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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

3rd ADEA High-Level Policy Dialogue Forum

Higher Education and Scientific Research in the light of
Digitalisation and the Fourth Industrial Revolution (4IR)

CONCEPT NOTE

Introduction to the ADEA High Level Policy Dialogue Forum (HLPDF)

As the premier forum for policy dialogue on education in Africa, the Association for the Development of Education in Africa (ADEA) brings together policymakers and legislators – including Ministers, Members of Parliament, and senior government officials – to engage with regional and global partners and other key stakeholders on critical issues affecting education in Africa. This fosters continental, regional and cross-country interactions in support of peer learning and knowledge exchange while collectively identifying innovative solutions. The outcomes of these engagements inform ADEA’s focus areas of support to countries through its regional platforms such as the Inter-Country Quality Notes (ICQNs) and network of partners that include the African Union, Regional Economic Communities (RECs), private sector, multilateral development banks, development partners and civil society organizations.

The overall aim of the high-level policy dialogue forums is to promote knowledge and experience sharing around practical and innovative solutions to address the skills gaps and the critical challenge of reforming the delivery of education in Africa. In response to the effect of the COVID-19 pandemic that rendered most, if not, all meetings virtual, ADEA split the 2021 High-Level Policy Dialogue Forum (HLPDF) on “Rethinking the Role of Skills Development in Future Work and Lifelong Learning in light of Digitalization and the 4th Industrial Revolution (4IR)” into three consecutive virtual forums focusing on the sub-sectors or domains of basic education, Technical and Vocational Skills Development (TVSD), and higher education. The first two of the consecutive forums took place in July and November 2021 for TVSD and basic education, respectively, and the one for higher education is planned for March 2022.

In line with its goal of empowering African countries to reform their education systems to respond to current and emerging issues sustainably, ADEA will hold the third consecutive forum on 10th March 2022 on “Higher Education and Scientific Research in the light of digitalization and the fourth industrial revolution 4IR”.

The objectives of this HLPDF is to:

1. Share knowledge, experiences, good practices, and lessons to inform policies and programmes on higher education and scientific research.
2. Foster partnerships among key stakeholders to advance the design and delivery of policy and strategy in support of higher education and scientific research.
3. Advance practical steps to move from research and studies to sustainable implementation of policies, strategies, priorities, and evidence-based practices on higher education and scientific research at country level.

Context of Higher Education and Scientific Research (HESR) in Africa

In sub-Saharan Africa, the average economic growth of 4.5% per year from 2000 to 2018 has only led to an increase in GDP per capita of 1.7% per year. Indeed, the population growth of 2.8% has absorbed 62% of economic growth (Vie Publique, 2021).¹ The growing share of youth in the African population is a reality: 60% of Africans are under 24 years old. By 2030, it is estimated that 30 million young people will enter the labour market each year, i.e., three quarters of the world’s young people. This gap between supply and demand is likely to widen if nothing is done, creating situations of high insecurity and unemployment in some regions. This is an ongoing issue throughout Africa - in North Africa, 30% of young people and nearly 55% in sub-Saharan Africa are already considered inactive (ID4D, 2021).²

¹ Vie Publique: <https://www.vie-publique.fr/parole-dexpert/269994-croissance-demographique-de-lafrique>

² ID4D: <https://ideas4development.org/jeunesse-africaine-avenir-continent/>

It is becoming increasingly necessary to strengthen the employability of young people by orienting training courses towards offers adapted to the needs of the labour market and towards the professions of the future. Innovation would enable Africa to leapfrog stages of development while creating the jobs it needs. The digital sector makes it possible to envisage disruptive solutions for young people in certain key sectors and areas, such as the development of digital educational platforms and in remote health centres.

Moreover, research in Africa is still at a low level as evidenced with the absence of the continent in the diagnosis and research of vaccines against the COVID-19 pandemic; in which they contributed to only 1% of the results of research in the world according to the World Bank (2020)³. Although Africa-led research remains weak, it has the potential to overcome the challenges and lead to an improved economic transformation in Africa.

The Sustainable Development Goals (SDGs), the Continental Education Strategy for Africa 2016-2025 (CESA 16-25), the ADEA Strategic Plan 2018-2022, the Science, Technology and Innovation Strategy for Africa (STISA 2024), and the Africa's Agenda 2063 "The Africa We Want" illustrate the clear desire to establish a responsive higher education, research and innovation ecosystem that would enable countries to ensure their competitiveness and growth.

Indeed, in a world characterised by a predominantly knowledge-based economy, well-trained and highly qualified human resources is key to sustainable development. It is now recognised that education, and higher education in particular, is critical for economic growth, job creation, competitiveness in the global market, socio-cultural revitalisation and improvement in the standards of living of the populations. In order to succeed in these areas, countries must make substantial and intelligent investments in various fields of higher education and scientific research in order to train qualified higher-level professionals and a technical workforce capable of meeting development needs.

Current Challenges for the Development of HESR in Africa

Globally, and particularly for Africa, the biggest challenge is to improve access to higher education while ensuring the quality of training. Higher education in Africa is also marked by the overcrowding of students in the university space; and the insufficiency and lack of training of teaching and research staff. For the past two years, the crisis of the COVID-19 pandemic has considerably disrupted education systems; aggravated the quality of teaching, and significantly reduced the number of hours taught.

Furthermore, most of the research conducted in Africa are in the areas of agriculture and health sciences, such as HIV/AIDS, malaria, the Ebola epidemic and more recently the COVID-19 pandemic. However, the fields of science, technology, engineering and mathematics (STEM) are missing from this equation, accounting for only 29% of scientific research in sub-Saharan Africa (World Bank, 2014)⁴.

While there are many challenges to higher education and scientific research, the specific challenges to be addressed during the planned forum include:

- **An inadequate teaching and learning environment** with insufficient levels of qualified teaching staff, poor/obsolete digital infrastructure, resources, and equipment to cater for the increasing number of young people in higher education.

³ World Bank: <https://www.banquemondiale.org/fr/region/afr/publication/improving-the-quality-and-quantity-of-scientific-research-in-africa>

⁴ World Bank: <https://www.worldbank.org/en/region/afr/publication/improving-the-quality-and-quantity-of-scientific-research-in-africa>

- **Underdeveloped remote education** due to lack of remote and online learning provisions following continental and global quality standards and the scarce knowledge of teachers in digital educational technology.
- **Lack of access to higher education** that ensures inclusion and equal opportunities for all students.
- **Lack of effectiveness and efficiency in the use of resources/funding** provided by the government and private sector institutions to improve educational programs and research, and educational outcomes.
- **Not enough STEM and relevant courses are available**, making it difficult to improve skills, employability, and integration of graduates in digital, science, mathematics, and existing/future jobs.
- **Weak governance of national research**, and the absence of national structures for the promotion and transfer of research results to practice.
- **Difficulty in combining different types of knowledge in training and research** to develop cross-cutting skills and expose students to innovative and multidisciplinary environment.
- **Lack of consistent collaboration within HEs and RCs** in the continent to facilitate regular peer learning and knowledge exchange

Sharing knowledge and evidence and enhancing higher education and scientific research must be the priority and key focus to ensure institutions provide more access and quality teaching to students; and are capable of producing relevant and innovative knowledge to enhance the economic transformation in Africa.

ADEA's response for the development of HESR

ADEA is working with several strategic partners, including the African Union, Arizona State University (ASU), Mastercard Foundation, NUFFIC, UNESCO, and Association of African Universities (AAU) to advance knowledge and evidence that support country efforts to make higher education a top priority for policymakers. ADEA has also conducted a series of studies in areas relevant to higher education, including:

- A survey of innovations in higher education in Africa in collaboration with AAU. This report aimed to identify and document ongoing innovations to drive higher education transformations in Africa through responsiveness to societal needs, strategic planning, funding, governance, curriculum reform and human development resources.
- The evaluation in 2008 of strategic planning experiences between universities in Africa, with the World Bank and AAU.
- The creation of the African Union's Committee of 10 African Heads of State Champions of Education, Science and Technology (C10), a concept ADEA initiated.
- The continental mapping study of higher education and scientific research in Africa in 2021, which identified the main constraints and challenges facing these sectors.
- Development and piloting of the remote education benchmarking toolkit that uses a checklist-based approach to help countries establish and maintain comprehensive and appropriate remote education systems in harmony with regional and international systems and practices, and as part of education sector's resilience to future crises (2021).
- Development of the Strategic Framework and 5-year Action Plan to guide the work of the Senegal-led ICQN on Higher Education and Scientific Research (ICQN-HESR) (2022).

HLPDF objectives and expected results

The expected outcome of the HLPDF on Higher Education and Scientific Research is to promote the sharing of knowledge and experiences around practical and innovative solutions to address skills gaps and the critical challenge of reforming higher education systems to provide Africa with a quality higher education system.

The Forum will share ideas on new/emerging trends in evidence and best practices on the role of higher education in preparing youth with the skills required for the future of work. It will help to take stock of current policies, programmes and innovative actions, and analyse their implementation in order to make concrete recommendations.

The forum will identify ways to reform policies, strategies and programmes to meet Africa's needs and priorities, with particular emphasis on the themes below:

1. **Prioritising a digital environment to boost the higher education system:** To improve remote education, and design practical and innovative strategies for integrating new digital technologies that meet quality standards, while building teacher capacity in technology for effective delivery. Assessing the benefits of digital technologies in higher education to improve educational outcomes, and creating more STEM related courses to improve skills.
2. **Placing research and innovation at the center of national response to economic and environmental challenges:** Improve the governance of national research, promote African-led research, and transfer of research results to meet Africa's needs and priorities. Developing the right policies for national research systems, ensuring they have the right capacity and capabilities for coordination and collaboration.
3. **Access to quality education and improving quality assurance approaches:** Promoting inclusive and equitable opportunities for youth in higher education. Maintaining quality academic standards and assessment in study programs and learning experiences of students.

All of the above sub-themes have cross-cutting issues, one of which is the gender dimension and more generally the issue of inclusion tackling different aspects. The discussions will be driven by guiding questions based on innovative experiences and success stories. The nature and diversity of the issues and challenges related to the theme make it essential that, as far as possible, all types of partners and stakeholders contribute to the discussions and the implementation of the results of the HLPDF. Therefore, targeted participants include: targeted Ministers in charge of higher education, scientific research, vocational and technical training, technology and innovation, education, finance and economic planning, youth and gender; Members of Parliament and Senior Government officials; African Union and Regional Economic Communities (RECs); development partners; private sector representatives; international and regional organizations and CSOs; young African entrepreneurs; teacher unions and trainers; qualification committees; training providers; councils in charge of certification; focal points and member countries from ICQN-HESR.

Conclusion

Africa's development relies on a higher education system and research that plays a key role in knowledge-based economic growth strategies: contributing to building human capital; support for innovation by creating new knowledge as well as the acquisition, building and validating scientific knowledge; developing competitive advantages; dissemination of scientific and technical culture; and expertise for the benefit of the society. Some countries have established governance structures for higher education and have initiated innovations in training (university and professional) with high class quality standards. With the fast demographic growth of the African continent, it is clear that providing quality education and training to millions of young people is the most important challenge that many countries will face and this can only be achieved with sound policies and strategies and more importantly consistent engagement with key stakeholders through partnerships.