-regenerate even in very harsh situations. Among the cross-cutting themes, the handling of which helps to buttress these propositions, issues such as those relating to techniques (invention and dissemination) for the circulation of knowledge, settlement history, continuing training of ethno-cultural communities, and training of States were tackled by each of the regions. The thematic section of the State is so vivid that the spaces that did not have “centralised” states are sometimes neglected or given less coverage.

Finally, there is the issue of the acceptance of the work by the young people for whom the contents are intended for learning purposes. It would not be out of place to answer this question from the preface by A. M. Mbow who set the goals of the General History of Africa. One could even ask about the achievability of the goals vis-à-vis the training needs of the youth of today by considering the state of the world and the major trends that can be seen in it.

Regional Conference on the Pedagogical Use of the General History of African Schools, Tripoli, Libya, 10 – 17 June, 2010

In the area of financing and mobilisation of the necessary resources for the advent of an African cultural renaissance education, several opportunities exist:

- An advocacy among States on compliance with commitments made on financing Education (4 to 6 per cent of GDP or 15 to 20 per cent of the overall Budget of the State);
- A reduction of taxes on African cultural works and products which impact on education;
- A capitalisation of promising financing experiences (cf. KARANTA strategy which cuts across to Senegal, Mali, Niger and Burkina Faso);
- The payment of a tax by users of educational products;
- The co-financing of cross-border educational programmes between countries with populations speaking the same language;
- The encouragement of public-private partnerships (PPP);
- The enactment of laws on sponsorship for the substantial financing of education, with a reduction of taxes in return;
- The development of simple, less expensive, short-term joint pilot programmes initiated by several countries with common borders (cf. “Education Centres for Integration” co-managed by Burkina and Mali).

6.4. Key Messages

- *Signing the African Charter for African renaissance is a sign of the commitment of African governments to promote African identity: to date only 14 countries have done so;*
- *The extreme diversity of African cultures and traditions is to be considered, not as an obstacle but rather as a formidable opportunity for the building of national and African identities;*

- *Re-inventing the African school will go through i) a period of distancing in comparison to a form of schooling done in a more holistic approach and ii) a greater internalization of endogenous values and practical stocks of knowledge;*

The New African School

Deconstructing the school inherited from colonisation and rebuilding it on the basis of historical and linguistic heritage, values and aspirations of African cultural renaissance, Pan-Africanism and continental integration calls for departure and reconstruction. To better understand the need and the issues, the perspective must be overturned to highlight and affirm (i) that African cultural renaissance cannot become a reality without an early and continuing education of young people in endogenous knowledge, practices, heritage and innovation and (ii) that Pan-Africanism and continental integration cannot be established without education on the common heritage and without transmitting to the young generations a common perspective of the history of African people and African descendants devoid of nationalism and chauvinism with colonial imprints. The seven aspirations expressed by the 2063 Agenda and which project the future vision of Africa come into play here.

However, one should not underestimate the questions raised by the project of restructuring the African school. They do not focus explicitly on legitimacy, but rather on its feasibility:

- How can the African school be decolonised?
- How does one break away from the prisoner school education system by opening the school to community life- the environment, endogenous knowledge, African history and culture?
- How can Africa's past be promoted in the curriculum and how can the teaching of history be strengthened in an African perspective?
- How can the school be made dynamic to impact the sensitivities and practices outside the classroom?
- How can endogenous knowledge and abilities be incorporated into the curriculum in a multilingual and multicultural context?
- How can national languages be used as a medium of teaching and as disciplines?
- How can art, citizenship values, Pan-Africanism and continental integration be taken into consideration in developing curriculum and in teaching curriculum to teachers?

Behind these valid questions are the sceptical and opposing views, which must also be dealt with. The answers to these questions are no longer simply theoretical because they persist on the ground.

- Schools in the central part of Mali have succeeded in integrating endogenous knowledge and abilities in the curriculum by developing a participatory education model open to the socio-economic realities of the locality. The process has gained widespread support in the community and it has brought the community on board for the development of programmes that help to achieve a curricular balance based on a blend of modern and traditional educational needs.

- In Burkina Faso, existing initiatives use art to promote African engineering among school children and to develop the bases of African identity. The Tuareg theatrical tent is also used in the country's schools to create a drama focused on the history of the locality.
- The pedagogical use of the monumental work which is the General History of Africa already translated into three (3) African languages (Hausa, Kiswahili and Fulfulde) is ongoing in several African countries.
- The experiments of using African languages in the official education systems exist in several African countries; they successfully use additive multilingual strategies.

In these various ways and attempts adopted by the countries to move towards the Africanisation of educational systems, the following key factors are evident:

- They consider the African school in its current form as an impediment to inculcating in the young ones a strong African identity, which will ensure that they take some pride in themselves and confidence in the continent's future. -- as opposed to the prevailing system, which produces extroverted young people who are ready to emigrate towards the Western dream by that education
- Deconstructing this school starts by a decompartmentalisation, which opens the door to stakeholders and bearers of African heritage and allows them to express themselves and to be involved in the process.
- But such a possibility can be achieved on condition that the school breaks off, not only from its island status vis-à-vis its surrounding community, but also from its formal school and scholastic traditions in order to open up to other learning modalities and contents: learning through experience, inter-generational learning, socio-educational activities, learning by manual work, learning through recreational activities and learning to live together.
- The teachers and the elite will generally not design and implement such changes until they themselves break off from the philosophy and matrix of colonial education that formatted them, and which requires an in-depth critical overhaul and reconstruction in their training or re-training, based on the sustained interaction with the endogenous heritage.

Finally, the way forward is to re-learn from African education, its approaches, languages, endogenous knowledge and practices, its history, cultural heritage, not to return to the past, but to draw from the historical, cultural and linguistic foundation serving as the basis of receiving, interpreting and owning universal contributions. Among the conditions of success of such an enterprise, one must underscore the need to identify, organize and promote the holders of endogenous heritage in order to systematically collect, document and capitalise their knowledge and experiences for transmission. Research must support the process to ensure quality and bolster planning and implementation of change in such key areas as curriculum, languages, learning, pedagogical approaches, teacher training and systems evaluation.

Summary of Triennial discussions

- *The additive bilingualism anchors in the culture and improves the quality of learning if the planning of implementation is well conducted (linguistic, institutional didactic re-arrangement of the learning environment, teacher training, IEC, steering generalisation...);*
- *Promotion of African integration are based on the grassroots communities: taking of ownership through education of the multicultural and multilingual traditions, the historical melting-pots and the sublimations of sources of conflicts, especially, in the border regions and points of encounters;*
- *The African cultural renaissance must be based on new concepts and paradigms marking a departure from strait-jacket habitual thinking on education, the economy and progress, focusing rather on experiences, heritage and common values inherited from African history;*
- *It is essential to promote the benchmarking for the enhancement of the propagation of successful practices on the cultural renaissance and continental integration.*

7. PROMOTING GLOBAL CITIZENSHIP AND THE CULTURE OF PEACE: TOWARDS A HOLISTIC AND MULTISECTORIAL APPROACH

In the 21st century, where globalisation has turned the world into a global village, Africa must see itself as part of that global community. Since it is acknowledged and taken for granted that learners spend much of their childhood at school, education affords them the opportunity to fashion out and reinforce the values that shape young people's character. Education must not be reduced to the acquisition of knowledge and the development of cognitive skills; it must inculcate in learners the values, the know-how to be and the attitudes that facilitate and promote social transformation and international cooperation. Peace education and global citizenship (PEGC) opens up to the universal just like education for identity rootedness. It must be opening learners up to knowledge, understanding to respect others and adherence to universal principles and human rights. Thus, through peace education and global citizenship shall be developed skills and values for the participation in and conscious and active contribution of African youth to the dimensions of societal development at local and global levels.

7.1. Issues

In the 2063 Agenda, the third and fourth aspirations of the vision of the future of Africa are related to universal principles: "good governance, democracy, respect for human rights, justice and the rule of law" and "an Africa living peace and security" respectively. For the CESA 16/25, promoting education for peace and conflict prevention and resolution at all levels of education and for all age groups, by focusing on common African values requires the following:

- a. Formulate national education policies for peace founded on African values and mechanisms for conflict prevention and resolution by involving the ministries concerned, as well as civil society representatives and communities;
- b. Train teachers, social workers, security forces, representatives of religious and civil society organizations as peace actors and mediators;
- c. Develop and disseminate teaching and learning documents on peace education and organize periodic training sessions in schools, training institutions, universities and adult learning centres;

- d. Capitalise ongoing innovative experiences in the various African countries and networks and disseminate the lessons drawn from these experiences;
- e. Strengthen the initiatives and activities of the Inter-Country Quality Node for Peace Education” which is a network for sharing of practices and a platform for policy dialogue and exchange of experiences and expertise.

It can be observed that these aspirations, objectives and strategies, made at the continental level, have generally not been operationalised in the national educational systems. In cases where implementation strategies exist in the national educational plans, they are not based on a specific analysis of causes of conflicts and the means of preventing them, for example i) the reduction of all forms of violence as well as the associated death rates; ii) the eradication of ill-treatment, torture, exploitation, and the trade in children; iii) the promotion of the rule of law internally and internationally; iv) the guarantee of equal access to justice for all. In short, it will be a question of enhancing the emergence of fairer, more peaceful, more inclusive, safer and more sustainable societies.

The use of African values and traditions, action by grassroots communities and the potential of women as agents of peace education also seems to be less present in the strategies established on the ground.

Moreover, it is expected that the learning institutions should be peaceful areas to facilitate the retention of learners and improve learning. However, the existence of different forms of violence in the educational institutions has been pointed out in many African countries. This undermines the achievement of peace initiatives in the education sector and does not help in developing among the learners empathy for other human beings, respect for human dignity, emotional consciousness, communication, cooperation, the capacity for conflict prevention and resolution, etc.

While more than 60 per cent of the African population consists of the youth, pieces of evidence show inconsistencies and conflicts faced by the youth since they are fighting to reconcile ethical expectations and their daily pressing needs which have been worsened by poverty. These contradictions also cut across other segments of the society and create a less resilient environment. The violation of universal principles of good governance, democracy, the rule of law and non-discrimination very often opens the door for African traditions and specificities to offer justifications. Other issues related to peace and global citizenship require attention in the education sector:

- i. the need for an education to prevent radicalisation and violent extremism which is increasingly attracting the youth
- ii. the difficulty of teachers in adopting a “transformational method” capable of changing the attitudes, values and behaviours of the youth
- iii. the lack of resources and capacity to support the development of peace education and global citizenship
- iv. the inadequate use of existing platforms for pooling of efforts and sharing of knowledge and experiences.

Role of Education in the Promotion of Peace and Global Citizenship

Education can encourage citizens, especially the youths, to vote or facilitate participation in the political processes. The educational content, as much as the teaching methods, are the corner stones of the relationship existing between education, conflicts and the consolidation of peace. If peace and non-violence make progress, it is not simply because children and youths go to school, but it is because of both the teachers impart into their pupils the useful skills for facing situations that are prone to conflict or violence. Education reflects the social tensions, especially stereotyped conceptions and the underlying ideologies of conflicts. Because of the foregoing, the relationship between education, peace and conflicts deserves a lot more attention in order to be able to support the positive contributions deployed, to a larger or lesser extent, in favour of the consolidation of peace, access to justice and protection against violence.

1. Education increases the propensity for constructive and non-violent participation in the political processes. Educational and communication campaigns may inform the populations as to the manner of participating in the political life and accessing political information. Also, adapted system of education and teaching facilitate transition towards political systems that are more participatory. Furthermore, citizens of democratic countries are, generally, more and better educated.
2. A better level of education is clearly tied up to a strong feminine representation in political management positions. However, gender equality in politics is far from being achieved. The best educated women are better suited to exercise management functions. Also, the more women you have in politics, the more the educational disparity based on gender is reduced.
3. Education delivered in conditions of equality, using inclusive didactical and pedagogical materials, is a powerful tool for the aversion of and an antidote to conflicts.
4. Conflicts have more and more disastrous consequences on the educational systems. First, children, teachers and schools are often taken as target. Second, for forcefully displaced persons, more especially, children and youths, access to education is an absolute necessity. Third, other forms of violence, notably, incidents of harassment at school, sexual violence are cases for concern.
5. The role of education in the resolution of conflicts should be better acknowledged, notably, in the programmes of consolidating peace. Education can reduce criminality and violence against children and youths. Educational programmes help the marginalised persons to access justice and legal protection.

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7.2. Main Challenges

Several challenges of implementation of PEGC must be addressed. Fortunately, there exists many opportunities and potentials that can be maximised by leaning on the capacity to make of the diversity of cultures, languages, religions, African ethnic groups, a powerful lever for harmonious co-existence.

Among the political and socio-historical challenges to be addressed is the limited willingness and leadership on the part of many African heads of governments, to defend policies and laws that favour peace and global citizenship. The challenge is the capacity of Ministries of Education to translate into actions the vision of PEGC and to forge relevant partnerships at the national and school levels. An emergent challenge is the rise, in many countries, of extremist radicalised, violent group that attacks school buildings and recruit into their ranks members of the school communities, including pupils.

At the operational level, the following challenges should be noted. The first is the non-existence, in several African countries, of a curriculum that may guide the implementation of the PEGC programme. The second challenge is that of power i) getting close in an objective manner to the structural causes of deeply rooted conflicts, resulting in historical injustices, marginalisation or corruption, ii) avoiding the confusion between outcomes, impact and the methodology of PEGC; learning through community service and commitment is also a challenge to be addressed in the majority of existing curricula. The third is the corresponding gender question, not losing sight of, as UNESCO notes, that global citizenship education is founded on Human Rights and that the equality of sexes is a fundamental human right. PEGC must therefore involve the two sexes (cf. Programme carried out in Côte d'Ivoire: Creation of Mothers and Infants' clubs, which brought together women of different nationalities, ethnic groups, and social strata for the well-being of their children).

Among the opportunities to be explored, there is the political commitment by the recent signing by the Ministers of Education of a Communiqué (in Addis Ababa) for the mainstreaming of the promotion of peace and global citizenship into the international and continental strategies. The youths constitute a driving force for promoting the values under-pinning global citizenship and how to put them into practice. Most contemporary conflicts occur in places with high youthful populations; children and youths offer a great amount of opportunity for breaking the cycles of violence.

On admitting that education is not limited only to socio-economic development, but that it includes social responsibility and citizenship, one cannot help but adopt a holistic approach for peace education and global citizenship education (GCE). Up till now, the formal system is the principal mode of instruction for PEGC. That system must, however, be complemented by the non-formal and informal systems. Then, the formulation of national PEGC policies by Ministries of Education must be realised in collaboration with the partners, including the civil society.

The general option for promoting peace should allow a switch from a content-based to a skill-based curriculum, from the teacher-centred to a learner-centred pedagogy, and from a summative to a more formative evaluation more formative. It is also necessary to move from content-based teaching and learning resources to activity-based interactive learning work-books (cf. Rwanda – South Africa – Tanzania – Uganda – Kenya – Asia Pacific Region). The two possible implementation strategies of PEGC are mainstreaming and immersion. Mainstreaming consists of identifying profitable disciplines and concepts of peace and global citizenship and making them integral parts of those disciplines. With immersion, the main messages of peace and world citizenship are introduced into the teaching and learning content, the said disciplines becoming the entry points. Adopting the 'formal model' goes on to make PEGC into a distinct discipline – an uncommon practice in Africa. One of the examples where world citizenship is taught like a separate, distinct discipline is South Korea ('Creative, Experimental Activities').

7.3. Profitable Experiences and Lessons Learnt

The non-formal programmes are another approach used to implement global citizenship, through initiatives led by youths in collaboration with non-governmental organizations (NGOs) and the private sector. Several illustrative examples were developed around the world, using this approach:

- **‘Activate’** (South Africa), a network of youth leaders aimed at bringing about change through the introduction of creative solutions to problems of society;
- **‘High Resolve’** (Australia), a pedagogical initiative in secondary schools;
- **‘Peace First’** (United States), a programme-based creativity, critical thought, knowledge about oneself and inclusiveness, allowing youth volunteers to work with children by designing and implementing community projects in a participatory way;
- **‘Youth for Peace’** in Cambodia;
- **Creating opportunities for dialogue** with parents and children (South Kirgizstan);
- **‘Reinforcing institutions and the response of Civil Society to Specific Violations of Religious Liberty and the Promotion of Tolerance and pluralism’** (Bangladesh) for the promotion of pluralistic values in the children with the aim of averting conflicts and exclusion-related intolerance;
- **‘Inclusion for all: Education, pluralism and achievement’** (Portugal), for working with population that are increasingly multi-ethnic and to support them in improving the school performances of immigrant children and assist in creating cohesive communities;
- **Twinning initiative** between British schools and schools in Jordan and Lebanon (British Institute) i) in support to Syrian refugee giving an opportunity to share their experiences by Skype and writing to each other letters, ii) and for giving the teachers the possibility to share ideas, lesson plans collaborate on projects.
- **Learning to live together:** an inter-cultural and interdependent programme (Comoros, Kenya, Mauritius, Nigeria, South Africa, Tanzania, and Uganda). Its vision is to assist children to live together in solidarity with persons of different religious persuasions, cultures and ethnic groups and allow them to take ethical decisions, nurture their spirituality and improve their inner capabilities of making positive contributions to transform their communities based on values which promote the respect for their own culture and beliefs and those of others. The programme provides lessons on the conceptualisation of ethical education -- a process of identifying fundamental values necessitating an experience and activity-related approach, training of teachers, development of materials and a methodology for the delivery of value in the class.
- **Children’s Friendly Schools Programme:** an initiative of ministries of education in collaboration with UNICEF in Nigeria and Mozambique, South Africa, Kenya and in Uganda. It aims at improving the teaching and learning process by adopting favourable approaches to learning, improving the physical and psychological environment by dealing with the physical dangers in the school and eliminating physical, sexual and emotional abuses. The programme also provides for the promotion of water and hygiene in the schools. The interventions are mainly implemented on the basis of an analysis of dangers in schools (research-action) and the improvement of leadership skills among teachers and learners, and the participation of

the community. The intervention has a positive impact on the experiences of learners in school in well-being, access, retention and learning outcomes.

- **‘Safe school’s statements’** against the use of schools for military action: an intervention in the countries in ongoing violent conflict situation, aimed at protecting schools from the use of military attacks. The main objective is to protect the learners, the teachers and other members of staff and school infrastructure in order to preserve the schools as peace environments. It has been practised in Central African Republic.
- **Integration of the analysis of conflicts in the diagnosis of the Education Sector** for a conflict-sensitive education (Burkina Faso, South Sudan, Liberia, Sierra Leone and Uganda). The sector analysis includes the effects of disasters, gender inequalities, regional imbalances, teaching language, educational interventions that worsen conflicts, educational interventions that promote peace, resilience factors....
- **Addressing the difficult past /history** through education (Rwanda): uses a museum to address the difficult history of genocide.

Figure 1: Template serving as a guide for peace-building initiatives in education

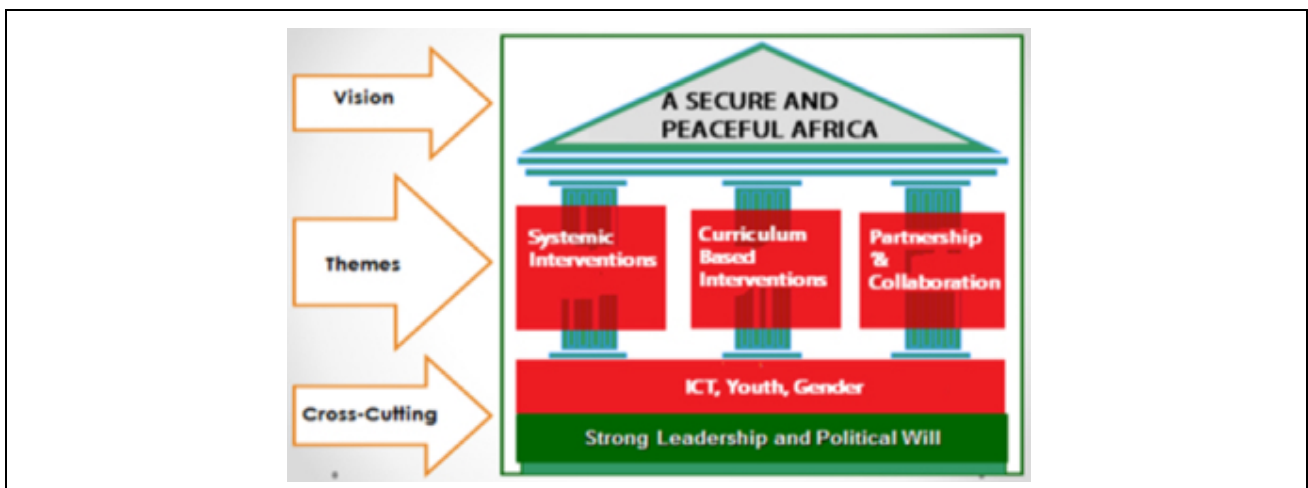
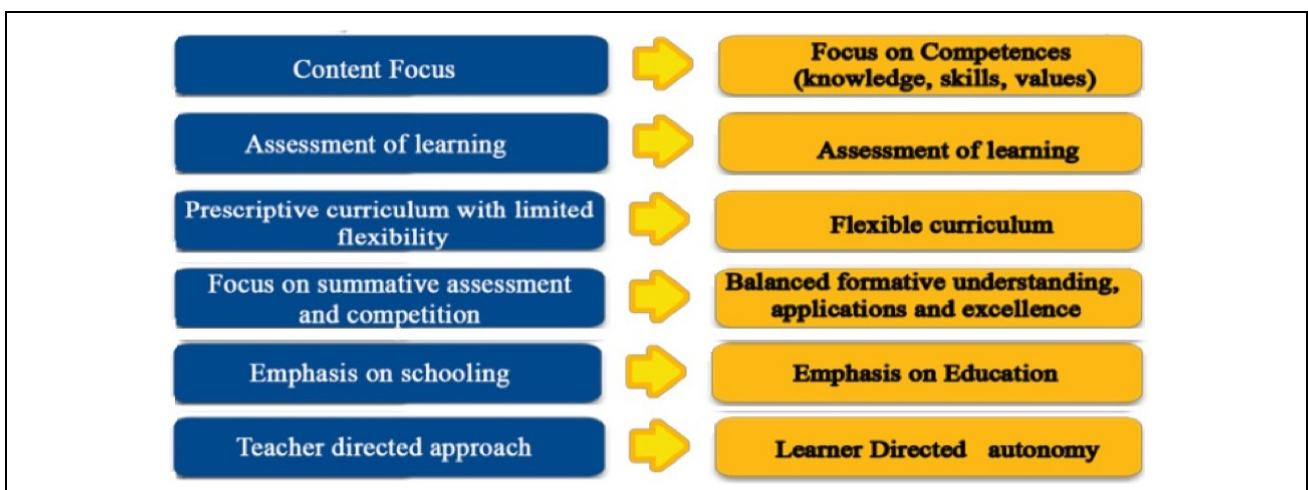


Figure 2: Paradigm-shift in curriculum development, based on the diagram below



7.4. Lessons learned

It can be seen from these experiences that the operational mechanism for a PEGC must address the following key issues:

- Identifying the specific causes of violence and dynamics that develop in each context (cf. examples Sierra Leone, South Sudan, Liberia, Burkina Faso);
- The strengthening of resilience to mitigate natural and human disasters and dealing with the link between conflicts and disasters (Burkina Faso, Uganda);
- Creating school sanctuaries to be protected from attacks and military occupation during conflicts (“Safe Schools Statements” in CAR);
- Highlighting the relationship between a high youth population and a very high statistical risk of armed conflict, especially in a context of youth unemployment/chronic youth under-employment, discrimination, bad governance, difficult access to quality education etc.;
- Transforming the demographic explosion of the youth into an economic dividend in Africa;
- Promoting inter-denominational dialogue at all levels and inter-faith learning assists the learners to clarify their faith and avoid violent religious extremism;
- Using interactive teaching and learning materials (teachers’ and learners’ textbooks and materials) provides support for educational delivery based on value as they provide critical thinking and promote a spirit of discovery among the learners: research conducted in Kenya has revealed that teachers can make a difference in the acquisition of values by the learners by improving interaction with the learners;
- Providing opportunities for the youth to participate in peace building can be achieved by adopting creative approaches, for instance, the use of recreation, drama, arts and sports and as a means of advocacy;
- Fostering consciousness of the existence of resources produced through research on the theme “Promoting the Culture of Peace”, particularly, those relating to women and the youth, allows to resort to the use of many tools and knowledge to promote peace education and conceptualisation of education through global citizenship.

It is important to also incorporate cross-cutting issues affecting the implementation of PEGC: information and communication technology (ICT), social media, sports, music and arts, climate change, political leadership, etc.

Implementation of Peace Education and Global Citizenship (PEGC)

While it is true that GCE has been implemented in different ways and in a diversity of contexts, including it at regional and local levels, the following elements appear to be constant factors:

- **an attitude resting** on the understanding of multiple levels of identity and on the potential of a ‘collective identity’ transcending individual, cultural, religious, ethnic and other differences;

- **a knowledge about world problems and universal values** such as justice, equality, dignity and respect;
- propitious **cognitive skills** and competences for a critical, systematic reflection, objectivity and the acknowledgement of the dimensions, perspectives, and different angles of the problems;
- **non-cognitive skills**, including social skills like empathy and capacity to resolve conflicts, aptitudes to communicate and create networks and exchange ideas about the diversity of environments, origins, cultures and opinions;
- **behavioural aptitudes** allowing for collaborating and acting in a responsible manner in search of global solutions to world problems and to struggle for the collective good (UNESCO 2014b).

2016 World Report on Education

The promotion of the PEGC requires a new paradigm for collaboration that eliminates the traditional silos separating governments, philanthropists and the businesses. Networks of partnerships developed in several countries helped to achieve promising results. This applies, for instance, to “Africa” of the Peace University (UPEACE), which launched Great Lakes Universities Peace Association (GLUPA), a partnership of ten universities in the Great Lakes region (Burundi, Congo, DRC, Kenya, Rwanda, Tanzania, Uganda and Zambia). In East and Central Africa, a partnership has been developed between the Pan-African Association, “Nairobi Peace Initiative” (NPI), the Secretariat of the Global Partnership for the Prevention of Armed Conflict (GPPAC), World Campaign for Peace Education and the Kenyan Ministry of Education.

Increasingly, the private sector plays an important role in peace building efforts in the regions facing conflict and post-conflict situations by providing key expertise, know-how and capital. The Samsung and Cromcraft Group, for instance, has established peace clubs (Amani). In Ghana, the “Ghana Citizen Project” enables pupils to learn their rights and civic responsibilities as citizens.

7.5. Key Messages

- *Promoting equity is essential, for any education characterised by exclusion and inequality exacerbates conflicts;*
- *Adapting intervention to the context tends to ensure success, but demands knowledge of the types of conflicts and the factors explaining them, to determine the link with education, to evaluate the local practices and mobilizable resources (human, cultural, religious, social, etc.), and to measure the strategy as a factor of transformation in confronting questions and challenges identified in the context;*
- *Preparing and implementing a system of identification and monitoring of forerunner signs of conflicts, and opportunities for prevention or arbitration;*
- *Approaching peace education by a multi-sectoral way, watching out for its overwhelming effect to be felt by all (identify and document the best practices for the purposes of scaling up and replication elsewhere);*

- *Developing a curriculum planning and partnerships at the horizontal and vertical levels and mobilizing, especially, community participation;*
- *Mainstreaming ICT and mobilizing political leadership and peace champions;*
- *Including endogenous knowledge and practices, as well as women, in the peace education process;*
- *Involving the youth in building peace by establishing targeted programmes and creating spaces;*
- *Calling on African countries through the Ministries of Education to commit to existing inter-country collaboration for capacity building of teachers on PEGC, for instance the PQIP of ASEA on PEGC and the UNESCO-KOREA scholarships programme on PEGC, which provide opportunities for international exchange of teachers.*

8. DEPLOYING SUCCESS FACTORS AND CONDITIONS

The analysis of the state of education in Africa, as well as lessons learnt from the successful experiences, underscores two decisive conditions for the attainment of the objectives and targets of Programme 2030 and of Agenda 2063:

- If educational policies are not transformed, the status quo is bound to produce the same results as those obtained from independence up to now: the countries always remain far removed from the set objectives by the successive education development programmes;
- It is necessary to transform the orientations, contents and the operational modalities of education to be able to transform Africa and the world in terms of sustainable development.

But what must Africa change to succeed in attaining 2030 objectives, which are much more ambitious than those of 2015? What needs to be changed in education to enable it to change Africa and the world? How is this educational transformation to be implemented?

Admittedly, Africa is not lacking in educational reform projects. The problem is that just a handful of countries have succeeded in implementing them effectively. Therein lies the main challenge of achieving the goals and targets for the 2030 Programme and the 2063 Agenda.

The required successful and brisk implementation of transformation on the ground and transformation demands certain decisions, processes, means and capacities of a break-up of paradigm shifts of culture and of practices always blocking the way to resistances, to interests and to established symbols. Yet, experiments made elsewhere just like in Africa teach us that it is possible to relatively succeed with these objectives in a small, poor country like was the case with Cuba or in a massive, poor country as was China.

Among the conditions and success factors identified by analysis, it is proper to emphasize the following:

- a ready mobilisation of the political will;
- a strategic and operational planning, targeted sectoral and multi-sectoral transformation;
- adequate financing; and

- an availability of strong technical and institutional capacities.

8.1. Mobilisation of Political Will

The mobilisation of the political will is a key condition. It can be achieved through the commitment of the political leadership at the highest level, which must be translated by:

- wider national consensus building based the reforms to be effected
- decision-making for the adoption of reform policies and the setting up of corresponding legislations
- the effectiveness of difficult but indispensable budgetary arbitration for the achievement of new objectives
- the mobilisation of the administration for necessary inter-sectorial collaborations meant for bringing about change
- the mobilisation of the different sectors of society based on partnerships among stakeholders and the participation of the grass-root players in favour of changes: teachers, the youth, parents, the private sector, civil society associations and all other organised forces, including the African diaspora;
- strategic monitoring for the maintenance of the transformation process and the commitments made within adequate time frames for the attainment of these set targets related to a strong national consensus, which goes beyond democratic change of power.

At this juncture, it is important to highlight the critical roles played by the Heads of State, Members of the Committee of Champions of Education both in enhancing the financial engagements for the implementation of the holistic development conditions and consolidated educational systems in Africa. The differences in performance between countries that have similar realities, resources and constraints, most often, explicitly show the impact of such a level of commitment. Certain African countries have recorded remarkable transformations. Tunisia under Habib Bourguiba, Tanzania under Julius Nyerere, Zimbabwe, under Robert Mugabe, and Uganda under Yoweri Museveni have, among others, given, at different periods and in specific priority areas, a good illustration of what the commitment of political leadership can bring to the advancement and transformation of education. Among the factors of impact, we can cite, favourable arbitrations in terms of the volume of financing and / or the gains of efficiency for the sector, a strong commitment and a persevering determination in decision-making and application during the course of difficult reforms.

8.2. Systematic Strategic and Operational, Inter-sectorial Planning of Targeted Transformation

The commitment of leadership at the highest political level can therefore give a strong boost to the development of education, but on condition that it is founded on well-defined political and strategic options, rigorously evaluated, relevant and efficient. Now, the latter come, first of all from a good sectorial analysis allowing for the diagnosis of the strength and the weaknesses as well as factors explaining performances and counter-performances of the educational system in question in order to identify precisely the specific challenges to take up and the levers on which to rest the dynamics of transformation. To this effect, African countries, beyond the continental averages, are experiencing different situations. Countries like Rwanda and Sierra Leone, which record net primary school

attendance rates higher than 95 per cent, do not have the same challenges and priorities of participation that Liberia and Eritrea, whose primary school attendance is widely below 50 per cent. Burundi and Seychelles, where the percentage of primary pupils at last part of primary education is attaining a minimum level of competences in reading and mathematics, is nearly 100 per cent, are faced with the different thorny questions of improving learning results from those of Comoros or Niger, where the same percentage stands around 50 per cent. Consequently, the choices to make in terms of the targets, priorities of action and the budgetary arbitrations must be reviewed in line with the peculiar challenges and problematic questions that each system encounters in a given context. However, because they can call into question the established positions and are susceptible to resistance, there needs to be a wider dialogue with all the stakeholders in order to ensure their political and social acceptability. It is on this basis that a valid educational policy can be defined and planning and its implementation should be undertaken.

Moreover, given the differences of context and performance levels, it is necessary to say that the models of strategic and operational planning may vary. However, in the lessons learnt from the best practices, the process of strategic planning covers the whole of the education sector, even when this is managed by several Ministries. It defines the strategic long-term objectives of education, between now and 2030, for example, before going down into the sub-sectors to guarantee a coherent wholesome implementation of the development system. The long-term planning is then operationalised through a multiannual programming, sub-divided into annual plans of action, allowing for the setting of and monitoring of intermediary targets and the adoption of a budget based on the expected results. These detailed plans of action are drawn up for all levels because the plan for implementation of change must not be limited to the macro or national level. It must go down to the meso (intermediary decentralised and/ or deconcentrated) and micro (school and class) levels so as to specifically and operationally define the targets, activities and responsibilities for which all are grateful to the players at all the levels.

Moreover, the holistic and inter-sectoral approach of sustainable development adopted both for 2030 Programme and the Agenda 2063 requires a multi-sectoral planning of education. The latter is translated by the action plans orientating the activities and the expected results in tandem with the different social, economic and environmental sectors. For example, management of flux towards the different sectors must take into consideration development planning in relationship with the needs in human capital of the different sectors. The improvement of the quality of education must pay attention to the meaning of learning and external effectiveness to be able to promote health, sustainable livelihoods, active citizenship, employability and entrepreneurship. The partnership forged with the other sectors on this basis may enhance integrated interventions favourable to dynamic synergies, giving a new impetus for social and economic transformation. In Ethiopia, local educational plans are set out along multi-sectoral approach, and Nigeria has set up an integrated mechanism of subsidies in the spheres of health, education, water and hygiene.

Policy Consistency

In this era of SDGs, sectoral approaches are not adapted to the cross-cutting and interdependent challenges of sustainable development (Le Blanc, 2015). The context is, on the other hand, more favourable to concepts such as 'Collective impact' (Kania and Kramer, 2011), which imply a desired structural coordination of the efforts in order to attain wider results; 'systemic thought' (Chapman,

2004), which consists in considering that all is wider than the sum total of the parts; or 'global government' approaches (United Nations, 2014), which expect Ministries to work concertedly. From a political standpoint, multi-sectorial approaches mitigate competition in the search for scarce resources enhance the more efficient use of existing resources. Integrated services can facilitate access to vulnerable groups and the ability to respond to their multiple needs and to reduce the cost of double-entries (OCDE, 2015d). Diversity of points of view is necessary for integration and the resolution of problems (Hong and Page, 2004), therefore educational planning would have its interest better served when it can draw from a wider range of competences released by the Ministry of Education (Jacobs, 1964). A Minister of Education desiring to reduce gender disparity in school attendance and academic performance must be conscious of the structural factors, which, beyond the field of education, hinder the school attendance of girls and boys, and which requires a thorough understanding of the social development and trends within the employment sector. Development efforts undertaken within the scope of the SDG require a horizontal mainstreaming (Le Blanc, 2015). Vertical mainstreaming, that is, the coordination and collaboration at the different rungs of the government ladder, is also a necessity, provided the roles and the responsibilities are clearly defined (OCDE, 2013a).

World Report on Education, 2016

Besides, development planning of innovation and reforms allows for a successful implementation when it adopts a systemic approach. For example, the planning of a curriculum reform, beyond the definition of the end results, objectives and new contents, must foresee:

- the didactic transpositions to the different stages of schooling;
- the preparation of all the players involved in the new approach, notably, the inspectors and advisors, teachers, and learners, school heads and parents;
- the adequate allocation of contact hours, visuals and appropriate learning environments;
- the application of pedagogical processes, stimulating procedures and congruent evaluation systems;
- modes of governance at all levels, notably, those allowing for the mobilisation of support of the institutional and community environment.

Planning change equally requires anticipating the preliminaries of a successful implementation of innovation and reform. For example, the successful introduction of African languages into the educational system demands a consistent system of transcription and codification of those languages, their conceptual enrichment, institutional and didactic re-organization (legislation and validation framework) and additive or subtractive model, pedagogy and visuals.

8.3. Adequate, Effective and Equitable Financing

Quality education requires adequate financing for the acquisition of personnel, infrastructures and other in-puts in sufficient quantity. The Global Monitoring of Education Report 2016 mentions a recent estimation: 'in order to achieve the SDG's between now and 2030, it will be necessary for both the public and private sectors to invest each year an additional amount corresponding to one part of the GDP between 1.5 and 2.5 per cent. Low income or lower middle income countries would have to

increase their expenditures to higher than about 4 per cent of the expected GDP (Schmidt-Traub, 2015)'. How can African countries increase, to the required level, the national resources allocated to education, especially in a period in which a declining tendency in the GDP for the continent has been projected, even though we need to take into account the diversity of situations?

The average public expenditure on education (PEE) in Africa is 4.3 per cent of GDP and 16.6 per cent of the total public expenditure, according to the 2014 figures. The African GDP average is below the world average (4. 6), of the developed countries (5. 1) and of developing countries (4. 4), but higher than those of countries in transition (4. 1), countries in conflict (3. 8), low-income countries (3. 9) and the middle lower income countries (4. 1). However, the level of public expenditure on education is not the same for all the African countries. The figures vary between 0.8 (South Sudan) and 8. 6 (Swaziland) for the total reported public expenditure on education to the total public expenditures. This strong variability indicates that the efforts deployed for increase financing as required by the attainment of SDG4, differ from one country to the other. But in all cases, the lofty ambition of attaining the 2030 targets will require a significant increase in domestic financing of education. Among the pathways to action, we emphasise the following:

- to increase from 1 to 4 points the share of GDP allocated to education taking into account the current variability of public expenditures underscored above;
- to increase the fiscal earnings ratio per GDP for the latter is lower than 15 per cent in the majority of the countries so that it may attain 18 per cent in the emergent economies and to 26 per cent in the developed economies will require a determined struggle against tax fraud and evasions (the latter and the practices of offshore investments of the multinationals have had as an effect a lack of an annual earnings for developing countries, estimated respectively at US\$139 billion (Action Aid, 2013) and at US\$ 100 billion (CNUCED, 2015);
- to diversify public and private sources of financing;
- to re-allocate into educational expenditures certain State subsidies, especially those granted for fossil fuels.

In all the pathways, it is suitable to assure oneself of the long-term sustainability of education financing.

The levels of public expenditures on education from the different regions of the world compared to the meeting of educational needs in these same regions show that the low African under-performances in terms of participation and of quality cannot be simply explained by the volume of public financing allocated to education. That is why, over and above the volume of financing, the attainment of the 2030 Goals, especially in Africa, raises the question of efficient allocation and use of the resources in the education sector. The disparities between countries are enormous when one considers the differences of unit cost per pupil. The unit cost for public expenditures in public schools at the primary level stands at 29.7 per cent of GDP per inhabitant in Niger, as against 5.6 per cent for Sierra Leone. At the secondary level, these figures for the same countries increase respectively to 73.2 and 7.9 per cent. At the higher education level, Niger still stays ahead with 617.7. South Africa spends the least (3.7 per cent) in higher education. Mathematically speaking, in terms of the resources available in a country for the educational system, the unit cost per pupil determines the capacity to meet the educational needs. In the unit cost per pupil at the primary level, the salary of one teacher represents 95.5 per cent (Cabo Verde) and 44.7 per cent (Burkina-Faso). Teachers'

remuneration also varies from one country to the other: “the average level of remuneration varies by less than twice the GDP per inhabitant (in DRC, in Angola, in Guinea, in Seychelles in Congo) to more than six times of GDP per inhabitant (in Ethiopia, in CAR and in Burundi)” (Universal Primary Schooling in Africa: The Teacher Challenge. *Pole of Dakar (UNESCO BREDA)*). These data and the management margin they offer points to the political economy of transformation that each country must undertake in order for better resource and specific priorities arbitrations to be effected for its development. These arbitrations may involve the allocation of public resources among the different level of the system, the adaptation of unit costs across the teachers’ remuneration levels or other components, the splitting into salary expenditures/social and pedagogical expenses, the teacher/pupil ratios, the models of schooling that is more endogenous, a more efficient utilisation of personnel and the financial and material resources available. It is ultimately a question of turning our attention towards a structure of compatible unit costs at the same time with the level mobilizable resources within the duration of the set educational development objectives, with the constant but difficult challenge of doing more with less, while reinforcing the efficiency, equity and quality.

8.4. A key dimension of success that we often forget: How to effectively turn resources into results?

Table 3: Performance of countries with comparable expenses in terms of income per capita: a source of reflection

Country	PEE as a % of GDP	PEE as a % of TPD	NPER	NSER1	NSER2	CRP	CRS1	CRS2	DPEP as a % GDP/Per cap	% Minimum L/M
Burkina Faso	4.5	19.4	68	53	23	30	8	3	20	98/87
Mali	4.3	19.2	64	53	30	42	18	14	14.7	84/55
Niger	6.8	21.7	62	30	11	28	6	2	29.7	68/32
Chad	2.9	12.5	84			32	17	7	5.9	86/56

Table based on data from the 2016 World Education Report

Finally, it is an issue of orientation towards a unit cost structure that is compatible with the level of mobilisable resources within the period and the objectives of the targeted educational development, and doing more with less, while strengthening internal efficiency, equity and quality.

Key Messages

The lack of adequate and equitable financing is one of the principal causes of the failure of the objectives of education for all between 2000 and 2015. Yet, no target of the SDG4 specifically treats the financing of education. Education expenditure reports hardly combine public funds, foreign donors’ grants and household expenditures. The national education accounts, which examine the

three sources concurrently, give it a more precise picture. At the global level, the mean public expenditures on education have crossed the two-third threshold proposed in the 2030 Education Action Framework. However, at least 35 countries are not respecting the minimum GDP share recommendation (4 per cent) and total public expenditures (15 per cent) that should be devoted to education. The data are incomplete, for only 60 per cent of the countries reveal information about their total expenditures on education in relation to their GDP for each year. The data in this respect are also stale, being only available after three years. The public expenditures monitoring must verify the allocation of funds to the most indigent persons. The countries are encouraged to create regional mechanisms of peer evaluation, in order to learn from each other issues of equity. Aid should be multiplied at least by six in order to fill up the annual US \$39 billion deficit, which prevents the attainment of new objectives.

World Education Monitoring and Evaluation Report, 2016

Domestic financing remains the main source of expenditures of education in Africa. However, whatever may be the agreed efforts for increasing on the part of low-income countries, external financing, estimated at more than 10 per cent of the expenditures on education between them remain necessary. In the hypothesis of domestic financing increase as advocated, the financing deficit is estimated at 42 per cent of the total cost of achieving the new objectives. Now, between 2010 and 2014, total aid to education has dropped from US\$ 14.2 billion to US\$13. 1 billion; aid to basic education, from US\$ 6.2 billion to US\$ 5.3 billion, and that to higher education, from US\$ 5.6 billion to US\$ 4.9 billion. Only aid to the secondary education has experienced a slight increase, from US\$ 2.4 billion to US\$2.8 billion. Aid to basic education in Africa has dropped by 22 per cent. As a matter of fact, according the report quoted above, for “member countries of the Development Aid Committee (DAC) of OCDE, the total aid equals on average to 0.31 per cent of the GNI and has almost not varied for ten years, while in 2015, 15 countries of the EU made a commitment to increase aid to 0.7 per cent of the GNI in 2014, only Denmark, Luxembourg Sweden and the United Kingdom met this commitment”.

For the achievement of the 2030 educational targets, donors are therefore solicited to:

- devote at least 0.7 per cent of the Gross National Revenue to aid;
- allocate 10 per cent of this aid to basic education and secondary education;
- give, from the aid, priority to poor countries, which have relatively a total number of more non-school attending children;
- Increase the share allotted to education in the total humanitarian assistance (less than 1.9 per cent in 2015);
- Internalise this aid catalytically and prioritise integrated multi-sectorial interventions;
- Give corresponding support to poor countries in the throes of tax evasion, illegal trafficking and corruption.

Mechanisms for financing education, a public commodity: African Education Fund

As indicated in the 2016 World Education Report cited above, the lack of adequate, effective and equitable financing has been one of the main causes of the failure of the objectives of Education for all between 2000 and 2015. Africa has particularly suffered from poor financing, as illustrated in the 2015 Report. It seems that the SDG4 expresses much more ambitious expectations for 2030 without any of its ten targets making mention of financing. But financing is a key condition for addressing the huge challenges confronting Africa in its efforts to achieve the targets set for 2030.

Africa has come a long way relative to the rest of the world, but the continent must accelerate the funding of education. First, more than half of the out-of-school children in the world can be found on the continent. Second, it is the region in the world with the highest demand for enrolment as a result of its relatively high population growth. Hence, it is confronted with the highest deficit of teachers. In sub-Saharan Africa alone, 17 million teachers are needed in primary and secondary schools by 2030, whereas the region is already struggling to meet its current demand. Indeed, more than 70 per cent of African countries face acute shortage of teachers in primary schools, and 90 per cent of them face huge shortages in secondary education, according to data provided by the UNESCO Institute for Statistics (UIS). In addition to the problem of delays in access, Africa needs to address major challenges relating to quality. At the end of the primary school, almost 50 per cent of the pupils lack the basic skills. Millions of children leave the primary school without the required skills in language and mathematics. Quality education also requires investments in teacher training and in other factors such as quality and equity, as well as in reforms necessary for the change of education systems to make it consistent with sustainable development requirements.

All these challenges call for an urgent and specifically-targeted approach to finance education in Africa moving to 2030. All the sources of financing must redouble efforts to enhance their contribution in these key areas:

- *Public financing:* This is first and foremost the duty of governments to finance education and fill the financing gaps by increasing the share of the budget that they allocate to the sector.
- *The support of bilateral and multilateral donors:* Donors have a key role to play regarding the support they give to governments in financing education, particularly, by complying with their commitment to give 0.7 per cent of the GDP and by carrying out more favourable trade-offs for education in Africa in allocating aid.
- *The private sector:* While this sector is currently increasing its investment in education, it must be encouraged to do more.

Steps must be taken to go farther by brainstorming on the sources and mechanisms for financing outside the known traditional sources in order to:

- *mobilise philanthropists:* this path must be explored since philanthropists can invest as they do in areas such as health but show unwillingness in investing in education as a result of the delayed effects of education on economic outcomes;
- *reform tax administration and broaden the tax base* to rope in contributions from airlines, telecommunications companies, banks in Africa, oil companies, players from the hospitality industry, financing corporate responsibility, international NGOs, and others; and

- *initiate innovative and sustainable financing mechanisms by taking into consideration African realities with various initiatives such as taxes on social funds, oil funds for education, funds from the diaspora, etc.*

To mobilise all these sources of financing, deploy the resources to the specific challenges and priorities of education in Africa and create the necessary synergies, the Ministries and the participants at the Triennial proposed to put in place an African Education Fund. They called upon all African countries to adhere to and support this Fund and ensure its reliability, stability and sensitivity to Africa's educational needs and, above all, to work collaboratively towards the desired impact. The Fund is intended to reduce the financial deficits suffered by education in Africa, but it cannot be a substitute or a duplication of the traditional sources of financing. It can be used at all levels of the system and for all kinds of education and training. The following are recommended to ensure the success of the African Education Fund:

- Ownership by all African countries and a strong leadership by Governments in partnership with financial institutions and stakeholders, including philanthropists, the private sector and political champions;
- The non-political interference in its operations, modalities for access and accountability which must be agreed upon;
- Disbursement of funds based on performance criteria;
- Mechanisms to forge operational partnerships among financiers and between financiers and beneficiaries;
- Transparent and participatory governance with periodic control, evaluation and reportage of the impacts.

The Fund shall be lodged at the African Development Bank as a platform to obtain additional financial resources for education. It will be under the oversight of a Board of Trustees, and it will produce added value to prevent aid fatigue.

Summary of discussions at the Triennial

In all, African countries will need to invest more and better in education in order to achieve the new set objectives. The increase in the volume of resources mobilised will call for efficiency and effectiveness in the use and allocation of these resources for the specific educational and development priorities of each country. Such utilisation demands arbitrations and targeting of priorities by the political leadership. It equally depends on the availability and the in-country mobilisation of technical expertise and institutions capable of rigorously ensuring the sectorial, planning and management analysis of educational development.

8.5. Availability of Technical and Strong Institutional Capacities

The needs for capacities in the educational sector are vast. Teachers is a top priority. Here, emphasis is placed on the governance capacities of the systems. The vertical coordination of implementation of policies requires that the central services of the Ministries of Education, the devolved services, local authorities and the schools, should at every level of the ascending and the descending chain;

play their assigned roles effectively. The inter-sectorial approach of education involved in the interaction of the new objectives equally requires, at every level, the capacity to build a horizontal coordination with the other sectors of development in order to design and implement the integrated interventions. The capacities in question are, notably, the following:

- the collection, analysis, the development and management of a knowledge bank on the educational system;
- the preparation, strategic planning as well as the monitoring and evaluation of the policies and programmes;
- the planning and management of human resources;
- the planning and management of financial resources, including budgetary and administrative processes, procurement...;
- the planning and management of the educational system infrastructure;
- the planning and management of decentralisation and decongestion in the educational system;
- the planning and management of the integrated multi-sectorial interventions;
- good governance and the use of ICT in all the areas of education.

In most African countries, the number and quality of technical capacities tend to be reduced, thus weakening the institutions. This degradation of capacities also affects pedagogical research, training and supervision of teachers, the preparation of curricula, the designing of school textbooks, etc. Such a situation is especially more worrying as it occurs at a time, governance in education needs to integrate new developments in the area of harmonisation of public policies, thorough decentralisation, standardised steering of the quality, transparency, indebtedness, results-based management, the move from average budget to result-based budget, performance contracts, increased efficiency and effectiveness expenditure procedures. Added to that is the loftiness of the ambition and the complexity of the new objectives and targets, making their attainment and monitoring hypothetical if the present weakness of the institutional and technical capacities continues. It is therefore an emergency to put in place strategies and programmes of capacity reinforcement in response to the needs. For the successful implementation of these programmes and strategies for capacity reinforcement:

- The processes of preparing the strategies and programmes must be supported by extensive surveys and consultations, taking into account lessons learnt from experience, to target specific needs of countries in terms of the required capacities at the country levels, decentralised and also, at the basis, for State as well as non-State players, leaning on the technical resources and the existing country system, going on with simulations and diverse exercises of experimentation and evaluation, to foresee a system of monitoring and adjustment in order to gradually guarantee the attainment of the expected results;
- The strategies and programmes of capacity reinforcement in the educational sector must integrate the perspective and the inter-sectorial collaborations by moving towards strategic objectives and the integrated interventions which will have demultiplying effects in several spheres of development of the country and taking into account the harmonisation framework public policies as they ought to take into consideration the introduction of educational,

administrative as well as technical reforms and innovations and innovative management and control tools, especially, the integration ICT to all levels;

- The strategies and programmes for capacity reinforcement must integrate a culture of quality education, which incorporates sensitivity to equalization of gender, socio-economic and geographical origins and among all human groups with a particular attention paid to the most vulnerable;
- Dialogue between governments, technical and financial partners, the civil society and the private sector must build, on sustainable, solid basis, a meaningful consensus and commitments based on the strategies and programmes formulated
- Aid increase for poor countries must comprise resources for capacity reinforcement, while care must be taken to guarantee an adequate anchorage and effectiveness of assistance, as well as the taking of national ownership and responsibility as a pledge of relevance and sustainability;
- Humanitarian assistance must equally integrate the strategies and programmes of capacity reinforcement in the fragile states;
- The reinforcement of regional and continental networks, such as ADEA, its working groups and its inter-country poles is vital for they represent essential public goods and play an irreplaceable role in the knowledge and experience sharing among countries, the exchanges among Education stakeholders in Africa, evaluation and learning among peers, research and the documentation of best practices, the management and dissemination of knowledge, all in one link with dialogue on the policies involving, notably, Ministries of Education and development partners.

Last of all, the perspective of these programmes and strategies are based on the establishment of wider internal partnerships developing the capacities necessary for the attainment of the objectives and targets of the 2030 framework and of the Agenda 2063. It involves profound changes in approaches to external assistance in the matter for a lot more assistance reinforcing the accountability, participation and self-reliance of the beneficiary countries. The latter should commit themselves more resolutely to self-and-inter-learning, anchored in a context of needs and resources, which they ought to control more than any other.

9. TOWARDS AN AFRICAN ROADMAP FOR THE IMPLEMENTATION OF SDG4 OF 2030 AGENDA AND THE 1.2 OF AGENDA 2063

To ensure follow-up of the Triennial and provide support for African countries, an African roadmap was adopted towards attaining the objectives of education under Programme 2030 and the 2063 Agenda.

9.1. Objectives and evidence

This roadmap traces the implementation path within the framework of pooling of knowledge and experiences of African countries to optimise the chances of Africa to attain the new targeted objectives. The African roadmap draws inspiration from the 2030 Framework of Action, which represents the international roadmap for the realisation of the SDG4 by 2030 and which proposes strategies of suitable actions for each country. To this end, the international framework recommends

ownership and coordination in each region of the world. According to the 2030 Framework of Action, an “inclusive and effective,” regional roadmap “will be concentrated on the aspects such as”:

- the collection of data and monitoring, including peer evaluation from one country to the other;
- mutual learning and exchange of best practices;
- the drawing up of policies;
- dialogue and association with competent partners;
- formal meetings and high-level functions;
- regional communication strategies;
- advocacy and resource mobilisation;
- common capacity reinforcement and implementation of projects.

9.2. Guiding Principles

The African roadmap sketch lines up coordination on:

- the principle of taking ownership and regional adaptation in articulating the 2030 perspective and that of the African Agenda 2063 as well as the reflections from the outcomes of the present Triennial;
- the principle of inclusion of all the education stakeholders in Africa: ministers, civil society organizations and the private sector, development agencies and foundation, teachers’ unions, parent’s associations, women and youth movements, research and expertise networks ...;
- the principle of effectiveness, with focalisation on aspects mentioned above, to avoid duplications, and putting in front the comparative advantages of the steering of coordination.

9.3. Coordination

It is precisely because of this concern, particularly in respect of ownership and effectiveness that the steering of coordination has to involve:

- The African Union, representing all the African States will ensure its political leadership;
- The AfDB, representing all the development agencies and responsible for the mobilisation of external partnerships and resource;
- ADEA, which has been well positioned for a long time on the aspects already mentioned above, has the experience, the capacities and the necessary tools to ensure its technical and secretarial coordination.

As regards the strategic thrusts for action retained at the Triennial, the roadmap presents 5 key areas and 5 strategies of action.

9.4. Areas of actions

➤ PRIORITY AREA OF ACTION 1: ACHIEVE THE SDG4

Implementation of quality education for all towards sustainable development;

Integration of the approach to transformation of the curricula and the learning and training environments, schools and other training institutions and all educational resources into factors for the promotion of adult education and lifelong learning;
Development of technical skills, youth employability and decent work for all.

➤ **PRIORITY AREA OF ACTION 2: BUILD A NEW AFRICAN SCHOOL**

Strategic thrusts and implementation priorities for transformation;

Contextualisation and African transformation of education to better target the educational needs, adaptation of the models to the resources to enhance the search for solutions at the local level, integration of the programmes and perspectives to the processes of planning, and community decision-making, and the interaction of the systems with the surrounding community, through multi-partite networks.

➤ **PRIORITY AREA OF ACTION 3: REVOLUTIONISE SKILLS**

Skills revolution through the promotion of teaching/learning of mathematics, science and technology and the twofold increase in the number of students registered for these courses;

Higher education and STEM at the service of economic acceleration and sustainable development of Africa;

Integration of ICT in education, particularly in the processes of teaching/learning and offer of quality online learning.

➤ **PRIORITY AREA OF ACTION 4: LEARN TO LIVE FREELY AND IN PEACE TOGETHER**

Integration of peace education and global citizenship in the systems;

Participation of women and the youth: peace movements, global citizenship and sustainable development, contribution to advocacy and policy development and implementation.

➤ **PRIORITY AREA OF ACTION 5: DEPLOY CONDITIONS AND FACTORS OF SUCCESS**

Mobilisation of the Committee of Ten Heads of State Champions of Education;

Implementation of Innovative Financing Mechanisms and the African Education Fund;
Transforming teachers' cultures and practices for educational transformation;

9.5. Strategies for action

- Strategy 1: communication for mobilizing commitment from all the stakeholders: advocacy, information, sensitisation, social mobilisation...;
- Strategy 2: assistance granted to the movement: dialogue forum on the policies, exchange networks on the best practices and knowledge sharing, learning and peer review, studies and research setting up of learning communities on the steps facing the problematic questions and major challenges;
- Strategy 3: facilitation of sub-regional, regional, and international partnerships in collaboration with the institution and the players at these different levels;

- Strategy 4: mobilisation of targeted resources on the effect of a lever for the creation of the catalyst effects;
- Strategy 5: monitoring/evaluation of progress at the continental level, support to the diagnoses and studies, to exchanges on results and measures.

10. CONCLUSION

The key word during the discussions and conclusions of the 2017 Triennial was TRANSFORMATION:

- Come out of additive and corrective policies in order to adopt transformational policies that will help to attain the objectives of universalisation, equity and quality of education.
- Transform the systems inherited from colonisation to build a new African school that promotes heritage and endogenous potential for development to meet as closely as possible the needs and aspirations of cultural and social development of the African population.
- Transform school knowledge far removed from daily realities and issues of development in order to promote the necessary skills among the youth to enable them live and work in the 21st century.
- Transform the imbalances that marginalise science, mathematics and technology in the current systems by a revolution of skills enabling Africa to bridge the divides separating it from the rest of the world in these disciplines; and anticipate and implement structural transformation of the economy and build African knowledge societies and economies.
- Transform the simple transmission of formal school knowledge into capacities to develop skills for brainstorming and action, to change the values, attitudes and youth behaviours positively -- to acquire a real capacity to educate for peaceful and harmonious co-existence with humanistic ideals and universal principles of democracy, human rights and justice.
- Transform the insular nature of the school to ensure that it serves the population as an avenue for inter-generational learning, fruitful confrontation between endogenous and modern knowledge and experiences and local development.
- Transform the pyramid structure of the school and its elitist functioning of selection-elimination to promote a diversified system and an education-training continuum which offer to every individual learning opportunities at every stage of their lives and adapted to their needs and capacities for the success of all.
- Transform the elitist, teacher-centric and insular practices of the teaching personnel and the other stakeholders such as school heads, educational counselors, teachers' trainers, parents and teachers so that they acquire new skills oriented towards the success of learning for all, with high priority and concern for disadvantaged learners, constructivist methods, educational partnerships with stakeholders in the community (i.e. social, economic and cultural environment of the school).
- Transform the modes of evaluation to ensure that they are more diagnostic and forward-looking at the service of continuous improvement of the quality of education for all and that they are in harmony with educational objectives focused on the development of skills, conceptual thinking, critical mindedness, new problem-solving capacity, innovation and activity-orientation.

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- Transform the governance of systems aimed at the offer and the means of promoting results-oriented management, conscious of efficiency of expenditure, optimisation of allocation and use of resources and the accountability of all the stakeholders.

All this transformation must not be seen and implemented as a totality of changes to be carried out, but rather it must be done in a coherent, holistic and interactive manner, taking into consideration the components of the education system (inputs, processes and procedures, outcomes and products, community and systemic environment, all levels and all modalities of education) and in relation to the guidelines and actions developed in the other sectors for the transformation of the entire social unit. It must always be borne in mind that this transformation is a pre-requisite in Africa to attain the SDG4 targets and the Objective 1.2 of the 2063 Agenda just in a manner akin to developing education and training systems that will significantly advance the transformation of Africa and the world towards sustainable development.

Among the critical conditions and factors for the successful implementation of this transformation, the following can be cited:

- The vision of transformation and the resolute commitment of the political leadership at the highest level: The intermediation of the Committee of Heads of State Champions of Education established by the African Union must be mobilised towards this end, in particular, the high-level meetings proposed in the roadmap;
- The increase in educational financing coupled with a better definition of the implementation priorities and strengthening of effectiveness and equity in educational expenditure: The African Education Fund has been adopted to complement, pool and support the efforts of countries towards the attainment of the set objectives;
- The availability of strong technical and institutional capacities, including strategic planning and operational planning, requires planned programmes for the development of capacity within the period and going forward: The roadmap incorporates them in exchanges between countries and in learning with peers, but it also allows for resource mobilisation for the African Fund to propose a regional institutional response to this vital need.

The implementation of the roadmap involves all stakeholders and partners in the transformation, with mutual accountability espoused by the participatory approach adopted. The implementation will help measure the results obtained by the countries and by the continent, according to the comparative indicators for political dialogue and decision-making, as well as the technical preparations, which the adjustments need for continuous progress. The roadmap enhances the chances of Africa to attain the 2030 and 2063 objectives through the pooling of resources, brainstorming, learning and development of skills, and mutualisation, which makes impossibility a possibility for each one taken individually.

ANNEXE

Speech by H.E. Mr. Macky Sall, President of the Republic of Senegal

Address by the President of the Republic of Senegal at the Opening Ceremony of the ADEA 2017 Triennale on 16 March 2017

Ladies and Gentlemen,

It is a real pleasure for me to chair the opening ceremony of this high-level forum on the future of education, initiated by the Association for the Development of Education in Africa (ADEA).

Before anything else, I would like to welcome all of you, personalities, political decision-makers, education specialists, experts, partners and civil society members engaged in the development of our beloved continent.

On behalf of Senegal and in my own name, I congratulate ADEA on this excellent initiative, which demonstrates its ongoing commitment to promoting quality education in Africa.

Twenty years after the 1997 Triennale, our country is once again honoured to host this one, which has as theme: "Revitalizing education towards the 2030 Global Agenda and Africa's Agenda 2063."

I am glad for the choice of this hopeful theme for our continent, which is resolutely committed to meeting current and future socio-economic challenges.

Ladies and Gentlemen,

As you know, we have embraced the universal 2030 Agenda for Sustainable Development, which aims to create sustained, shared, and sustainable growth.

In addition, with the African Union's Agenda 2063, our continent reaffirms its strong aspiration to **sustainable prosperity**, based on maximizing its immense **potential, including, without any doubt, its human resources**.

These fundamental options, backed by democratic governance, aim to guarantee the well-being of the population, especially young people and women, in **peace and security**.

Clearly, the realization of this ambition requires highly qualified human capital, able to lead the structural transformation of our continent.

This shows the importance that should be placed in revitalizing education as one of the essential pillars of development.

Indeed, there can be no progress without quality education for all!

There can be no democracy without quality education for all; because democracy, as an ideal form of government, is strengthened by the conscience of educated and informed citizens!

Likewise, there can be no lasting peace as long as ignorance persists!

Overall, our progress in the different areas of economic and social life is closely linked to the performance of our education and training systems.

That is why we must support this major initiative by ADEA and subscribe to a forward-looking and inclusive approach that focuses our actions on a sustainable vision.

It is about sharing our knowledge and thinking together about the best way to mobilize around the construction of new education systems, aligned towards sustainable development goals.

In this perspective, we need to join forces to identify our priorities.

We must, above all, agree on efficient strategies for achieving a modern Africa, rooted in its traditions and values, and resolutely focused on science, technology and innovation.

As for me, I remain convinced that Education is a strategic lever on which to build, through Agenda 2063:

- a prosperous continent, reconciled with itself and open to the world;
- a united continent, concerned with good governance, democracy, human rights and the environment.

It is for this reason that our country has placed at the centre of the Plan for an Emerging Senegal (PES) the strengthening of human capital to ensure sustainable and inclusive growth.

In this regard, my Government has taken important steps to improve the quality of education and training.

Ladies and Gentlemen,

At the end of the Presidential Consultation Councils on the Future of Higher Education and Research and on the Education and Training Forum, 22 decisions were adopted, including:

- reorienting the education system towards science, technology, engineering, mathematics (STEM), IT and entrepreneurship;
- developing vocational training and adapting it to labour market needs;
- improving equity in access to education;
- developing literacy and strengthening the place of national languages;
- promoting the inclusion of girls and children with special educational needs.

In the same light, the state has embarked on major projects in education and vocational training, among which I can mention:

- the construction of the Amadou Moctar MBOW university in Diamniadio and the El Hadj Ibrahima NIASS university in Sine-Saloum;
- the construction of 20 science and technology blocks (STB);
- the programme to construct Higher Institutes of Professional Education (ISEP);
- the construction and equipment of 7 vocational high schools;
- the construction of 8 training centres for the poultry, horticulture and tourism sectors.

I would like to add that Senegal, in the interest of efficiency, is committed to aligning its actions with international programmes that seek to provide us with skills in critical areas that will shape the future of the continent.

It is in this light that we joined the Partnership for Skills in Applied Sciences, Engineering and Technology (PASET) as a founding member.

It is also the meaning of my commitment to the continental education initiative, led by the Committee on Education, Science and Technology.

It is also the meaning of Senegal's hosting of this International Summit on the Revitalization of Education, after the one devoted to the Next Einstein Forum.

It is with the conviction that nothing sustainable can be achieved without quality human resources, that I decided to create, here in Diamniadio, the Oil and Gas Institute to prepare our country for the management of these new national perspectives.

It is probably in recognition of these initiatives that the African Union has designated Senegal among Africa's leading countries in the Higher Education sector.

This distinction should be understood not as an end in itself, but as an encouragement and an incentive to maintain our efforts for **quality education, education for all, and above all, education for young people and women.**

As a pure public school product, I cannot help but seize this opportunity to urge state entities, the private sector, civil society, experts and the population to make education an absolute priority.

This gives me the opportunity to warmly congratulate members of the organizing committee for this important meeting, especially the Minister of Higher Education and Research, Professor Mary Teuw Niane.

I would also like to thank the Ministers of National Education, Vocational Training, Apprenticeship and Handicrafts, Serigne Mbaye THIAM and Mamadou TALLA.

I also commend ADEA and encourage it to continue this noble struggle for the education revolution in the exclusive interest of the people, with the active support of the AfDB.

I know in this regard I can count on the personal commitment of my brother and friend, President Adesina, whose commitment to the development of our continent is recognized by all.

I pay tribute to teachers, researchers, and other education actors for the outstanding work they do seamlessly to endow Africa with competent, well-trained human resources committed to our cultural values.

By your noble sacrifices, you honour this thought by Nelson Mandela, an illustrious African, that: "Education is the most powerful weapon which you can use to change the world."

I declare open the 2017 ADEA Triennale and wish you full success in your proceedings.

Thank you for your attention!

Keynote Speech by Dr. Akinwumi Adesina, President of the African Development Bank

“Education Financing in Africa: Adopting innovative and effective approaches to achieve the 2063 Africa agenda and the African Development Bank’s High 5s”

ADEA 2017 Triennale on Education and Training in Africa, Dakar, Senegal, March 16, 2017

Your Excellencies, Ladies and Gentlemen;

1. I am very pleased to be here to discuss education financing in Africa, and I wish to thank the Association for the Development of Education in Africa for its continuing commitment to the promotion of education and skills transformation in the continent.
2. You know the numbers, and they are compelling. Africa has 722 million children and young people. There will be almost 1 billion by 2050.
3. This will create a generation of well educated, efficient, skilled and productive workers. Africa will be a region where global investors will locate their offices and factories and hire the workforce with the skills they need. It’s a superb and tantalising prospect. So let’s try to get there.
4. Since 2000, Africa’s fortunes have been reviving, due to economic resilience and a strong confidence that will carry the continent forward for many years.
5. Educational opportunities have been expanding. The number of primary-school age children not attending school has halved. Enrolment rates for secondary and higher education have increased by 14 and 4 percentage points respectively. The number of students in vocational education and training has increased by 24%, and the adult literacy rate has increased. Gender equity in access to education has also improved. This is encouraging. But we are not there yet. There is still a lot of work to do.
6. Africa is lagging behind other continents and regions. The truth is that we are not equipping our young people for the jobs of tomorrow. Digitalization, mathematics, materials sciences, biotechnology, engineering, artificial intelligence and robotics head the agenda for tomorrow’s required skills in what is sometimes called the Fourth Industrial Revolution.
7. Most of these skills are not on current secondary or even tertiary curricula in Africa, and this means that available skills and competencies coming through the system do not sufficiently align with job market needs. It’s not just about the supply side, on which governments often concentrate. It’s also about the demand side, and how they complement each other.
8. For example, fewer than 30% of students in higher education are enrolled in science, technology, and engineering programmes where there will be plenty of jobs. The majority are in humanities, social sciences and law, where some jobs are available but scarce. There is a dearth of researchers in the industrial and business sectors of the future, and yet there are also unacceptably high unemployment rates among social science graduates.
9. It is as if two people approach each other to shake hands but they walk straight past each other smiling broadly but having failed to hold each other’s hand. It’s a missed handshake. And we cannot afford missed handshakes on the education and careers joint agenda.
10. And furthermore, science and technology on the one hand, and innovation and private sector development on the other, remain largely disconnected. Much more needs to be done to build a culture of creativity and innovation that boosts private sector competitiveness. But we must get this work started by making the necessary connection, exactly as if we were connecting two live wires together to make a bright spark.

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11. Africa is underinvesting in research and development. On average the continent invests less than 1% of its GDP in R&D, which is by far the lowest of any global region.
 12. The availability of scientists and engineers declined in many African countries between 2008 and 2016, further confirming a trend that could prevent Africa from reaping the benefits from an increasingly knowledge-driven global economy.
 13. In many African countries, the education systems suffer from poor infrastructure, and most schools have no electricity, drinking water or sanitation. There is also a high dropout rate, and a third of African children completing primary school do not remain literate in their adulthood.
 14. This is not good news for the target of eliminating poverty. Graça Machel said that “Education has the capacity to break the intergenerational cycle of poverty. Go to any poor rural village or urban slum and you will find Africans who share that view.”
 15. In the face of the growing problem of youth unemployment in Africa, Technical and Vocational Education and Training is the best way to empower the youths with readily employable skills for the world of work.
 16. Competent artisans and technicians are needed to fill gaps in the building and construction industry, in power and energy plants, in water distribution and sanitation systems. Adequately trained workers are also in short supply in the hospitality, healthcare and agro-processing sectors.
 17. But qualified students and trainees are not coming through the system in sufficient numbers. They are missing the handshakes with their future employers.
 18. It’s time to influence this trend. The application of knowledge is the global currency of the 21st century and we must prepare the coming generations.
 19. Much is expected from Information and Communication Technologies both as ways to facilitate new forms of education remotely and online and as a set of skills to be deployed for the new employment market.
 20. These technologies are now being used in developing countries with increasing popularity and impact. When used properly, they expand access to information, enhance learning experiences, improve motivation, and increase efficiency.
 21. The problem is not always about money. Sometimes it is about knowledge and its intelligent application. And the Bank knows this very well. The Bank deals in money, yes, but it also deals in knowledge. It is as much a knowledge Bank as an investment Bank.
 22. And one without the other is, well... another missed handshake.
 23. This is why the Bank supports the ADEA proposal to set up an “African Education Fund”, a potential catalyst in financing education on the continent, and setting off a generational tidal wave of knowledge and skills.
 24. The objective is to ensure an All-African, sustainable mechanism to support governments in their implementation of inclusive, equitable and high quality education projects according to Africa’s Agenda 2063, the Sustainable Development Goals, The African Union Continental Education Strategy for Africa, and the Bank’s own High 5s strategy.
 25. The preparation of a financially sustainable education sector plan country by country is the first priority. And while Africa needs more finance for education, it must also utilize existing resources more effectively to meet the growing demand for education services.

26. The Bank agrees with the United Nations' Education Commission that the shortage of schooling represents a timebomb that might cause social conflict among a generation frustrated by a lack of life chances, and that additional funding of US\$ 30 billion is needed if the goal of ensuring every child receives a full primary and secondary education by 2030 is to be achieved.

27. But we cannot do it alone, nor do we want to. In fact, governments cannot do it on their own with their own shrinking resources. Education has become too important for us not to invite and deploy the massive resources of the private sector. And that means private sector involvement, participation and investment.

28. The needs of the higher education in Africa prompt us to appreciate the urgent timing and the breadth of the opportunity that presents itself.

29. Partnering with the private sector, foundations, civil society and other development partners can not only help to address major bottlenecks, it will play a crucial role in finding new funds for education and chart the future.

30. The private sector is already doing this with new institutions and universities that are growing in proportion and impact across Africa. Private enrolments account for 24 % of all tertiary enrolments in the region, and they are on the rise. This is very significant.

31. The market is pointing the way. It is tapping us urgently on the shoulder, reminding us that our duty is to people and not to institutions. Colonialism has left us with a poor legacy in education; funding crises and governance issues have made it difficult for countries to repair and strengthen this delicate fabric. But it is high time for us to use our own resources and our own unique knowledge to stand up and make the investment that is needed.

32. But let's not forget the legacies. The annual economic cost of under-nutrition in sub-Saharan Africa is US\$ 25 billion. Ending malnutrition is an economic imperative, not just a moral obligation, because without early investments in nutrition, education investments will be wasted.

33. In truth, the greatest contributor to economic growth is not physical infrastructure, but brainpower - "grey matter infrastructure". Stunted children today mean stunted economies tomorrow. We must invest in the grey matter infrastructure that fuels economic progress and improves people's lives across the continent. We must invest in our children.

34. I was recently in Goree Island, visiting the Maison des Esclaves and its Door of No Return. This memorial to the Atlantic slave trade is a memorable place and a cherished opportunity to pay respect to the dreadful human toll of slavery.

35. I felt I could sense the personal tragedies on this site. These were free men and women, deprived of their freedom and sold for export like cattle during a dark period of world history. But I thought also of those thousands of young Africans more recently and now, who willingly and determinedly risk a dangerous journey to foreign shores where an uncertain future awaits them.

36. Africa needs our youth to stay with us after their education and training here and to help our transformation.

37. It's a similar story with our professionals. Africa has had a brain drain of 20,000 professionals each year since 1990. We lose too many graduates at the end of their studies. Sub-Saharan Africa has one of the highest losses of tertiary students in the world. In 2013, one out of every nine Africans that hold a tertiary education qualification lived in an OECD country.

38. But many highly skilled Africans who have trained outside the continent remain potentially useful resources for Africa as visiting scholars, investors in companies, and facilitators of joint ventures between host and sending countries. They can, quite simply, be direct benefactors. Thus, the Brain Drain can be a Brain Gain when migrants repay their homelands through remittances and other contributions in kind.

39. In addition, migrants may return, often with skills that would have been hard to pick up at home. Letting educated people go where they want could be regarded as the brainy option. It's also the freedom of movement option, so controversial in Europe and America, but critical to the culture of knowledge everywhere.

40. We can no longer discuss education without drawing attention to gender equality. There is an unacceptably wide gender gap in tertiary education in sub-Saharan Africa, and low education completion rates for women.

41. There are two good but different reasons to invest in gender equality. First, gender equality should be obvious simply in terms of equity and justice. Second, eliminating the gender gap makes good economic and business sense. Education is fundamental to women's empowerment because it leads to so many other opportunities. It's time to close the gender gap in Africa with bold actions.

42. The Bank is fully committed to speeding up gender parity within the institution and across its Regional Member Countries. Africa's economic growth will be faster and development outcomes better when we ensure gender equality and the Bank is determined to provide a good example.

43. After all, no bird can fly with just one wing. Africa needs to fly with two wings in balance. And that is exactly what gender parity does.

44. The Bank has contributed to increasing access to higher education opportunities, improving quality of service delivery, fostering regional integration, and revitalizing scientific research. Between 2005-2016, the Bank approved more than 60 education projects amounting to US\$ 1.6 billion. 39% of the funding went to higher education, science, technology and innovation. The Bank issued its first Education Bond in 2010 and a total of US\$ 422 million has been issued since.

45. The Bank supports education as part of its strategic priority to "improve the quality of life of the people of Africa", in line with the Sustainable Development Goals (SDGs) and the African Union's 2063 Agenda, and as part of the collective priority that brings together the other four strategic priorities: "Feed Africa"; "Light-up and Power Africa"; "Industrialize Africa" and "Integrate Africa".

46. These "High 5 priorities" were adopted by the Bank in 2015 when I was elected President and they define our priorities for Africa's transformation. This year we are stepping up the progress.

47. Financing is essentially about leadership and imagination. And there are many leaders here today, many Presidents, Ministers and other influential leaders in education and finance who have come together, created or led efforts to change the map of knowledge in this continent.

48. We already have many examples of visible successes by Africans in bringing positive changes that challenge the status quo, not just of gender, but of wider issues of access to technology, knowledge and science. Allow me to recognize just some of them.

49. His Excellency Mr. President Macky Sall, an education champion in Africa, President Paul Kagame for his strong engagement for the development of ICT, and Her Excellency, Ms. Amina Gurib-Fakim for her great support for a scientific revolution. You are leaders, you are disruptors of the status quo, and you are primary influencers of improving finance for education.

50. We must reach that “superb and tantalising prospect” of which I spoke earlier - because Africa cannot afford to settle for less.

51. There are enough leaders and influencers, I hope, between us to obtain or encourage enough funds for education in Africa that we can meet the challenges that I have been referring to in my remarks.

52. It is our job is to inspire, establish and maintain a strong, inclusive and sustainable educational system in and throughout Africa, one that produces graduates for the jobs of tomorrow. The Education Commission says that US\$ 30 billion is needed if every African child is to receive primary and secondary education by 2030.

53. Does anyone think this is too expensive? Too much of an investment? Try illiteracy and see how expensive that can be!

54. Let us therefore replace all the negatives with positives; the doom and gloom with optimism and confidence; the bad news with messages of hope and comfort. Let’s create a generation of well educated, efficient, skilled and productive workers from these billion children and young people.

55. Let’s help them make Africa the workshop of the world, where industry and business flourish, and where a skilled and industrious workforce is available.

56. Best still, let us march towards each other, student, investor, entrepreneur, politician, regulator and reporter, young and old, and give each other a firm, connected and confident handshake in the form of a High 5 for Africa!

Thank you!

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Ushirika wa Maendeleo ya Elimu Barani Afrika
الرابطة لأجل تطوير التربية في إفريقيا
Association for the Development of Education in Africa
Association pour le Développement de l'Éducation en Afrique
Associação para o Desenvolvimento da Educação em África

Association for the Development of Education in Africa (ADEA)
African Development Bank Group (AfDB)
Immeuble CCIA Plateau, Avenue Jean-Paul II, 01 BP 1387
Abidjan 01, Côte d'Ivoire
Tel: (+225) 2026.5674 - Email: adea@afdb.org - Website: www.adeanet.org

